

Evaluating Law and Policy in the Context of Doctoral Mobility in the European Union

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Table of contents

	Page
Abstract	vi
Acknowledgements	vii
List of Abbreviations	viii
Table of Statutory Material Cited	ix
Table of Cases Cited	xii
Table of Figures and Tables	xiv
Chapter 1: Evaluating Law and Policy in the Context of Doctoral Mobility within the European Union	1
The Research Background	2
Doctoral Mobility in context: Considering the push and pull factors	5
The home country context: push factors	6
The economic situation in the home countries	7
The desire to stay in science: the key push factor?	8
The Host country context: Pull factors and destination decisions	11
Attracted by excellence: The desire to 'do good science'	12
Finding doctoral mobility in law and policy	15
Structure of the Thesis	17
Chapter 2: Building a Thesis out of Socio-Legal Empirical Research: Methodology, Methods and Issues	20
The MOBEX2 Research: Methods used	22
Background and Policy Work	22
The Questionnaire	23
The interviews	23
Analysis	24
Legal Method and interdisciplinary reflective practice: Issues arising from the methods used	24
Legal method in the context of interdisciplinarity and reflective practice	26
Cross national and cross cultural research	29
Language	30
Defining the Native Speaker	33
Interviewing scientists: elite group or peers?	35
One researcher, 4 projects, one PhD: Building a thesis	35
Chapter 3: Doctoral Research or Doctoral Study? Unpicking the European Higher Education Area and the European Research Area	39
Why focus on mobility?	40
Questioning mobility as internationalisation	43
The European Higher Education Area	44
The development of the Bologna Process	45
The Bologna Process Objectives	46

The changing higher education landscape: The Bologna Process' influence	48
The European Research Area	50
Making Most Effective Use of Resources: The ERA Objectives	51
A Recruitment Pool for Future Researchers: The ERA and Doctoral Candidates	52
The 3 rd Cycle of Study: The EHEA and Doctoral Candidates	54
Bridging the Gap between the ERA and EHEA: Doctoral Level research	55
The status of doctoral candidates	57
Conclusion: Bringing the ERA and EHEA together or falling between the gaps?	60
Chapter 4: Doctoral Candidates and Free Movement of Persons Law	62
At the Top of the Hierarchy: EU Migrant Workers' Rights	62
Social Advantages for Workers: Access to Education and Other Rights	63
Genuine and Effective Work: Doctoral Candidates as EU Workers	64
Is doctoral candidates' work actually work?	65
If it is work, is it genuine and effective?	66
Do 'studies' render the 'work' marginal and ancillary?	67
Doctoral candidates as workers: A definitional conundrum	69
Doctoral candidates as students: Free movement but no social advantages	70
Jacqueline Förster - worker status, real link or a bit of both?	73
Förster and Doctoral Candidates	75
Doctoral Candidates and Other Social Advantages: It is not all about	76
Maintenance Grants	
Doctoral candidates as EU citizens.	77
Proportionality	80
Conclusion: The need for a holistic approach to the ERA and EHEA	83
Chapter 5: Moving as EU Workers: The German Case Study	85
A Well Funded, International Context: The German Science Labour Market	86
Being Part of the Scientific Community: Germany's Engagement with Doctoral Research	88
The Legal Framework	89
Access to doctoral positions: a level playing field?	91
Indirect Discrimination and Doctoral Research: Language Requirements and Recognition of Qualifications	93
Recognition of qualifications for the purposes of work	96
Reversing the Rights Hierarchy: Transitional Measures Move Workers Down and Students Up	99
Workers: Taking advantage of employment terms and conditions	103
Conclusion	106
Chapter 6: Moving as an EU student: The UK Case Study	108
The Science Labour Market in the UK	108
Doctoral Candidates and Tuition Fees: Re-enforcing student status	113
Protecting Domestic Doctoral Students: Access to Doctoral Funding in the UK	117
Gaining Admission: Language Requirements and Academic Qualifications	120
Students: Rights, entitlements and issues	123
Conclusions	124
Chapter 7: Doctoral Mobility, Families and Law	127
European Union Free Movement of Persons and Family Rights	128
Who is a family member?	129

Are partners really family members? Member State Implementation of CRD	130
Who is a Dependant?	133
Partners and derived rights	134
Rights of EU national family members	136
Transitional arrangements for Polish and Bulgarian nationals and family members' right to work	137
Third country nationals moving as family members	138
Family ties, proximity and doctoral mobility	141
Family Friendly Rights and Policies in the Host States	143
More generous provisions in Germany?	146
Dual science career couples	147
Conclusions	153
Chapter 8: Exchange and Mobility Schemes and Networks: The importance of being part of the scientific community	156
The DFG Research Training Groups and the International Max Planck Research Schools	157
The Marie Curie Actions	163
Shorter Stays: A way to mitigate not having access to full rights?	165
Joint Programmes	167
Doctoral candidates' own networks	175
The role of Undergraduate mobility in triggering later moves: demonstrating the real link	177
Conclusions: Networks, exchange programmes and fellowships and EU Law and Policy	184
Chapter 9: Evaluating Law and Policy	186
The key issues arising from the research	186
Making the case for EU Migrant Doctoral Candidates	188
Rethinking doctoral candidates in the EHEA and ERA	191
Creating a coherent mobility framework	193
Mapping the Research Agenda	195
Bibliography	197
Appendices	220
Respondent Information	220
Key Informant Information	223
MOBEX2 Questionnaires	225
Enhanced Stipend Project Questionnaires	246
Interview Schedules	251

Abstract

Doctoral candidates, particularly in the natural sciences, are often expected to spend time abroad as part of their doctorate or even to complete the entire qualification in a host country. However the law and policy surrounding scientific mobility on the one hand and student mobility on the other rarely consider doctoral candidates as a distinct group with specific issues and needs. As a result PhDs can fall between the gaps left by different legal and policy frameworks. Are they researchers or are they students? A more holistic approach would allow them to bridge the gaps creating a robust framework for mobility in European higher education and research. This thesis takes such a holistic approach examining in detail the legal provisions applying to doctoral candidates moving as EU migrant workers as well as those applying to EU migrant students. It considers whether using the EU citizenship provisions, a reconceptualisation of 'economic activity' as well as a different way of thinking about 'real links' with the host society might, in conjunction with the policies of the ERA as well as the EHEA, provide a rationale for extending rights to doctoral candidates as a distinct group of EU citizens. This would then allow them to genuinely bridge the gap between different policies and provisions , rather than falling between them and would build one coherent framework for mobility in higher education and research.

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List of Abbreviations

AGG	Allgemeines Gleichbehandlungsgesetz [General Equality Act]
BFUG	Bologna Follow Up Group
CRD	Citizens Rights Directive
DAAD	Deutscher Akademischer Austauschdienst [German Academic Exchange Service]
DFG	Deutsche Forschungs Gemeinschaft [German Research Foundation]
ECJ	European Court of Justice
EHEA	European Area of Higher Education
ENQA	Quality Assurance in Higher Education
EPSRC	Engineering and Physical Sciences research Council
ERA	European Research Area
ESG	The Standards and Guidelines for Quality Assurance in the European Higher Education Area
ESRC	Economic and Social Research Council
EUA	European Universities Association
FP	European Framework Programme
GDP	Gross Domestic Product
GERD	Gross domestic expenditure on Research and Development
GTA	Graduate teaching assistants
HERO	Higher Education & Research Opportunities
HRG	Hochschulrahmengesetz [Higher Education Framework Act]
IELTS	English Language Testing System
IMPRS	International Max Planck Research Schools
MOBEX2	Mobility and Excellence in the European Research Area'
R&D	Research and Development
RCUK	Research Councils UK
RTD	Research Technology and Development
TFEU	Treaty on the Functioning of the European Union
TOEFL	Test of English as a Foreign Language

Table of Statutory Material Cited

European Union Legislation

Treaty on The Functioning of the European Union

Treaty of Accession 2003 O.J. L236/46 of 23rd September 2003.

Treaty of Accession 2005 O.J. L157/11 of 21st June 2005

Regulations

Regulation (EEC) No 1612/68 of the Council of 15 October 1968 on freedom of movement for workers within the Community Official Journal L 257, 19.10.1968, p. 2

Regulation (EEC) No 1251/70 of the Commission of 29 June 1970 on the right of workers to remain in the territory of a Member State after having been employed in that State OJ, Special Edition 1970 (II), p. 402

Directives

Directive 93/96 on the right of residence for students [1993] OJ L317/59

Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin

Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation

Directive 2004/38 of the European Parliament and of the Council of 29th April 2004 on the right of citizens of the union and their family members to reside freely within the territory of the Member States Official Journal L158/77

Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications [2005]OJ L255/22

Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast)

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Prague Communiqué (2001), 'Towards the European higher education area', Communiqué of the meeting of European Ministers in charge of Higher Education in Prague on May 19th 2001

Berlin Communiqué (2003), 'Realising the European Higher education Area' Communiqué of the Conference of European Ministers Responsible for Higher Education, Berlin, 19-September 2003

Bergen Communiqué (2005) The European Higher Education Area -Achieving the Goals Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005

London Communiqué (2007), 'Towards the European Higher Education Area: responding to challenges in a globalised world' Communiqué of the Conference of European Ministers Responsible for Higher Education, London, May 2007

Leuven Communiqué (2009), 'The Bologna Process 2020 - The European Higher Education Area in the new decade'. Communiqué of the Conference of European Ministers Responsible for Higher Education, Leuven and Louvain-la-Neuve, 28-29 April 2009

Budapest-Vienna Declaration on the European Higher Education Area March 12, 2010.

National Legislation: UK

Employment Rights Act 1996

Local Government Finance Act 1992

Additional Paternity Leave Regulations 2010

Council Tax (Discount Disregards) Order 1992/548

Immigration (European Economic Area) Regulations 2006 SI 2006/1003

National Health Service (Charging of Overseas Visitors) Regulations 1989. SI 1989/306.

National Legislation: Germany

Allgemeines Gleichbehandlungsgesetz vom 14. August 2006 (BGBl. I S. 1897), das zuletzt durch Artikel 15 Absatz 66 des Gesetzes vom 5. Februar 2009 (BGBl. I S. 160) geändert worden ist

Arbeitszeitgesetz vom 6. Juni 1994 (BGBl. I S. 1170, 1171), das zuletzt durch Artikel 7 des Gesetzes vom 15. Juli 2009 (BGBl. I S. 1939) geändert worden ist

Aufenthaltsgesetz in der Fassung der Bekanntmachung vom 25. Februar 2008 (BGBl. I S. 162), das zuletzt durch Artikel 4 Absatz 5 des Gesetzes vom 30. Juli 2009 (BGBl. I S. 2437) geändert worden ist

Berliner Hochschulgesetz vom 13 Februar 2003 das zuletzt durch das Dienstrechtsänderungsgesetz vom 19. März 2009 geändert worden ist

Bremische Hochschulgesetz in der Fassung der Bekanntmachung vom 9. Mai 2007

Bundeselterngeld- und Elternzeitgesetz vom 5. Dezember 2006 (BGBl. I S. 2748), das zuletzt durch Artikel 10 des Gesetzes vom 28. März 2009 (BGBl. I S. 634) geändert worden ist part 2

Bundesurlaubsgesetz in der im Bundesgesetzblatt Teil III, Gliederungsnummer 800-4, veröffentlichten bereinigten Fassung, das zuletzt durch Artikel 7 des Gesetzes vom 7. Mai 2002 (BGBl. I S. 1529) geändert worden ist

Deutsches Sozialgesetzbuch (German Social Law)

Entgeltfortzahlungsgesetz vom 26. Mai 1994 (BGBl. I S. 1014, 1065), das zuletzt durch Artikel 80 des Gesetzes vom 23. Dezember 2003 (BGBl. I S. 2848) geändert worden ist

Freizügigkeitsgesetz/EU vom 30. Juli 2004 (BGBl. I S. 1950, 1986), das zuletzt durch Artikel 7 des Gesetzes vom 26. Februar 2008 (BGBl. I S. 215) geändert worden ist

Gesetz über befristete Arbeitsverträge in der Wissenschaft In der Fassung vom 12.4.2007. BGBl. I S. 506 §1.

Gesetz über den Aufenthalt, die Erwerbstätigkeit und die Integration von Ausländern im Bundesgebiet (Aufenthaltsgesetz) neugefasst durch B. v. 25.02.2008 BGBl. I S. 162; zuletzt geändert durch Artikel 4 Abs. 5 G. v. 30.07.2009 BGBl. I S. 2437 §18(1)

Gesetz zur Steuerung und Begrenzung der Zuwanderung und zur Regelung des Aufenthalts und der Integration von Unionsbürgern und Ausländern (Zuwanderungsgesetz) zuletzt geändert durch Artikel 2 G. v. 20.12.2008 BGBl. I S. 2846

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Wissenschaftszeitvertragsgesetz vom 12. April 2007 (BGBl. I S. 506)

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Blaizot v Universite de Liege and others Case 24/86 [1988] ECR 379

Brown v Secretary of State for Scotland Case 197/86 [1988] ECR 3205

Commission v Luxembourg (Re Maternity Allowance) Case C-118/91 [1994] 2 CMLR 781

Förster v Hoofddirectie van de Informatie Beheer Groep Case C-158/07 [2008] ECR I-8507

Gebhard v Consiglio dell'ordine degli avvocati e procuratori di Milano Case C-55/94 [1995] ECR I-4165

Gravier v City of Liege Case 293/83 [1985] ECR 593

Groener v Minister for Education and the City of Dublin Vocational Educational Committee Case C-379/87 ECR 1989 Page 03967

Grzelczyk v Centre Public d'aide sociale d'Ottignies-Louvain-la-Neuve Case C-184/99 [2001] ECR I-6193

Hoeckx v Openbaar Centrum voor Maatschappelijk Welzijn Case 249/83 [1985] ECR 973

Hoekstra (nee Unger) v Bestuur der Bedrijfsvereniging voor Detailhandel en Ambachten Case 75/63 [1964] ECR 177

Jia v. Migrationsverket Case C -1/05

Kempf v Staatssecretaris van Justitie Case 139/85 [1986] ECR 1741

Lair v University of Hannover Case 39/86 [1988] ECR 3161

Lawrie-Blum v Land Baden Wuerttemberg Case 66/85 [1986] ECR 2121

Levin v Staatssecretaris van Justitie Case 53/81 [1982] ECR 1035

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Matteucci Case 235/87 [1988] ECR 5589

Ministere Public v Even and ONPTS Case 207/78 [1979] ECR 2019

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Reina v Landeskreditbank Baden-Württemberg Case 65/81 [1982] ECR 33

Roman Angonese v Cassa di Risparmio di Bolzano SpA Case C-281/98 [2000] ECR I-04139

Scrivner and Cole v Centre Public d'Aide Sociale de Chastre Case 122/84 [1985] ECR 1027

Steymann v Staatssecretaris van Justitie Case 196/87 [1988] ECR 6159

The Queen (on the application of Dany Bidar) v London Borough of Ealing, Secretary of State for Education and Skills Case C-209/03 [2005] ECR I-2119

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Union Royale Belge des Sociétés de Football Association ASBL & others v. Jean-Marc Bosman Case C-415/93 [1995] ECR I-4921

Table of Figures

Figure 2.1: Questionnaire Question 4 on Seniority level

Table 6.1: Respondents who registered for doctorate in the UK

Table 6.2: Maximum annual fee charged for 'home' (including EU) and international doctoral candidates at selected UK Universities for 2010/11 (science, non-clinical subjects)

Chapter 1: Evaluating Law and Policy in the Context of Doctoral Mobility within the European Union

The free movement of persons is one of the fundamental freedoms of the internal market and an underpinning principle of the European Union (EU). Early examination of free movement of persons law concentrated on the economic aspects of the internal market, focusing on the rights of workers and the economically active. With the creation of the EU and its change of emphasis from a purely economic focus to a broader vision of what the Union should be, commentary also turned to considering intra-EU migration in a broader context. The rights and entitlements of workers and the self-employed continued to be discussed¹ but to that debate were added studies of for example the retired², students³, volunteers⁴ and the economically inactive⁵. Whichever group is studied however, detailed consideration of the law and its practical application provides us with an understanding of how the legal provisions impact on different groups and allows us to evaluate whether or not the law is achieving its objectives. This thesis seeks to add to our understanding of free

¹ Barnard, C. (2009), 'British Jobs for British Workers: The Lindsey Oil Refinery Dispute and the Future of Local Clauses in an Integrated EU Market', 38 ILJ 245. Costello, C. (2000), 'Market Access All Areas? The Treatment of Non-Discriminatory Barriers to the Free Movement of Workers', 27(3) LJEL 267. Dougan, M. (2005a), 'The Court Helps Those Who Help Themselves: The Legal Status of Migrant Workseekers Under Community Law in the Light of the Collins Judgment', European Journal of Social Security 7-34. O'Brien, C. (2009), 'Social blind spots and monocular policy making: the ECJ's migrant worker model', 46(4) Common Market Law Review 1107-1141

² See for example Ackers, H. L. And Dwyer, P. (2002), 'Senior Citizenship? Retirement, Migration and Welfare in the European Union', Bristol: Policy Press. Ackers, H. L. And Dwyer, P. (2004) 'Fixed laws, fluid lives: the citizenship status of post-retirement migrants in the European Union', 24(3) Ageing and Society 451-475. Ackers, H. L. and Coldron, K. (2009). 'European Citizenship, Individual Agency and the Challenge to Social Welfare Systems: A Case Study of Retirement Migration in the European Union', 37(4) Policy and Politics 573-589

³ See for example: Dougan M. (2008), 'Cross-border educational mobility and the exportation of student financial assistance', 33 European Law Review 723-738. Dougan M. (2005b), 'Fees, Grants, Loans and Dole Cheques: Who Covers the Costs of Migrant Education Within the EU?' 42 Common Market Law Review 943-986. King, R. and Ruiz-Gelices, E. (2003), 'International student migration and the European "Year Abroad": effects on European identity and subsequent migration behaviour', 9(3) International Journal of Population Geography 229-252.

⁴ See for example O'Brien, C. (2010) 'Between angels and serfs: Fitting disabled, caring or older volunteers into the EU framework of free movement, equal treatment and citizenship' Doctoral Thesis, Liverpool Law School.

⁵ See for example: Dougan, M. and Spaventa, E. (2003), 'Educating Rudy and the (non-)English Patient: A Double Bill on Residency Rights Under Article 18 EC'. 28 European Law Review 699-712 and the plethora of literature on the scope of EU citizenship including for example Spaventa, E. (2008), 'Seeing the Wood Despite the Trees? On the Scope of Union Citizenship and its constitutional Effects' 45(1) Common Market Law Review 13 or Kochenov, D. (2009), 'Ius Tactum of many Faces: European Citizenship and the Difficult Relationship between Status and Rights', 15 Columbia Journal of European Law 169.

movement rights and mobility within the EU by studying doctoral candidates as a distinct group.

This chapter begins by setting out the research background to the thesis, outlining the projects which form the starting point of the analysis presented here. It then considers the motivations for mobility as expressed in the research literature and by respondents to the empirical work themselves. While it may seem unusual to outline empirical findings in the introductory chapter, it provides important context for the policy and legal analysis which follows in chapters 3 and 4. It also sets the scene by providing an insight into why doctoral candidates choose to become internationally mobile which then allows an assessment of the extent to which relevant policy as well as the legal framework engage with the motivations and needs of doctoral candidates. The final sections of the chapter give a brief overview of some of the literature which has specifically engaged with the mobility of doctoral candidates and then set out the structure of the remainder of this thesis.

The Research Background

This thesis seeks to evaluate law and policy in the context of doctoral mobility in the European Union. It aims to understand the law and policy in this area and the impact those frameworks have on international, intra EU mobility at doctoral level. It draws on the findings of four socio-legal projects with which the author was involved and which were carried out between 2004 and 2007 and it builds on them by specifically placing law and legal rights at the centre of the analysis. The four projects relevant to this thesis were all concerned with the international mobility of highly skilled academics in the natural and/or social sciences. The most substantial of these was the project 'Mobility and Excellence in the European Research Area' (MOBEX2) which was directed by Louise Ackers of the European Law and Policy research group at Liverpool University.⁶ The project was funded by the Science in Society Programme of the Economic and Social Research Council (ESRC) and the Anglo German Foundation.⁷ The MOBEX2 project examined in detail the mobility of scientists from Poland and Bulgaria to the UK and Germany in the context of the enlargement of the EU. It focused on scientific mobility as a whole, examining the impact of highly skilled mobility on sending and receiving regions as well as on individual scientists and their families. It combined an examination of relevant law and policy with a consideration of literature on highly-skilled, and in particular scientific migration. This

⁶ Previously the Centre for the Study of Law and Policy in Europe (CSLPE), University of Leeds

⁷ RES-151-25-00 and 1468 respectively. The Anglo German Foundation funded the work relating to Germany.

analysis was complemented by an online survey in four countries (Germany and the UK as key receiving countries and Poland and Bulgaria as key sending countries) and 89 qualitative interviews with Polish and Bulgarian scientists (from doctoral level upwards) based in the UK and Germany as well as Poland and Bulgaria.

Ackers has highlighted the importance of considering scientific mobility in the context of scientists' life course and has pointed out that the factors influencing mobility are likely to change over an individual's career trajectory and life course.⁸ This thesis therefore focuses on the beginning of that career trajectory, studying doctoral mobility rather than scientific mobility in general. The analysis of MOBEX2 interviews focused on the interviews with doctoral candidates (n=31) although reference is also made to other respondents where their experience is relevant. MOBEX2 concentrated on the broad fields of physics and biology, including scientists within many sub-disciplines. It concentrated on academic researchers who were either based in universities or research institutes, with a minority of respondents working in industry.⁹

The thesis further benefitted from the author's involvement in two further socio-legal, empirical projects dealing more explicitly with doctoral level research. The first considered the impact of enhanced stipends on the ability to recruit doctoral and post doctoral researchers in shortage areas in the UK.¹⁰ The second was a study of doctoral mobility in the social sciences across a number of western and northern European countries.¹¹ Lastly, the T.H. Marshall Fellowship, sponsored by the London School of Economics and awarded in 2006, allowed the author to spend additional time in Germany and thus immerse herself in the national contexts of both host countries studied in relation to this thesis.

All four projects were interdisciplinary in nature and all four offered some consideration of the law and policy shaping decision making of mobile scientists and social scientists. However, none of the projects explicitly analysed the legal status of those moving or

⁸ Ackers, H. L. (2005), 'Moving People and Knowledge: The Mobility of Scientists Within the European Union', 43(5) *International Migration* 99 – 131. See also Ackers, H.L. and Gill, B. (2008), 'Moving People and Knowledge' Cheltenham: Edward Elgar.

⁹ For a detailed consideration of some of the methodological issues arising in this research see chapter 2.

¹⁰ 'Assessing The Impact Of The Roberts' Review Enhanced Stipends And Salaries on Postgraduate and Postdoctoral Position'. RCUK funded. See <http://www.rcuk.ac.uk/rescareer/rcdu/enhanced.htm>

¹¹ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility in The Social Sciences. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool

focused on a legal analysis of rights. The author thus felt that she had both the knowledge and the skills to build on those projects by offering a detailed examination of doctoral candidates' legal status and associated rights as well as an in-depth consideration of the relevant policy areas. These frameworks play an important role in shaping mobility itself as well as responses to it by Member States of the EU at doctoral level.

The empirical work drawn on throughout this thesis was carried out in the context of the EU enlargement rounds of 2004 and 2007. The empirical research thus took place in a context of debates about the 'brain drain' and in particular the 'youth drain' from Eastern Europe to Western Europe amidst western fears of swamped labour markets and welfare tourism as well as concerns about skills shortages and the need to attract highly skilled workers to fill those shortages. The research data therefore allows an examination of some of the tensions between various factors: firstly European and national policy in relation to doctoral candidates; secondly the legal framework governing the free movement of persons in the EU, and thirdly the scientists' own motivations for becoming internationally mobile and exercising free movement rights. The latter issue is considered in more detail below whereas the other points are picked up throughout the thesis. The timing of the research allows consideration of the extent to which EU citizenship as well as differing EU status make a difference to the rights and entitlements of doctoral scientists moving to another EU Member State and whether they in turn impact significantly on doctoral candidates' migration decision making. In other words: does law and policy sufficiently engage with the needs of doctoral candidates as a distinct group of scientists and a distinct group of EU citizens?

Having set out the research background above, this chapter now turns a consideration of what motivates doctoral candidates to become internationally mobile. The next section therefore draws on some of the empirical work mentioned above to provide the background and context to the further study of policy and law relating to the free movement of doctoral candidates.

Doctoral Mobility in context: Considering the push and pull factors

Studying the migration of the highly skilled is nothing new. There are already studies from a variety of disciplines looking at a plethora of contexts.¹² Much of the traditional migration literature deals with motivations for migration and the location choices which are closely linked to them; the push-and-pull factors influencing why people leave their home countries and why they choose their host countries.¹³

One of the prime motivational factors for migration or mobility discussed in the run up to the European enlargement and in relation to East-West Migration is that of wage differentials. Heinen and Pegels note that, based on very basic economic models, it can be shown that *'comparatively high wages in one country will attract workers from a country that has relatively low wages'*.¹⁴ It was argued that eastern European workers would migrate to the West to take advantage of the significantly higher pay. Jałowiecki and Gorzelak's suggest that *'emigrants are attracted to Western countries by higher salaries'*¹⁵ amongst other factors and the fact that they list pay first indicates the importance they assign to it. In contrast however, the Department for Trade and Industry (DTI) categorised highly skilled migrants as knowledge migrants rather than economic ones stating that *'pay and other financial reasons, although important, were not predominantly what encouraged*

¹² See for example: Mahroum, S. (2001), 'Europe and the Immigration of Highly Skilled Labour', 39(5) International Migration 27-42. Iredale, R. (2003), 'The migration of professionals: theories and typologies', 39(5) International Migration 7-26. Ferro, A (2006), 'Desired mobility or satisfied immobility? Migratory aspirations among knowledge workers', 19(2) Journal of Education and Work 171-200. Just, T. and M. Korb (2003), 'Internationale Migration: Wer, wohin und warum?' Deutsche Bank Research. Frankfurt: Deutsche Bank. Kofman, E. and P. Raghuram (2006), 'Gender and Global Labour Migrations: Incorporating Skilled Workers' Antipode 282-303. Kofman, E. (2000), 'The invisibility of skilled female migrants and gender relations in studies of skilled migration in Europe', 6(1) International Journal of Population Geography 45-59. Peixoto, J. (2001a), 'The international mobility of highly skilled workers in transitional corporations: the macro and micro factors of the organizational migration cadres', 35(4) International Migration Review 1030-1053. Salt, J. (1997), 'International movement of the highly skilled', OECD Occasional Paper no. 3, International Migration Unit, Paris: OECD. Straubhaar, T. (2000), 'International Mobility of the Highly Skilled: Brain Gain, Brain Drain or Brain Exchange', HWWA Discussion Paper 88, Hamburg Institute of International Economics. Williams, A. M., et al. (2004) 'International labour mobility and uneven regional development in Europe: human capital, knowledge and entrepreneurship', 11(1) European Urban and Regional Studies 27-46.

¹³ Vizi, E. S. (1993), 'Reversing the Brain Drain from Eastern European Countries: The 'Push' and 'Pull' factors, 15 Technology in Society 101-109. Mahroum, S. (2001), op cit note 12. OECD (2002), 'International Mobility of the Highly Skilled'. Paris: OECD

¹⁴ Heinen and Pegels (2006), 'EU Expansion and the Free Movement of Workers: Do Continued Restrictions Make Sense for Germany?' Focus Migration Hamburg: Hamburg Institute of International Economics at page 3

¹⁵ Jałowiecki B and Gorzelak J (2004), 'Brain drain, brain gain and mobility: Theories and prospective methods,' 29(3) Higher Education in Europe 299-308 at page 300

these skilled migrants to move abroad'.¹⁶ The emphasis on mobility for the highly skilled often reflects a lack of opportunities in the home labour market¹⁷ but particularly in science mobility there are further considerations. Scientists wishing to leave their home country often refer to the lack of science funding, the lack of equipment and facilities as well as poor salaries or limited job opportunities.¹⁸ The factors influencing location decisions are often the exact mirror image of the mobility motivations which influence people to leave in the first place. Mobility decisions are always complex but often determined by the desire to go where 'good science' can be achieved. The next two subsections therefore examine the situation in the home and host countries respectively to gain an insight into the factors that contributed to the doctoral candidates' mobility decision making.

The home country context: push factors

'Neither the level of the necessary scientific equipment, nor the available library information make it possible to carry out any meaningful research, if one relies on national sources in Bulgaria. The Bulgarian salaries of young scientists in higher education and research cannot attract any gifted and bright students. The only motivation to stay in science is mobility: the contacts with devoted researchers from abroad and with modern equipment as well as the prospect of some better payment in terms of fellowships during scientific visits'.¹⁹

Krieger notes the lack of viable employment opportunities in the home country as an important reason why people might migrate from East to West.²⁰ While his report focuses on the population as a whole, the DTI report 'Knowledge Migrants' was concerned with highly skilled migrants and also lists unemployment or the under-utilisation of skills as push factors which might encourage highly skilled workers to leave their home countries.²¹ Turning their attention to scientists specifically, other studies²² further confirmed that the

¹⁶ Department of Trade and Industry (DTI) (2002), 'Knowledge Migrants. The Motivations and Experiences of Professionals in the UK on Work Permits' London: DTI at page 42. We will consider the implications of pay and finances in the national contexts in more detail in chapters 5 and 6

¹⁷ Morano Foadi, S. (2005), 'Scientific Mobility, Career Progression and Excellence in the European Research Area', 43(5) *International Migration*, 133

¹⁸ Ackers, H.L.(2005), op cit note 8. Department of Trade and Industry (DTI) (2002, op cit note 16.

¹⁹ Professor Bulgarian Academy of Sciences, MOBEX2

²⁰ Krieger, H. (2004), 'Migration Trends in an enlarged Europe', Dublin: European Foundation for the Improvement of Living and Working Conditions.

²¹ Department of Trade and Industry (DTI) (2002) op cit note 16.

²² Centre for the Study of Law and Policy in Europe (CSLPE) (2005), 'Gender Mobility and Progression in Science Careers: MOBISC Summary Report' Leeds: University of Leeds and CSLPE (2004) 'Mobility

lack of available positions played a role in encouraging mobility in this specific subset of the highly skilled.

The economic situation in the home countries

The economic situations in both Poland and Bulgaria are far from ideal and respondents in the MOBEX2 study were very much aware of the issues. The general unemployment rates were high at the time the research was carried out at 17.8% and 10.01% respectively.²³ As one of our respondents indicates:

'When you look at the economic situation in Poland it's difficult in terms of getting a decent job after graduation. So many of my friends who graduated from my department they had either switched to completely different work or they were sort of downgraded and they were doing basic office work because they simply couldn't find the work with their qualification'.²⁴

Jerzy explains why he decided to leave and come to the UK. *'In Poland [...] you do not have so many possibilities, unemployment is like 20% now so we really had no choice'*. Similarly, the high unemployment rate in Bulgaria was of concern for Ivanka. When asked if finding work was a problem in Bulgaria she replied *'It is a huge problem; the unemployment rate is incredibly high'*. Mostly, however, respondents did not refer to the labour market or job situation generally but rather talked about opportunities in science and more particularly in their specific field of expertise. Both home countries studied had a strong tradition of higher education and scientific research in communist times. Following the trend witnessed throughout Central and Eastern Europe both countries had mass expansion of higher education post 1989. During this same period state expenditure on research was in substantial decline. In Poland gross domestic expenditure on Research and Development (GERD) in relation to GDP fell from 0.63% in 1995 to 0.61% in 2008 and in Bulgaria from

and Excellence in Scientific Labour Markets: the Question of Balanced Growth'. See <http://www.sci-soc.net/SciSoc/Projects/Economics/Mobility+and+excellence+in+scientific+labour+markets.htm>

²³ Eurostat (2010a), 'Unemployment rate, annual average, by sex and age groups' available at http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_rta&lang=en [last accessed December 2010]. The Bulgarian unemployment rate initially fell but stood at 10.01% again for September 2010. The Polish rate has fallen quite considerably to 8.2% in 2009 and stood at 9.6% in September 2010.

²⁴ Monika, MOBEX2 respondent. All respondents in the studies drawn on throughout this thesis have been allocated a pseudonym. A full list of respondents quoted with additional details relating to their home country, host country and level of seniority is available at appendix 1.

0.62% in 1992 to 0.49% in 2008.²⁵ These indicators remain among the lowest in the EU and spending on higher education also fell significantly during the 1990s²⁶ leaving higher education and research in a difficult position.

The scientists interviewed showed concern about the state of the science labour markets and the availability of positions and the viability of those positions that were available. The data in relation to opportunities for doctoral research in both Poland and Bulgaria is not unambiguous. Respondents did indicate that there were very limited opportunities for doing a doctorate or finding a suitable position in their home country. Many agreed that getting any employment in Poland was difficult even for university graduates and that in order to find a position many graduates had to leave science to find employment elsewhere. On the other hand there was some indication that institutions in both Poland and Bulgaria had little trouble attracting candidates. Bogdan explains that in Bulgaria positions are available and are being filled:

'we get high quality students who have finished Masters degrees who become PhD students and in fact we have many in our department; now there are already 15. The problem is what to do after PhD and more of them they start seeking careers outside the country'.²⁷

Statistics show that a significant number of doctorates are awarded in both Poland and Bulgaria every year. Poland saw a dramatic increase in the number of doctoral candidates with degrees awarded going up from 1500 in 1991 to 5722 in 2005. In Bulgaria the doctorate was awarded to 528 people in 2005.²⁸ In the MOBEX2 study a number of post doctoral researchers interviewed had successfully completed their PhDs in their home country, showing that it was indeed possible.

The desire to stay in science: the key push factor?

However, many of the respondents sought to move because of the poor working conditions in their home country and the better conditions abroad. What the majority of

²⁵ Eurostat (2010), 'Gross domestic expenditure on R&D (GERD) as % of GDP' available at http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_20&plugin=0 [last accessed November 2010]

²⁶ Slantcheva, S (2003), 'The Bulgarian academic profession in transition' 45 *Higher Education* 425–454.

²⁷ Bogdan, MOBEX 2

²⁸ European Commission (2008a), 'A more research-intensive and integrated European Research Area Science, Technology and Competitiveness: key figures report 2008/2009' Brussels: European Commission

respondents wanted was to do good science and to be able to work effectively in their chosen field. In MOBEX2 however, there was a further dimension, which was especially apparent in the Bulgarian case: the desire to continue working in science research at all. It seems from the data that many Bulgarian scientists and some Polish ones were only able to work in science because they had left their home country completely or because they were at least able to spend short periods abroad while keeping a position at home.

According to the EUA mobility is an integral part of doctoral training in many European universities.²⁹ For some of our respondents however, mobility presented more than an opportunity for training and learning new skills. The conditions for science research in Poland and Bulgaria are poor when compared to the UK or Germany and in some cases anything other than purely theoretical work seems impossible. Perhaps not unsurprisingly, Polish and Bulgarian labs visited were often more sparsely equipped and for the most part contained outdated equipment. According to Kalina *'The problem is really that the conditions for work are not that good and nowadays we don't get new machines and old ones of course are already too old.'* In those areas of science where large or expensive equipment is needed, doctoral candidates wishing to pursue a career in science research are faced with the problem of practical work not being feasible in their home country. Vanya, now based back in Bulgaria, explains why she went to the UK during her doctorate: *'Here it's not possible to do what I wanted to do within the subject'*. Svetlana further explains the situation in Bulgaria:

'I think that there is the basics of a core support for research which is still there and some of it is decent. There are bits and pieces of equipment which are obviously not there and there are things which are clearly not available there; those are things which you can't easily put on a grant. We're talking about big things, things like micro-rays these are modern things that are simply not accessible there. It's not unthinkable to get some of the equipment necessary but running costs are a big problem; [...] Money is a big problem'.

Emerging areas of science are clearly at an even greater disadvantage because there is likely to be no equipment available, not even out-dated equipment which the scientists could 'make do' with. While Svetlana indicates that some of this equipment could be purchased with grant funds, the more critical problem is the cost of routinely running large

²⁹ See European Universities Association (2005), 'Doctoral Programmes for the European Knowledge Society: Results of EUA Doctoral Programmes Project'. Brussels: EUA.

machinery or buying other equipment. Those who do want to continue in science often have no alternative but to go abroad. This is especially the case where the research field of interest is not well developed in the home country and a move is essential in order to pursue it. This was the case for Marcin, who came to Germany to do his doctorate after deciding in Poland that he wanted to work in particular field of physics. He explains that there was no equipment at his home institution in Poland so he had to leave there:

'[I could] either go to Breslau where you have to work in a group of 20 people and then you can measure for 2 weeks and wait say 2 months to get the measuring time or go to Germany and work all the time with the machine doing just what you like'.

Similarly Boyko explains that he would have been able to get a job in certain discipline areas but not in his area of expertise:

'For my speciality there weren't many employment opportunities.[...]They weren't good jobs for me because I could do something in engineering but it wasn't what I really wanted'.

The opportunities in all areas of science research, not just in new and emerging fields, seemed limited. Rada points out *"the research [in Bulgaria] isn't developing very well. The universities are fewer and I'd like to do research or to go in a company but it's difficult at that stage in Bulgaria for scientists.[...]"*. It is not just the lack of large, expensive machines that is the problem but much more basic things such as glassware and access to chemicals that can prove problematic. Todorka articulates the problem: *'there are such poor conditions for work - it is not only salary – it is equipment – chemicals – they are SO expensive.'*³⁰

It is perhaps in this area where there seemed to be the most marked differences between the Bulgarian and the Polish contexts. Polish respondents made comments indicating that everything can be done in Poland though only with long delays: *'we have every kind of equipment but not so many like here so you can learn everything but not as fast as here.'*³¹ Similarly Sylwia describes her lab in Poland: *'so the equipment and everything it is exactly the same as here. So maybe here you have more groups and fewer people for the same equipment...'* and Marcin indicated above that he could have gone to a different Polish

³⁰ Respondent's emphasis

³¹ Lech. MOBEX2

institution in order to pursue research in his chosen field but opted for Germany because he would have easier access to the necessary equipment.

The examples given above highlight that in many instances actually completing the experimental or empirical work involved in a doctorate is very difficult if not impossible in Bulgaria and international mobility is necessary in order to complete the experimental part of the work. In these cases, the motivation to move is relatively straight forward because without mobility, a doctorate cannot be completed. However, comments such as those made by Lech and Sylwia above indicate that in Poland especially it is possible to do scientific research although it might take longer than it would elsewhere. In addition there are areas of science which require very little in the way of an experimental set-up in order to carry out meaningful research and these areas can be carried out in both Poland and Bulgaria, for anything else mobility, it seems, is essential.

The Host country context: Pull factors and destination decisions

Scientists are attracted to better science infrastructure and funding, better working conditions and higher salaries. The decision to leave the home country is thus often led by the desire to go where 'good science' can be achieved. While the OECD identifies potential increases to earnings as one of the most important reasons why people migrate,³² the DTI report 'Knowledge Migrants' states that in the IT and biotechnology sectors one of the key reasons highly skilled researchers move to work in the UK is the desire to work with 'leading edge researchers' 'state of the art equipment' and in a 'meritocratic' system'.³³ Dickson also argues that many scientists leave their home countries not so much because of wages '*but rather to seek an environment in which they can work effectively with enthusiasm and support*'.³⁴ In such cases, where scientists are relocating in order to work with leading researchers in their field and with better funding than is available in their home countries, the framework for their location decision has already been set: they will consider those countries with institutions which offer them the best opportunities in terms of equipment, access to materials and networks as well as salary and working conditions. A number of authors have therefore concluded that prestige is a particularly

³² OECD (2002), op cit note 13.

³³ Department of Trade and Industry (DTI) (2002), op cit note 16 at page 22

³⁴ Dickson, D. (2003), 'Mitigating the Brain Drain is a Moral Necessity' Science and Development Network 29 May 2003 available at <http://www.scidev.net/en/editorials/mitigating-the-brain-drain-is-a-moral-necessity.html> [last accessed July 2009]. See also Ackers, H.L.(2005), op cit note 8.

important factor in shaping the mobility and location decisions of the highly skilled.³⁵ Previous studies point for example towards a high concentration of foreign researchers in the golden triangle of Oxford, Cambridge and London.³⁶ The UK as a whole thus benefits from the reputation of Cambridge and Oxford universities, whereas in Germany it is the research institutions of the Max Planck society that are prestigious and well known internationally. Both German and UK universities are well represented in the international university league tables, with the UK having 10 institutions and Germany 5 of the highest ranking 100 universities in the world³⁷ and both countries attract a significant proportion of international scientists. Both countries are thus useful case studies because they are known to be key receiving countries.

Attracted by excellence: The desire to 'do good science'

The rapid development of science and Research and Development (R&D) in the west³⁸ and the comparatively higher levels of funding for science in Germany and the UK allow doctoral candidates in those countries to access the latest equipment and state of the art facilities. Even where lack of such equipment does not make research impossible, limitations in access may delay results and even a delay in putting forward results can be damaging because being able to work effectively is of utmost importance in science as competition between groups working on similar issues is fierce. Hanna explains:

'We did some experiments and we wanted to publish it and I had this result it was in April or May and the paper was finished in July and unfortunately someone was faster than us. It was one year of my really hard work and [...] I think the other group had good support and was able to write in a very short

³⁵ See for example Avveduto, S. (2001) (ed.), 'International mobility of PhDs', in Innovative People: Mobility of Skilled Personnel in National Innovation Systems, Paris: OECD. Mahroum, S. (2000a), 'Global Magnets: Science and Technology Disciplines and Departments in the United Kingdom' 37(4) Minerva 379-390. Mahroum, S. (2001), op cit note 12. Meyer, J., et al. (2001), 'Scientific nomadism and the new geopolitics of knowledge' 168 International Social Science Journal 309-321. Department of Trade and Industry (DTI) (2002), op cit note 16.

³⁶ Ackers, H.L. (2001), 'The participation of women researchers in the TMR programme of the European Commission: An Evaluation', Brussels: European Commission (DG Research). Van de Sande, D., Ackers, H.L. & Gill, B. (2005), 'Impact Assessment of the Marie Curie Fellowships Under the 4th and 5th Framework Programmes of Research and Technological Development of the EU (1994-2002)' Final Report, Brussels: European Commission.

³⁷ Shanghai Ranking Consultancy (2010), 'Academic Ranking of World Universities – 2010' [online] available at <http://www.arwu.org/ARWU2010.jsp> [last accessed July 2010]

³⁸ Jalowiecki B and Gorzelak J (2004), op cit note 15.

time so now the paper will probably go to another not as good journal so the groups in Poland end up with the not so good publications’.

Because Hanna’s group lacked the resources and support to work fast and effectively, a western group was able to publish their results sooner and submitting them to the most influential and highly regarded journal leaving Hanna’s group looking second best. This may have implications for the future reducing the group’s ability to secure research funding and reducing the employability of its members.

The DTI ‘Knowledge Migrants’ report ranked a number of factors influencing the decision to work in another country and it is interesting to note that gaining experience or knowledge, career development and better opportunities abroad were the top three responses given in that survey.³⁹ The sample included a group of researchers from the biotech industry who seemed to be in agreement that a major motivation for mobility was the fact that the research area was more developed elsewhere than in their home country. Similarly, a survey of foreign PhD students and researchers in Finland observed that the top mobility motivations were the high quality of research environment abroad and career development.⁴⁰ The data analysed for this thesis is in line with both of those studies in that it indicates that working effectively in a high quality research environment is important to doctoral researchers. As the MOBEX2 respondent Ivan puts it: *‘For me it’s very important to be in a good group, to have a good PhD thesis and just to be competitive’.*

This desire to work effectively goes beyond the use of up to date equipment and easy availability of chemicals and materials. Svetlana explains:

‘Access to journals again is a problem because here [in the UK] I have immediate online access to virtually everything, they don’t. [...]Access to databases as well which is all linked through the Internet and a, the Internet connection is slow and b, they don’t have subscription to send the databases they need so some of them are open but some of them are not’.

As Hanna’s case above illustrates, quick access to journals and databases can be imperative to be able to prepare publications quickly and competently.

³⁹ Department of Trade and Industry (DTI) (2002), op cit note 16.

⁴⁰ Puustinen-Hopper, K (2005), ‘Mobile Minds. Survey of Foreign PhD Students and Researchers in Finland’ Publication of the Academy of Finland 1/05, Helsinki, Finland. See also Millard, D. (2005), ‘The Impact Of Clustering On Scientific Mobility: A case study of the UK’, 18(3) *Innovation* 343-359.

The desire to work effectively and do good science is linked to the desire to work in an environment which is most conducive and supportive to their work. This kind of environment can often be found in prestigious institutions and centres of excellence. Yet prospective doctoral candidates' conceptualisation of excellence varies. Millard indicates that the reputation of a country in terms of research excellence and research environment plays an important role when shaping scientists' mobility and location decisions⁴¹ and some do narrow it down to country level as Jan does: *'With computer science for example you look for papers which universities and who makes what and you mainly come up with these three countries [Germany, UK, USA]'*. More often however respondents were focused on individual institutions. Georgi said *'[German city] has a very good name for molecular biology. ... I heard for the first time about [the city] when I was still at school'*. Similarly the exchange with Teresa highlights the attractiveness of a prestigious UK institution

T: Yes I looked in Poland, I looked in America.

I: What were you looking for?

T Then I think for excellence mainly.

I: And money I guess some sponsorship?

T: Yes scholarships yes although they are the same all over the UK.

I: In terms of choosing [UK institution]?

T: Yes that was academic excellence

Millard thus goes on to note that the perceived reputation of individual areas, institutions or clusters is more important than that of the country overall.⁴² Mahroum talks about scientists moving to gain access to scholarly "power", which could be seen to mean access to a high quality research environment as a whole but also access to certain professors or groups.⁴³ Irina highlights how attractive an individual or group can be, not only in terms of their reputation and prestige but also in terms of the support they can offer doctoral candidates:

'I didn't look for a place to go abroad. I was sort of thrilled and honoured to work with this particular professor in this particular area [...] And I also had very powerful support from the Professor in [UK university] here, he was my referee...'

⁴¹ Millard, D. (2005), op cit note 40

⁴² Ibid.

⁴³ Mahroum, S. (2000a) op cit note 35.

However excellence is defined by the individual scientist, Mahroum notes '*the ability of some academic locations to attract highly talented personnel from both the local labour market and from overseas is enormous*'.⁴⁴ We will return to this issue in the context of formal networks and centres of excellence in more detail in chapter 8.

This section has outlines the push and pull factors as seen by respondents in the MOBEX2 project which influence doctoral mobility. The discussion has highlighted that although mobility decisions are often complex, they are also often influenced by the quality of the science labour markets in home and potential host countries as well the reputation of host institutions or research groups. The section has focused on professional factors influencing doctoral candidates and the next section considers the extent to which academic literature has engaged with those factors and the law and policy relating to doctoral mobility.⁴⁵

Finding doctoral mobility in law and policy

Highly skilled migration generally and scientific mobility specifically have received some academic and policy attention. Scientific mobility has been recognised as an important means of enhancing knowledge, expertise and the professional development of scientists at all levels of their careers.⁴⁶ It is perceived as an effective form of knowledge transfer and research training⁴⁷ and a main aim within the European Research Area (ERA) and the European Area of Higher Education (EAHE).⁴⁸ A stint abroad at postgraduate or postdoctoral level is now crucial and is expected of European early career scientists.⁴⁹ It is also an integral part of doctoral training in many European universities.⁵⁰ In terms of organised doctoral mobility, Mitchell notices a significant increase of candidates going abroad during doctoral research through the Erasmus and other schemes⁵¹ and other

⁴⁴ *Ibid.*

⁴⁵ Although the focus here has been on professional factors, it is important not to underestimate the importance of less formal factors and personal issues in shaping mobility decision making. In particular family ties can play a significant role and these issues are discussed in more detail in chapter 7.

⁴⁶ European Commission, (2003b), 'Communication from the Commission to the Council and the European Parliament. 'Researchers in the European Research Area: One Profession, Multiple Careers'. COM(2003) 436 final.

⁴⁷ Casey, T., Mahroum, S., Barré, R., (2001), 'The Mobility of Academic Researchers: Academic Careers & Recruitment in ICT & Biotechnology. A Report for the IPTS/ESTO [online] available at <http://futures.irc.es/reports/ipts-estoMobility01.pdf>. [last accessed July 2010].

⁴⁸ See chapter 3 for a detailed consideration of both the ERA and EHEA.

⁴⁹ Casey, T., Mahroum, S., Barré, R., (2001), *op cit* note 47.

⁵⁰ European Universities Association (2005), *op cit* note 29.

⁵¹ Mitchell, I. (2002) 'European Doctoral Mobility'. DG for Education and Culture. Brussels: European Commission.

datasets suggest similar trends.⁵² While the push-and-pull factors discussed above are generally accepted as framing highly skilled mobility, it has been suggested that where the main objective is to do a PhD abroad '*it might be a mere chance that decides which country the individual will move to*'.⁵³ In her study of Italian PhD candidates who spent a period of time abroad, Avveduto conceptualises the choice of destination as fixed by two parameters.⁵⁴ The first being the type of research and the second being the PhD candidate's networks or what Stalker calls 'human chains'.⁵⁵ While both of these are undoubtedly important there is a further dimension which must be considered: the legal and policy frameworks must also be acknowledged because they will impact upon where the doctoral candidate can go in terms of immigration rules, available positions and funding as well as the rights and entitlements available to the doctoral candidate once they are in the host country. Chapters 3 and 4 examine the policy and legal frameworks applicable to doctoral candidates moving within the EU in further detail but it is important to note from the outset that the free movement and associated rights of doctoral candidates depend on their status in EU law.

However, in the EU context the status of doctoral candidates is unclear. In policy terms both the ERA and the EHEA treat doctoral candidates as both students and researchers and do not assign them a status as one or the other. The national contexts of Member States vary enormously, with some (such as the UK) seeing doctoral candidates as students, others (for example the Scandinavian countries) seeing them as employees or workers and some allowing different status depending on the context (as in Germany). The UK and Germany lend themselves well to an examination of the issues raised because the majority of doctoral scientists in Germany appear to have an employment or fellowship relationship with their institutions whereas in the UK doctoral candidates are classified as students. It can however be argued that in most cases doctoral candidates can neither be conceptualised in the same way as undergraduate students nor as fully fledged independent researchers. The issues they face at this particular level are unique to them

⁵² Deutscher Akademischer Austauschdienst [German Academic Exchange Service] (DAAD) (2010), 'Wissenschaft Weltoffen 2009'. Bielefeld: DAAD. Data also available online at <http://www.wissenschaft-weltoffen.de/> [last accessed June 2010]. Statistisches Bundesamt Deutschland (2010), 'Hochschulen' [online] available at <http://www.destatis.de> [last accessed December 2010].

⁵³ Puustinen-Hopper, K. (2005), op cit note 40 at page 19

⁵⁴ Avveduto, S. (2001) op cit note 35.

⁵⁵ Stalker, P. (2000), 'Workers without Frontiers: The Impact of Globalization on International Migration'. Geneva: International Labour Office/Lynne Rienner Associates.

but must also be understood in the context of scientific careers and scientific mobility more generally. There is now an abundance of literature considering migration and mobility in science.⁵⁶ More recently attention has been turned to doctoral candidates and the specific scientific, cultural and contextual factors shaping their mobility⁵⁷ but the legal framework shaping that mobility has so far not been examined in any detail. This thesis therefore takes a socio-legal approach to the issues under consideration. It focuses on doctoral candidates as a distinct group of scientists and as EU citizens and seeks to understand how the policy considerations shaping the ERA and EHEA and European Union free movement of persons law impact on doctoral research within the EU. In other words, the primary research question this thesis sets out to answer is this: how important and effective is EU law and policy in shaping scientific mobility at doctoral level?

Structure of the Thesis

Chapter 2 engages with the methodological underpinnings and the methods used in the projects as well as with the process of creating a doctoral thesis out of those larger linked projects. It seeks to explore the nature of socio-legal research in a European context and chart the author's development as an empirical, socio-legal and cross-cultural researcher.

Chapter 3 introduces the ERA and EHEA in more detail and considers how they engage with doctoral mobility. It sets out the rationale for mobility at policy level and argues that doctoral candidates can and should be treated as a distinct group of scientists who can neither be fully categorised as students under the EHEA or as researchers under the ERA, but in fact straddle both frameworks. It recognises that there is a risk that doctoral candidates might fall between the gaps left by the policy frameworks and that this risk is further increased for mobile doctoral candidates. However, it must also be acknowledged that doctoral candidates and doctoral level research have the potential to bridge the gap between the two frameworks and bring them together. By considering doctoral candidates as a distinct group of scientists rather than as either students or researchers, the ERA and EHEA can be brought together to form a more coherent framework in which science policy can be formulated. However, from a legal perspective, it is striking that these policy

⁵⁶ See for example Ackers, H.L. and Gill, B. (2008), op cit note 8. Mahroum, S. (2000b), 'Scientists and Global Spaces', 22 *Technology in Society* 513-522; Meyer, J., et al.(2001), op cit note 35.; Van de Sande, D., Ackers, H.L. & Gill, B. (2005), op cit note 36.

⁵⁷ See for example Avveduto, S. (2001) op cit note 35 and Puustinen-Hopper, K. (2005), op cit note 40.

debates at both ERA and EHEA level have hardly engaged with the legal framework governing intra-EU mobility or even mobility into the EU at all. Chapter 4 thus seeks to understand EU free movement of persons law in the context of doctoral mobility. It begins with an examination of workers' rights. It then raises the question whether doctoral candidates are workers in EU law and thus have access to the most generous free movement rights or whether they must 'make do' with student status and the more limited rights associated with that status. It further considers whether the concept of EU citizenship might be used to develop rights for doctoral candidates in their own right. It concludes that using the citizenship provisions in conjunction with the policy of the ERA and the EHEA would provide a rationale for extending rights to doctoral candidates as a distinct group of EU citizens.

The considerations so far are framed in rather theoretical terms and the following two chapters consider how they play out in the national contexts studied. Chapter 5 provides the first of two country case studies and sets out the situation of doctoral candidates moving to Germany for doctoral research. It begins by outlining the scientific context into which the candidates move, thus providing an insight into German science policy and how that maps on to the European agendas set by the ERA and EHEA. It then considers access to doctoral research positions in more detail, arguing that the German national framework has begun to recognise doctoral candidates not as students but as a specific group of scientists whose needs can best be addressed by treating them as such. In Germany, it is argued, there exists a level playing field for nationals and other EU citizens competing for doctoral positions. Chapter 6 then provides the second of two country case studies and sets out the situation of doctoral candidates moving to the UK. It is structured in a similar way to chapter 5 for ease of comparison and begins by outlining the scientific and higher education context into which the candidates move. It then considers access to doctoral research positions in more detail, arguing that the UK system makes it unnecessarily difficult for nationals of other EU Member States to secure funded doctoral positions and that the UK aims to protect its own nationals in this context. By conceptualising doctoral candidates as students, the UK can justify not only charging them tuition fees but also excluding EU nationals from eligibility for maintenance awards. In addition, student status tends to signal that the value of doctoral research is limited, and of course it also has detrimental implications for eligibility for important rights such as maternity rights, social security rights and social advantages.

It must however be recognised that mobility decisions are not made on a purely professional basis and that decisions about family life and personal issues are often inextricably linked to career and mobility decisions. Chapter 7 thus engages with the importance of family and personal ties on doctoral mobility. As well as considering how personal ties might impact on the decision to become mobile and on the choice of destination, the chapter also considers the extent to which the rights of family members as well as family related rights such as access to family leave and childcare play a role in the mobility of doctoral scientists. In this context the preponderance of dual science career couples can be very important and the chapter considers the policy response to such constellations in order to determine the extent to which such doctoral candidates' needs are addressed.

Chapter 8 follows on from the latter part of chapter 7. It unpicks a further layer in the multi-layered framework which shapes scientific mobility at doctoral level. We have so far considered EU level law and policy as they operate in the national context. In many respects, similar frameworks exist in the mobility of any group of EU citizens taking advantage of free movement rights. This chapter discusses whether there is anything special or different about scientific mobility from EU mobility in general and if so, how that impacts on doctoral mobility in particular. It examines scientific mobility and exchange schemes at EU and national level and argues that these formal schemes create a 'scientific bubble' - a specific, relatively autonomous environment - in which mobility takes place. While the bubble itself may operate within the legal and policy frameworks discussed previously, scientists themselves need only gain access to the bubble, which then provides the frame of reference for their mobility experience. Furthermore, it is argued that networks and collaborations which are less formal than exchange and mobility programmes act in a similar way by providing established mobility patterns and flows in which doctoral scientists can follow a tried and tested path.

This analysis leads into the concluding chapter, which brings together the various frameworks and considers how they overlap and interact with each other as well as how they engage with doctoral candidates' needs. The chapter aims to highlight gaps left in the frameworks which need filling in order to fully protect the rights of doctoral candidates and further enhance opportunities for mobile doctoral candidates, making explicit how considering doctoral candidates as a distinct group of EU citizens and scientists might provide a way to more successfully bridge those gaps.

Chapter 2: Building a Thesis out of Socio-Legal Empirical Research: Methodology, Methods and Issues

Doctoral theses in law do not often have a separate methods chapter. Legal method is something, surely, that all lawyers are familiar with. After all they are trained to 'think like lawyers' from the moment they set foot in a law school.¹ Lawyers are trained to read cases; they are taught how to interpret statutory material using different methods and are well acquainted with legal research methods. They can decode citations, find law reports, track down statutory instruments or white papers and know where to search for the latest judgements or government proposals. Lawyers can explain what the law says and sometimes even what it means in a given practical scenario; what lawyers are less good at is acknowledging that legal method is no different, no more objective, than any other approach to research. Lawyers are taught to think of legal reasoning, statutory interpretation and legal research in general as an objective exercise; one which is divorced from the researcher's, in fact from anyone's, personal view or perspective. Law then is rational, objective and dispassionate and those who practise it, whether as practitioners or academics, are, like the oft cited man on the Clapham omnibus, objective, dispassionate, rational and reasonable. Jo Shaw, in discussing socio-legal work in the European Union context, captures this way of thinking about what lawyers do in non-doctrinal work: '*This [work on the Court of Justice as a political institution] has involved some collaboration with lawyers, principally seen as 'technicians' feeding in a data set of what the Court (objectively) 'does'...*'²

However, the law and legal processes studied here are more than objectively measurable rules and procedures or an objective data set. Legal analysis, like any other analysis, is inextricably linked with the researcher's own position, experience and biography and, perhaps even more importantly, peoples' experience of the law will be shaped by their background and context. This chapter therefore explicitly engages with the approach taken to the research which underpins this thesis. This involves more than a section detailing the approach to the empirical work, the 'socio' and 'empirical' aspects of the research, which is of course provided below. In addition however it is important to examine the researcher's approach to legal analysis in more detail. This chapter questions the notion that legal analysis is any more objective than any other type of analysis and acknowledges the fact

¹ See for example Cownie, F. Bradney, A. and Burton, M. (2007), 'English Legal System in Context'. 4th ed. Oxford: OUP

² Shaw, J. (1997), 'Socio-Legal Studies and the European Union' in Thomas, P.A. (ed), 'Socio-Legal Studies'. Aldershot: Ashgate Dartmouth at page 313

that the experience of a legal framework can be different for different people and indeed that there may be a significant difference between a law in the books, a law in practice, the purpose of a law and its actual impact. Untangling all these elements is not always straightforward but, as Shaw notes *'without a developed sense that law in the EU context is a problematic enterprise, socio-legal studies on the EU will provide little more than a contextualised explanation of existing legal models rather than a critical exploration'*.³ In order to provide that critical exploration this thesis engages with the law, with interdisciplinary, theoretical debates and with empirical data collected as part of a number of projects. As Adler puts it:

'Because the facts do not speak for themselves, because concepts need to be constructed and because the process of concept construction needs to be theoretically informed, empirical socio-legal researchers need to have a good grasp of legal, political and social theory. This is clearly the case if the research is intended to advance theory but it is, arguably, also the case if the research is intended to deepen understanding, challenge complacency, or inform and evaluate policy'.⁴

All aspects of the research then, and not just the empirical element, should give rise to discussion in a methods chapter. Not doing so would only reinforce the idea of lawyers as technicians supplying information for others to analyse.

'Three interconnected, generic activities define the qualitative process. They go by a variety of different labels, including theory, analysis, ontology, epistemology and methodology. Behind these terms stands the personal biography of the researcher, who speaks from a particular class, gender, racial cultural and ethnic community perspective.... Every researcher speaks from within a distinct interpretive community that configures in its special way the multicultural, gendered components of the research act'.⁵

Biography is therefore important in the research process. Acknowledging the role of the researcher arguably allows for a more reflective and thus ethical research practice. It also

³ Ibid at page 317

⁴ Adler, M. (2007), 'Recognising the Problem: Socio-Legal Research Training in the UK'. Edinburgh: The University of Edinburgh. At page 1.

⁵ Denzin, N. K. and Lincoln Y.S. (2005), 'Introduction: the Discipline and Practice of Qualitative Research' in Denzin, N. K. and Lincoln Y.S. *'Handbook of Qualitative Research'*. 3rd edition. Sage Publications at page 21

helps to explain and justify methodological preferences and choices and acknowledges the impact the researcher ultimately has on the research data. In other words, this thesis is not based on the collection of neutral information and data, but on a data generation process to which the researcher was central. The issues arising from the author's biography are considered following the discussion of the methods employed throughout the research.

The MOBEX2 Research: Methods used

This thesis is based on a legal analysis of EU and national law and an in-depth analysis of empirical work carried out as part of 3 socio-legal projects. The methods used were very similar in relation to all of the empirical projects which underpin this thesis. This section therefore explores the methodology used in the context of the MOBEX2 project which was the largest and which contributed the most data to the analysis of the thesis. Differences to the other projects and particular issues arising from them are discussed where relevant. The MOBEX2 project was split into distinct phases as follows:

- Phase 1: Analysis of EU law and policy in relation to transition and EU enlargement
- Phase 2: National Level Legal and Policy Analysis
- Phase 3: Email/Postal Questionnaire
- Phase 4 : Qualitative Interviews

Background and Policy Work

Working with partners in Poland and Bulgaria, the initial background data, policy and legal analysis was brought together in thematically ordered country reports. The reports covered questions around science and higher education policy, mobility/migration patterns and issues surrounding European Union enlargement. In addition to the desk-based work, the team carried out a number of key-informant interviews with research funders, higher education administrators, representatives from ministries of research and other stakeholders.⁶ The author interviewed several (n =12) key informants in Germany and was present at the interview conducted in the UK. She prepared a thematic report on the development of the Bologna Process and internationalisation of Higher Education and research.

⁶ A full list of key informants can be found at appendix 2

The Questionnaire

The MOBEX2 questionnaire was designed as a sampling tool to locate a population of scientists and then elicit background information about potential interviewees. It covered basic personal data, brief career and mobility history as well as some questions relating to mobility intentions. There were two versions of the questionnaire, one for scientists in their home countries and one for scientists in the host regions.⁷ Each version was posted online in both English and German and the results were collected in a Microsoft Access database. The aim was to collect 100 responses in each country. The sampling strategy used in this project resulted from a number of pragmatic as well as theoretical choices. Even the overall population to be accessed was quite small, consisting of scientists from Bulgaria and Poland in the disciplines of Biology and Physics from doctoral level upwards who were spending or had spent a period of at least 12 months in either Germany or the UK or who were considering doing so. The sample would be generated by contacting institutions in all the countries and asking eligible people to participate. A total 243 responses were received with the following distribution: 26 from the UK, 35 from Germany, 118 from Poland and 64 from Bulgaria. As the questionnaire was used predominantly as a sampling tool, the research team did not make significant efforts to chase respondents in the UK or Germany where interview respondents were relatively easily found. In addition the number of Polish and Bulgarian scientists in the UK and Germany was more limited than the number of such scientists considering moving from their home countries. The uneven distribution of responses is therefore not that surprising. More reliance was placed on the questionnaire in Poland and Bulgaria so partners were asked to attempt to generate as many responses as possible. The author contributed specific questions to the questionnaire and was involved in the overall design, piloting and amending of the questionnaire. The author was also responsible for translating the questionnaires into German.

The interviews

The interviews were designed as qualitative semi-structured interviews. Using a thematically structured interview schedule containing a list of areas to cover together with some useful prompts would help ensure that the same areas were covered in each

⁷ See Appendix 3. The questionnaires used for the study on enhanced stipends can be found at appendix 4.

interview and that useful data was generated.⁸ This was important as the interviews would be carried out by different people across a time span of roughly a year.

Contact was initially made through the questionnaire responses; particularly in Poland and Bulgaria, but later also reliance was also placed on recommendations and referrals, effectively snowballing the sample. 89 interviews were carried out in total across the four countries; with 14 Polish nationals being interviewed in Poland, 17 in the UK and 20 in Germany; 11 Bulgarian nationals were interviewed in their home country with a further 14 being interviewed in the UK and 13 in Germany. The author carried out all interviews in Germany and a further 6 in the UK, Poland and Bulgaria.

Analysis

The interviews were recorded and then transcribed, either by professional transcribers or by the research team. The analysis of the interviews was undertaken using the qualitative data analysis software N6 allowing the thematic 'coding' and thus relatively easy interpretation of sections of the interviews. The coding and analysis for the project was shared within the team and the author coded all Germany based interviews as well as a significant proportion of those carried out elsewhere. For the purposes of this thesis however, the author reanalysed the relevant interviews and recoded them to the analytical framework relevant to this work.

Legal Method and interdisciplinary reflective practice: Issues arising from the methods used

No methodology or methods are uncontroversial. All have their critics and all entail practical problems. Much has been written about those issues already and it is not the intention to rehearse the advantages and disadvantages of different methods here in any detail.⁹ Suffice it to say that the researchers working on the project, including the author naturally gravitated towards a qualitative methodology and that the research questions to be answered related to matters to be explored in detail rather than to the collection of quantifiable data. The choice of methods was undoubtedly shaped by the researchers' preferences as well as disciplinary backgrounds but in addition some choices were

⁸ The interview schedules used for all of the projects can be found at Appendix 5. The approach used was similar for all and worked well providing both structure and flexibility.

⁹ See for example Denzin, N. K. and Lincoln Y.S. (2005) op cit note 5; Bryman, A. (2008), 'Social Research Methods'. Oxford: OUP. The Web Centre for Social Research Methods at <http://www.socialresearchmethods.net/> [last accessed December 2010].

pragmatic ones. These were shaped by issues around access to participants and being able to get sufficiently detailed data in a fairly short space of time, as well as theoretical considerations around how particular methods are associated with particular epistemologies and ontologies.

Theoretical considerations were important even where pragmatic decisions needed to be made. The research, for example, acknowledged the limitations of the survey method as a tool for collecting opinions. Cicourel for example paints a bleak picture of the survey method in social science research:

*'The fixed choice questionnaire provides standardised propositions (stimuli), from the point of view of the researcher, but begs all of the relevant questions posed by language and meaning, treats the "rules" or norms as self-evident, and eliminates the problem of situational definitions by a static conception of role taking'.*¹⁰

Arguably the use of surveys ignores the cultural and country specific context in which the studies took place and an understanding of exactly those contextual issues is important for any valid comparison to be made or conclusions to be drawn. However, Cathy Marsh offers an altogether more positive approach which embraces the challenges posed by the survey method.¹¹ While acknowledging the problems of meaning and accessing opinions through fixed choice answers, Marsh points out the obvious: Why not ask respondents for their meaning? Alternatively she suggests 'reading' the meaning from their answers.¹² Neither approach is without problems, particularly in cross-cultural or multi-lingual research,¹³ but Marsh's approach at least leaves the door open for useful survey research to be conducted in social science fields of study, even if this may have to be backed up with other methods in order to ascertain meaning. This then was the aim in this research.

Furthermore, the research recognised that the problem of meaning imposition or working only within the researchers' frame of references is equally present in qualitative research although it is perhaps less visible. Ann Oakley puts it like this: *'however one looks at it, from*

¹⁰ Cicourel, A. (1964), 'Method and Measurement in Sociology', New York: The free press of Glencoe at page 114

¹¹ Marsh, C. (1988), 'Exploring Data', Cambridge: Polity Press

¹² *ibid*

¹³ See further below

whichever paradigm, researchers are the ones with the power to define.¹⁴ In other words, the researcher or the research team are in a position to decide what is and what it not important by asking certain questions and not asking others, by focusing the analysis on certain aspects and ignoring others and by bringing their own interpretative framework to the collected data. Bearing in mind this power to define, we now turn to examine the first main methodological issue raised: The role of the legal analysis in the research process.

Legal method in the context of interdisciplinarity and reflective practice

As Chatterjee points out, *'it is essential for a researcher in Law to know how to interpret statutes or decisions of courts...'*¹⁵ He continues by giving examples of what a researcher should do when examining a statute. He considers it important to understand why the legislation was enacted, whether there are any amendments, when it came into force and whether it remains in force. He also considers the importance of staying up-to-date. All his advice is useful but it also seems to reinforce the idea of the law as something objective and the interpretation of the law as something uniform that all agree on as long as the right process has been gone through and the legal provision was considered 'as a lawyer'. This is of course the lawyers-as-technicians approach commented on by Shaw.¹⁶

Throughout MOBEX2 and the other projects the legal framework played a secondary role. The researchers did not engage in any detail or depth with the legal framework governing the mobility and migration of scientists. An overview of migrant workers' rights in the EU and of transitional measures following the EU enlargement of 2004 was collated as part of the background work but the projects did not include critical examination of the legal provisions. There are two main reasons for this. Firstly, although MOBEX2 in particular was framed in the context of EU enlargement, the empirical work collected was indicating that the participants did not consider the change in legal framework to be of significance and in fact they referred to factors other than legal rights and entitlements as being much more important. Secondly, the research team's efforts and interests were focussed elsewhere, considering in particular science policy, the ERA and the EHEA as well as migration theory and debates around brain drain and internationalisation of science and higher education. Law, it initially appeared, was just not that important.

¹⁴ Oakley, A. (2000), *Experiments in Knowing: Gender and method in the social sciences*, Cambridge: Polity Press, at page 72.

¹⁵ Chatterjee, C. (2000), *'Methods of Research in Law'*. Old Bailey Press. At page 37.

¹⁶ Shaw, J. (1997), *op cit* note 2.

However, the fact that the participants in all projects did not discuss law or even their legal rights and entitlements explicitly cannot logically lead to the conclusion that law does not matter or is not an important factor in the context of scientific mobility within the EU. Most people do not make decisions, even important decisions such as where to live or what career path to follow, with reference to the law governing that particular area of their lives. In fact most do not directly engage with the law or legal provisions at all. When talking about their decision making processes, their lives and experiences, people do not frame them in the legal and policy context in which they have taken place. They may engage with processes and procedures such as applying for a job or fellowship position, or a visa or residence permit which are all linked to a legal framework but the engagement is with the administrative process, not with the law itself; and often it is a process which feels removed from the law because it does not involve legal institutions or lawyers but administrators or other officials. Law, it seems, is something only consciously turned to when something goes wrong.

It should therefore not come as a surprise that the research respondents talked little about the law in the context of their mobility/migration decision making and experience. Unless something went wrong for them, they are likely not to have thought about the legal framework and its impact in much detail at all.

This consideration marks the point of departure for this thesis. While the four projects on which this thesis draws focussed on the experience of the participants and thus were happy to confine discussion of the legal context to the background, this thesis seeks to refocus our attention on the potential importance of the legal framework in shaping those experiences. The fact that participants talked little of law and legal rights does not make law irrelevant. However, it is acknowledged that there is a danger here of imposing the authors frame of reference on the research participants; or put another way, do legal researchers assume, because they are lawyers, that the legal framework must be relevant, define law as something more than it is and impose their view on their respondents? That would be to simplify the issue. A full understanding of scientists' mobility and career decision making must include an examination of the legal framework because that framework provides part of the context in which these decisions are made. Furthermore the law and policy shapes some of the other factors which scientists do engage with such as the availability of positions, science funding, immigration regulations and recognition of qualifications. In

order to draw out these issues though, something more than a purely doctrinal analysis of the legal provisions is necessary.

Determining what the law says is relatively easy. Legal texts at EU and national level are freely available online as is the case law which gives some insight into the courts' interpretations of the legal issues in questions. Textbooks and academic commentary provide further starting points for interpretation and analysis. These materials are available in multiple languages allowing an insight into the difference national and cultural contexts might make if researchers are able to access material in more than one language.¹⁷

However, integrating the empirical work with that legal and policy analysis is challenging. If respondents are asked direct questions about the law, they will often not know the answer and if they are asked to reflect on their experiences they will rarely mention the legal framework explicitly. Fitting the respondents' experiences into the legal framework thus falls to the researcher. The researcher is the one who decides how the information generated through their discussions with the respondents fits into the legal and policy framework which they have constructed on the basis of their interpretation of the law. The researcher's power to define is thus significant and their conclusions are likely to be influenced considerably by their own biography. That is not to say that their conclusions or the data collected are consequently invalid, just that they have been shaped by who they are as much as by who their respondents are. As Charlotte Burck notes about her own research '*I had been bolder in my analysis of those aspects of experience that were more similar to mine than I had in my analysis of those which were more different*'.¹⁸ Like Burck, the author of this thesis also felt more confident analysing experiences which were in some way similar to her own. She too relied on colleagues to help explore in more detail those experiences which were more different. While working in a research team means that the power to define is not vested in one researcher but is shared, it is nonetheless, the researchers who were the ones who decided which literatures and theoretical debates to engage with, who decided what questions to ask and it was the author who, in this thesis, defined the legal framework and its importance. The power to define, in relation to the legal aspect of the work was no more or less powerful than in relation to any other part of the work. The law was just another aspect to explore, evaluate and discuss with respondents (even if indirectly). The law and the experience of legal issues presented

¹⁷ The issues related to cross-cultural research and language are considered further below.

¹⁸ Burck, C. (2005). 'Multilingual Living: Explorations of Language and Subjectivity'. Basingstoke: Palgrave. At page 166.

throughout this thesis is therefore the author's interpretation which is based on a detailed reading of the empirical data as well as relevant literatures. It offers an in-depth and contextual analysis which takes account of the lived experience of the research participants without pushing the legal framework into the background. It does not posit law as something fixed and objectives but allows us to understand how law is understood, lived and experienced in the everyday lives of the research participants. As such it makes a valuable contribution to our understanding of international mobility at doctoral level as well as to EU citizenship status and associated rights.

Cross national and cross cultural research

The three empirical projects influencing this thesis all involved empirical work in countries other than the UK and with nationals from other countries who were not native speakers of English. In addition the work drawn on here, and in particular the TH Marshall Fellowship which was based in Germany, involved working within a national context different from the researchers' own.

While the MOBEX2 project had partners in Poland and Bulgaria who were responsible for the background work and who provided valuable insights into national contexts, the project did not have a partner in Germany. Instead it was the author's role within that project to act as the German link. Personal biography is important in this context as the author's language skills as a native speaker of both English and Germany as well as her family background allowed genuine engagement with the German national context. This was particularly supported through the TH Marshall fellowship which allowed the author to spend 6 months in Germany to work within the national context. Data availability, even from the UK, was not problematic. Legal texts, policy documents and statistical datasets were easily available on the internet, many even in English, so questions of translation for the rest of the project team did not arise. However, sometimes the task of providing information on Germany seemed merely a technician's exercise, viewing the German policy and legal documents as objective datasets in exactly the way criticised by Jo Shaw.¹⁹ It is worth reminding ourselves that we cannot simply assume that because someone is able to speak and read a particular language or even shares some affinity with a particular community, the information and data collected will be experienced in the same way by everyone from that community or with that language ability. Temple puts it like this:

¹⁹ Shaw, J. (1997) op cit note 2.

*'The assumption that there is no need to examine the position and perspective of bilingual researchers since knowledge of a language per se gives them a direct access to the view of supposedly homogenous communities is an essentialist one.'*²⁰ And further *'The employment of bilingual researchers has many benefits but they are not interchangeable conduits of meaning across language.'*²¹

Biography thus clearly shapes how researchers engage with the material under consideration as well as the context in which the research takes place. This is particularly the case in this research as the languages used for the empirical work (i.e English and German) were not the native languages of the research participants and therefore common use of language did not connote common membership of any cultural context. That is not to say that language was not an important issue to consider and it is to this consideration we now turn.

Language

The issue of language and in particular bilingualism and translation is generally discussed in the context of cross-cultural research. The literature in this area spreads across a whole host of disciplines and language was also a factor of concern to the author. In any discussion about cross national and comparative research it is important to confront the issue of language and translation. The first translation issues encountered related to the MOBEX2 questionnaire design. The Questionnaire was initially constructed in English with input from the project partners. Most questions were uncontroversial but one caused problems. To establish the level of seniority of respondents accurately examples of positions or titles expected to fall into each possible categories were included. This, it was thought, would avoid some of the issues of different interpretations in different national contexts.

However, a mere translation of the concepts was not sufficient. Some of the job titles were identical when translated but belonged in different categories in the different countries. Furthermore the conceptualisation of who was to be categorised at what level was also context specific. Careful negotiation with the project partners was therefore imperative at this stage to allow the phrasing of the question and give prompts which would have the

²⁰ Temple, B. (2006), 'Being Bilingual: issues for Cross-Language Research'. 2(1)[Journal of Research Practice](http://irp.icaap.org/index.php/irp/article/view/20/66). Article M2 [online] available at <http://irp.icaap.org/index.php/irp/article/view/20/66> at page 3 [last accessed October 2010].

²¹ *ibid* at page 11

same meaning for all 4 country contexts. It was then the author's job to translate not only the job titles but also the ideas and concepts for the German version of the questionnaire. As Miedema and de Jong note '*concepts are clearly more than language: they are historically, socially and psychologically rooted and need to be understood in this context. A mere translation is often inadequate*'.²² Or as one German key informant, who was perfectly competent in English, noted at the end of a discussion with the author '*I am glad you speak German, I was wondering how I was going to explain all this in English!*'²³ The figure below highlights the complexity of the issues to be translated.

Figure 2.1: Questionnaire Question 4 on Seniority level

<p><u>Question 4 for scientists in Bulgaria and Poland</u></p> <p>4. We would like to get an impression of seniority for sampling purposes. Can you say which of the following best describes the 'level' of your current research position (for industrial scientists please select your equivalent level):</p> <p><input type="checkbox"/> Junior [In Poland: Doctoral candidate; assistant; senior assistant; research assistant] [In Bulgaria: Doctoral candidate, Assistant Professor (Category III), Researcher (Category III)]</p> <p><input type="checkbox"/> Intermediate [In Poland: post-doctoral /research fellow; assistant professor; adjunct] [In Bulgaria: PhD holder, Associate professor (Docent), Senior Researcher Category II]</p> <p><input type="checkbox"/> Senior [In Poland: senior researcher; group leader; Associate professor (DOCENT); Professor] [In Bulgaria: DSc., Professor and Senior Researcher Category I]</p>
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Source : MOBEX 2

This issue of complexity is an important point in relation to the empirical work undertaken. The respondents were after all non-native speakers of English and German and were being asked to talk about their personal experiences and decisions in a language other than their native one. This has implications for the research data. Although mostly very competent in English (and/or German) the fact that they were not native speakers is likely to have had some impact on the way in which the respondents were able to express themselves and how they articulated some very complex and sometimes emotional issues. In the analysis it is important to note that simplicity in language does not necessarily imply the simplicity of a point being made. On the other hand however, there is also no presumption of shared context and mutual knowledge so concepts that do not translate well are less likely to get lost in translation because the interviewee is expressing a concept in another language and

²² Miedema, B and De Jong, J. (2005), 'Support for very old people in Sweden and Canada: The pitfalls of cross-cultural studies; same words, different concepts?' 13(3) Health and Social Care in the Community 231-238 at 236/7

²³ Key informant comment noted in my field notes

is therefore often required to explain it in more detail than they might have in their native language. Meaning is therefore not presumed but constructed in the interview process and being a bilingual researcher aided this process even where the interview did not involve any aspects of translation or working in more than one language.

Knowledge of two languages and an awareness of language learning and the differing grammatical structures of languages can be extremely helpful when interviewing scientists. The majority of the doctoral candidates interviewed in Germany spoke fluent English with few mistakes. All were given the choice whether they wanted to conduct the interview in English or German and only one doctoral candidate opted for German and in most cases this preference was known prior to the interview and was often based on the language of previous correspondence. Once a history of using one language is established it often feels artificial to switch to another even where that it actually the preferred language of both speakers.²⁴

In interactions with non-native speakers – in the interviews with doctoral candidates in all the projects, at conferences, and when speaking to our research partners, the author sometimes felt able to understand their English more easily than her colleagues who speak only English. This was especially the case when non-native speakers' command of English was patchy. A related phenomenon is that research partners and non-native English speakers at conferences have commented that the author's English is comparatively easier to understand. There are two possible explanations. One is the question of whether some English accents are more difficult for non-native English speakers than others to understand, the other is that of language sensitivity.

The first issue is interesting but the author's English is neither accent free nor free from colloquialisms or 'local colour'. Nor do issues around accent explain why bilingual or multi lingual researchers are often better able to understand non-native speakers in spite of mistakes. The explanation lies in what can be termed language sensitivity. Having detailed knowledge of more than one language and operating in a context where both languages are used and interact as well as speaking frequently with non-native speakers facilitates the development of an understanding of non-native speakers' use of English or German. In addition knowing English and German, which have radically different grammatical systems, meant mistakes in word order, for example, do not require the researcher to ask for

²⁴ See for example Temple, B. (2006) op cit note 20 and Burck, C. (2005) op cit note 18.

clarification or repetition. Being bilingual can also provide wider vocabulary to draw on in assessing what a speaker might have meant. A word used wrongly or even just mispronounced might bear no resemblance to the English but might be similar in German, making the probable meaning clear to a bilingual but not necessarily a monolingual researcher. At the same time this understanding of language can aid the researcher in making themselves understood.

However, bilingual competence does not only bring advantages but also raises some concerns. As indicated above, personal biography is important and the fact that a researcher is bilingual does not automatically mean that they are also comfortable in both languages and cultures.

Notwithstanding the author's command of German and her family ties in the country, she has spent all her professional life in the UK and was studying the German context from the outside. The author did not have any specific expertise relating to Germany and although reading documents in the original language went some way to providing insight; it was insufficient to provide an insider's view. It was not until the author had the opportunity to spend a significant amount of time actually living and working in Germany and interacting with colleagues working in Germany on an everyday basis that the national context was fully understood and appreciated. Issues of language however remained a concern

Defining the native speaker

A native speaker is someone who has learned a language '*naturally without formal instruction*'.²⁵ However, it is quite possible that the first language learned is no longer a speaker's dominant language and in this case the author's experience of formal or academic German was extremely limited. The question arises whether language ability or lack of confidence in expressing more complex issues in the less dominant language impacts on the way research is presented and questions are asked and therefore on the response received from the participant. In other words, does the researcher make a different impression depending on which language she is operating in and if so, does it matter? The situation is complex where the researcher is perceived as a native speaker rather than a learner as there are then no indications that it might be necessary to make allowances for imperfect linguistic competence. Listening to the interviews later this is not apparent; there

²⁵ See Oxford English Dictionary

appears to be no difference in terms of the flow or level of the conversation between interviews conducted in English or German.

There may be a number of reasons why the issue of language was of significance to the author. The first issue is that the German interviews were also the first interviews conducted for the project where knowledge about the subject area was still being built. Secondly the author's own insecurities about language and speaking German may have led to interpreting language as being a much bigger issue than it really was and that the first few interviews, whether in English or in German would have felt the same. Thirdly, the author may struggle a little more in German but that that struggle is resolved before speaking. In other words what might seem like a clumsy way to say something is actually perfectly correct and user-friendly formal German or while the thought process is clumsy and longwinded, what is actually then articulated is completely acceptable. Whichever is the case, the critical issue which is highlighted is that of confidence and how confidence can have an enormous impact on the author's perception the interview. Does that necessarily mean that confidence also directly impacts on the data gathered?

In order to consider this question further the only one interview with a scientists conducted in German as the interviewee's preferred option is re-examined here. In this particular case arrangements had been made with Bartosz in English to meet him at his lab. After initial introductions he asked if the interview could be conducted in German which was unexpected given that all previous communication had been conducted in English. The author's field notes record Bartosz as saying several times that he was not really a 'people person' and that 'He was quite shy and not very chatty'. Looking at the interview in more detail it becomes clear that the process was quite artificial and laboured lacked conversational rapport achieved with other interviewees. It could of course be suggested that this was a language issue but equally it could be argued that it was partly because Bartosz truly wasn't a 'people person' and partly because his request to be interviewed in German had negatively affected and diminished the author's confidence. It is apparent that towards the end of the meeting a relaxed discussion about the project aims and objectives, timeframe and publication plans took place during which there are no signs of language problems. It seems then that confidence plays a more important role than language but that language is part of what constitutes confidence.

Interviewing scientists: elite group or peers?

From the discussion above it seems clear that the researchers have a powerful position in the research process. They set the framework in which discussions take place and they also set the analytical framework. However, power relationships in research can be complex and simply placing the power at the researchers door is too simplistic, especially where researchers are inexperienced or unconfident. As Mason rightly notes, *'the qualitative interviewer has to prepare themselves to be able to 'think on their feet' in the interview itself'*.²⁶ This is even more so the case where the group to be interviewed is considered elite in the way that scientists, as highly skilled, highly educated and intelligent people and can clearly be considered. Most are confident in their work and as to presenting their work to peers, colleagues and the public is often part of their job, they tend not to be concerned by the interview process. As Adler and Adler put it: *'It is easy to feel intimidated by these people...especially given that they are used to being in charge of most social situations'*.²⁷ However for the most part those interviewed were more akin to peers than an elite as they too were researchers working in higher education or research institutions. Interviewing senior scientists and key informants on the other hand was certainly more intimidating. While the researcher may have the power to define; in many cases the respondent has (and should have) the power to redefine through dialogue and discussion and in some cases has the power to impose their own agenda, as did one senior respondent who responded to the author's introductory comments with *'So you really believe all this [nonsense] then'*.²⁸ Ackers therefore rightly notes that: *'as researchers we must be aware that relationships between researchers and the subjects of researchers constitute power relationships (although the precise balance varies in every case and is quite complex...)*.²⁹

One researcher, 4 projects, one PhD: Building a thesis

The author's involvement in the projects underpinning this thesis is worth further exploration in order to gain an insight into the contribution made to the wider research and to explain in more detail the development of this thesis. The author was employed as a part time research assistant on MOBEX2. As such she was actively involved in the shaping of the project as well as in the management and all aspects of the research work. She conducted

²⁶ Mason, J. (2002) 'Qualitative Researching', Sage Publications at page 67

²⁷ Adler, P. A. and Adler, P. (2001) 'The Reluctant Respondent,' in J. F. Gubrium and J. A. Holstein (eds) (2001) *Handbook of Interview Research*. Thousand Oaks, CA: Sage, pp. 515-536.

²⁸ Todor, senior scientists in Germany. Comment recorded in my notes

²⁹ Ackers, H. L. And Dwyer, P. (2002) 'Senior Citizenship? Retirement, Migration and Welfare in the European Union'. Bristol: Policy Press.

all interviews in Germany as well as some additional ones in Bulgaria, Poland and the UK. She was responsible for the background work and the legal and policy analysis in respect of Germany. She acted, for all intents and purposes, as the German project partner.³⁰ The author's involvement in the other two empirical projects was less central. She acted as research assistant on the NORFACE study considering mobility of social science doctoral candidates. Here she interviewed doctoral candidates and supervisors in the UK, Germany and Norway as well as contributing to the policy and background work and co-authoring the final report.³¹ The author conducted a number of interviews with key informants, doctoral candidates and post doctoral researchers for the Research Councils UK (RCUK) funded study on doctoral and postdoctoral stipends in shortage area subjects. Finally the TH Marshall fellowship awarded to the author in 2006 allowed her to spend a significant period of time in Germany and to consolidate and develop her knowledge of the context in which doctoral candidates in Germany operate.³²

This thesis then developed alongside and parallel to the MOBEX2 project before eventually moving away from MOBEX2 and establishing its own identity. As time went on the author's interest and focus shifted back toward the legal framework and in particular EU free movement of persons law. While much of this thesis is underpinned by work carried out as part of MOBEX2; this PhD draws on empirical work from the other projects mentioned: 29 interviews with doctoral candidates from the MOBEX2 project form the basis and these are supported by additional material drawn from 13 interviews with social science doctoral candidates in the UK and Germany conducted as part of the NORFACE study as well as 10 doctoral candidates in the UK who were interviewed as part of an RCUK study on doctoral and post doctoral stipends. The focus of the thesis is on Germany and the UK in order to make the analysis manageable within the scope of the thesis and because the author had

³⁰ Relevant publications by the author from that project include Guth, J. (2007a), 'Triggering Skilled Migration: Factors influencing the mobility of early career scientists to Germany', Focus Migration Policy Brief No 6. Hamburg: Hamburg Institute of International Economics (HWWI). Guth, J. (2007b), 'Auslöser für die Migration qualifizierter Arbeitskräfte: Faktoren, die die Zuwanderung von Nachwuchswissenschaftlern nach Deutschland beeinflussen', Focus Migration Kurzdossier Nr 6. Hamburg: Hamburg Institute of International Economics (HWWI). Guth, J. and Gill, B. (2008) 'Motivations in East-West doctoral mobility: revisiting the question of brain drain', 34(5) Journal of Ethnic and Migration Studies 825-841. Guth, J. (2006), 'The Bologna Process: The Impact of Higher Education Reform on the Structure and Organisation of Doctoral Programmes in Germany' 31(1) Higher Education in Europe 327 – 338.

³¹ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility In The Social Sciences. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool

³² See Guth, J. (2007c), 'Destination Germany: Early Career Scientific Mobility, the Bologna Process and Choosing Whether and Where to Move'. TH Marshall Fellowship Report. Available at <http://www.brad.ac.uk/management/people/pubs/?author=iguth>

far less knowledge of Poland and Bulgaria and also less opportunity to get to know those national contexts. In addition the contexts within which doctoral candidates operate in the two countries chosen are different and illustrate the issues raised by the research questions set well. As such they make useful case studies for the purposes of this thesis.

The thesis further developed out of the author's personal experience and interest. Biography, which has been highlighted as important throughout this chapter impacted upon the research generally but is particularly important in shaping this thesis. A number of issues are relevant in this context. Firstly, the author is a law graduate and has worked in legal practice. She also however has a Masters degree in social research methods and can thus be described as having an interdisciplinary background. She worked in interdisciplinary teams with colleagues with backgrounds in sociology, political science, geography and economics as well as law. Secondly, the author is the child of an English mother and German father and spent her early years until aged 16 living in Germany. She is bilingual English/German and maintains close links with family in Germany. Finally, this thesis is concerned with the academic/scientific mobility of doctoral candidates. The author's research thus focuses on a group of people who can be described as peers. Although they are working in different disciplines, they are at the same stage of their career as the author and are experiencing some of the same issues.

Personal biography which saw the author move from Germany to the UK and then from the UK back to Germany to take up a research fellowship and then back to the UK and eventually taking up a full time lectureship in law influenced the topic chosen for development into this thesis. While MOBEX2 and the other projects are rooted in debates about science policy, internationalisation and brain drain/gain with the legal framework shaping the background to the work, this thesis puts the legal framework at the centre. It does so not because law is the most important factor, but because it is a factor which has not been considered fully in this context and because it is felt that the author's interest and skills could make a valuable contribution to the debates around doctoral mobility at EU level. The empirical work undertaken in relation to the 3 projects outlined underpin the work in this thesis but the interviews have been re-evaluated in the light of a new analytical framework. The detailed legal analysis is grounded and placed in context through the empirical work and the genuinely socio-legal approach bears in mind that law in the EU context remains a highly problematic enterprise, the interpretation of which is shaped by

the researcher's background and biography as well as the research process and participants involved.

Chapter 3: Doctoral Research or Doctoral Study? Unpicking the European Higher Education Area and the European Research Area

Both the European Research Area (ERA) and the European Higher Education Area (EHEA) are initiatives aimed at creating a space which allows the free circulation of students, researchers and teachers within a given territory. The initiatives run in parallel: the European Commission's Lisbon agenda driving forward to achieve the ERA and the intergovernmental Bologna Process working towards establishing the EHEA. Although the Bologna Process is not an EU initiative, the EU is a signatory to the Bologna Process providing a link between the two frameworks. Both initiatives recognise the importance of human resources and their mobility in achieving the reality of their ambitions and so create an important policy framework in which doctoral mobility takes place. This chapter outlines the main features of the two Areas and introduces the policies shaping these frameworks in order to further our understanding of the context in which doctoral mobility takes place. The chapter then considers how the ERA and EHEA engage with doctoral candidates' status and mobility specifically, and the extent to which doctoral candidates fall neatly into one or the other framework. It questions whether doctoral candidates can and should be seen as either students or researchers or whether they can in fact be both simultaneously, and examines the implications, in policy terms, of considering doctoral candidates as a distinct group straddling the ERA and EHEA. The next chapter then considers the EU legal framework. Together the two chapters set out the supra-national context in which doctoral mobility takes place. They set the foundation which then allows a full analysis of how law and policy engages with doctoral candidates' mobility.

Before considering these policy frameworks in detail it is worth exploring why the mobility of scientists underpins the ERA and EHEA. The first part of this chapter therefore assesses the rationale behind the policy and tries to analyse the benefits of mobility and barriers to it in a more critical way; because if we are to fully understand the legal and policy factors shaping doctoral mobility, we must first be clear about why mobility in this context and at this level is considered important and worth encouraging. It also allows a consideration of the extent to which the rationale for mobility at policy level matches the motivations of those actually moving.

Why focus on mobility?

The encouragement of mobility has been accepted as one of the main aims of both the ERA and EHEA and neither would make much sense without this goal. However neither has fully explained what it is about mobility that we should value. It is simply assumed without further questioning that mobility is desirable. But in order to understand how policy may affect doctoral mobility, it is important to understand what it is about mobility that should be valued and encouraged. Without such an understanding it is not possible to evaluate the policy framework or indeed its impact on doctoral candidates. It is further important in understanding doctoral candidates as a distinct group because their mobility motivations may differ from those of undergraduate students and those of more experienced researchers. This section of the chapter therefore examines policy's focus on mobility as an underpinning objective and investigates the rationale for mobility to a greater extent than is common in the literature to date.

Puustinen–Hopper has suggested that holding a doctorate from a foreign university increases the chances of also securing a position abroad¹ and Iredale, in the context of developing countries, goes as far as saying that a western degree is a ticket to better employment opportunities in the West.² Casey et al argue that holding a doctorate from abroad in a discipline area which is underdeveloped in the home country would make potential returnees very employable on their return home.³ So simply holding a qualification from another country can work to the graduates' own advantage.

Doctoral mobility is however about more than simply gaining a qualification from an institution in a different country. In many ways it is now an accepted part of scientific training. In the context of scientific research, the expectation of mobility and the assumption that mobility is beneficial are rarely questioned at all in the literature about academic mobility and in research policies.⁴ Indeed, as we have seen in chapter one, it is rarely questioned by the scientists themselves. Melin and Janson note that *'in truth, to be*

¹ Puustinen-Hopper, K. (2005), 'Mobile Minds. Survey of Foreign PhD Students and Researchers in Finland' Publication of the Academy of Finland 1/05, Helsinki, Finland.

² Iredale, R. (2001) 'The migration of professionals: theories and typologies', 39(5) *International* 7-26.

³ Casey, T., Mahroum, S., Barré, R., (2001), 'The Mobility of Academic Researchers: Academic Careers & Recruitment in ICT & Biotechnology. A Report for the IPTS/ESTO, <http://futures.irc.es/reports/ipts-estoMobility01.pdf>. [Last accessed November 2010]

⁴ Musselin, C. (2004), 'Towards a European Academic Labour Market? Some Lessons Drawn from Empirical Studies on Academic Mobility', 48 *Higher Education* 55-78.

trained as a researcher requires that one is mobile'.⁵ Rothwell similarly comments '*Mobility and varied experience are very important in research training and careers*'.⁶ Meyer goes as far as to say that the international mobility of the highly skilled is the '*natural extension of the traditional cosmopolitan character of the world's scientific community*'.⁷ In her study of the mobility of Italian PhD candidates, Avveduto found that '*[t]he opportunity of having an experience abroad has been considered in almost all cases by both students and professors as highly desirable, and it has often been quoted value per se*'.⁸

However, this unquestioning expectation of mobility is not without its problems or critics. In their study of doctoral mobility in the social sciences Ackers et al conclude that '*[t]he fact of mobility has been divorced from the objectives associated with it to become almost a rite of passage*'⁹ and note the concerns of their respondents that mobility was becoming a 'metric' by which scientists were being judged regardless of the outcomes of that mobility. Öquist similarly urges us not to lose sight of why mobility is seen as valuable in the first place and comments: '*we would first emphasize the stimulation of intellectual mobility in terms of creativity and scientific skills*'.¹⁰ Öquist argues that mobility should be about stimulating interest and creativity as well as the learning of new skills. If geographical mobility helps achieve those aims then it should be valued but it should not be assumed that it will do so in every case or indeed that it impossible to achieve the objectives without it.¹¹

The communication 'A Mobility Strategy for the ERA' tried to articulate why mobility is important for European Research. It claims that it is a 'well-known and effective way of

⁵ Melin and Janson (2006), 'What skills and knowledge should a PhD have? Changing preconditions for PhD-education and postdoc work', in Teichler U (ed), The Formative Years of Scholars. Wenner-Gren International Series Vol 83, London: Portland Press.

⁶ Rothwell, N. (2002), 'Who Wants to be a Scientist?' Cambridge: Cambridge University Press at page 7.

⁷ Meyer (2003), 'Policy implications of the brain drain's changing face', SciDev.Net Policy Brief, May, www.scidev.net/dossiers/index.cfm?fuseaction=policybrief&dossier=10&policv=24. At page 2. [Last accessed]

⁸ Avveduto, S. (2001) (ed.), 'International mobility of PhDs', in Innovative People: Mobility of Skilled Personnel in National Innovation Systems, Paris: OECD at page 8.

⁹ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility In The Social Sciences'. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool at page 35

¹⁰ Öquist, G. (2006), 'The Role of cooperation and mobility in the formative years', London: Portland Press at page 98

¹¹ Ibid.

training skilled workers and disseminating knowledge'.¹² Mobility, in the words of the Commission 'permits the creation and operation of multi-national teams and networks of researchers, which enhance Europe's competitiveness and prospective exploitation of results'.¹³ Similarly in the Bologna Process the Ministers responsible for higher education across Europe declared:

'Mobility of students and academic and administrative staff is the basis for establishing a European Higher Education Area. Ministers emphasise its importance for academic and cultural as well as political, social and economic spheres'.¹⁴

In academic terms, working in different institutions which have a circulation of staff allows scientists to build up networks. The importance of networks, both formal and informal is discussed in detail in chapter 8. For now though it is worth noting that these networks allow doctoral scientists to draw on different scientific and cultural backgrounds and create an intellectually stimulating and exciting atmosphere in which science can be advanced. In addition, doctoral candidates tapping into these networks can learn new skills and different approaches to scientific practice which can benefit not only their own development but also the development of their scientific discipline. The benefit of mobility here can be seen both from a student's perspective of learning new scientific skills and techniques, and also from a researcher's perspective in benefitting from scientific networks and expertise which allow progression along the independent research track. Neither the traditional conceptualisation of student mobility as a way to experience another culture and way of life while studying, nor thinking about mobility as a way to simply progress science quite fit in this scenario. Doctoral candidates straddle the two, with some falling more in the student camp and others moving as (almost) independent researchers.

Furthermore, ongoing exchanges and the continued flow of information, technology, equipment and expertise provide a useful lifeline for scientists who remain in home countries which do not have a developed science base.¹⁵ Mobility can thus not only benefit

¹² European Commission, (2001) 'Communication from the Commission to the Council and the European Parliament. A Mobility Strategy for the European Research Area'. COM(2001) 331 final, at page 4.

¹³ *ibid*

¹⁴ Berlin Communiqué, 'Realising the European Higher education Area' Communiqué of the Conference of European Ministers Responsible for Higher Education, Berlin, 19-September 2003, at page 4.

¹⁵ Ackers, H.L. and Gill, B. (2008), 'Moving People and Knowledge', Cheltenham: Edward Elgar.

those who are mobile but also their home and host institutions. However, this rationale for mobility also impacts indirectly on doctoral candidates in that they may gain opportunities to experience internationality without actually being mobile themselves and they may benefit from supervisor's visits abroad as well as mobile scientists coming to visit their institutions. This influence is much weaker at undergraduate level, which highlights the extent to which doctoral mobility is much more influenced by and closely linked to science mobility in general, whereas student mobility remains something quite separate.

Apart from the immediately apparent skills gained through a period abroad, soft skills and cultural understanding can be as important a result of mobility. The Bologna Process recognises the importance of mobility to cultural and social aspects of the EHEA and the importance of competence gained in these areas in being able to work in multi-national as well as multi-cultural research teams.¹⁶ The cultural experience is often a fundamental part of undergraduate mobility experience but actually becomes less important at doctoral level and beyond where the focus is much more narrowly on the science. This is apparent in the discussion in chapter 1 of doctoral candidates' motivation for becoming mobile.

Questioning mobility as internationalisation

To return to the argument outlined above, the ERA is underpinned by a system of linked centres of excellence which rely on a highly mobile workforce to carry out cutting edge interdisciplinary research.¹⁷ This vision is only possible if knowledge, technology and expertise are exchanged. The ERA further presumes that this exchange happens most effectively when physical geographic mobility takes place and international experiences are combined. Mobility is therefore often valued because it is assumed to be identical to internationalisation. Ackers et al comment:

'The tendency to use the language of mobility and internationalisation interchangeably generates the impression that being mobile, automatically increases exposure to internationalisation'.¹⁸

¹⁶ This is something which all the Bologna Process Communiqués allude to.

¹⁷ European Commission (2007b) 'Inventing Our Future Together: The European Research Area: New Perspectives'. Green Paper. Brussels: European Commission

¹⁸ Ackers, H.L., Gill, B. and Guth, J. (2008), op cit note 9 at page 39.

While mobility means spending time in another country it does not necessarily mean that the doctoral candidate will be exposed to an international environment. Ackers et al continue:

'This is by no means always the case. Of course it does mean spending time in another country but the quality of that experience in terms of its contribution to doctoral research varies significantly depending on the location and context'.¹⁹

It is for example possible to move from a research team which has a very international make-up and in which one is exposed to a truly international experience to a research setting where there is little interaction with any other scientists or only with scientists from one particular scientific and/or cultural tradition. In addition the purpose of mobility may not be to have an international experience but simply to access equipment which is not available at the home institution. The link between internationalisation and mobility therefore needs much closer examination on a case by case basis and needs to take into account the doctoral candidates' reasons for moving, which may or may not be linked to issues around internationalisation.

While the central nature of mobility to both the EHEA and ERA is therefore not entirely uncontroversial, it is clear that mobility does underpin both policy frameworks and that both set out to achieve a much more mobile set of human resources in the higher education and research fields. The remainder of this chapter sets out the ERA and EHEA policies in more detail to provide an examination of the precise context in which doctoral mobility takes place.

The European Higher Education Area

The Bologna Process has been the driving force of higher education reform in Europe since its beginnings in 1999.²⁰ Although it is an intergovernmental, legally non-binding and essentially political process, its impact has been quite extraordinarily extensive. With currently 47 signatory countries, the main aim was to establish the EHEA by the year

¹⁹ Ibid.

²⁰ Bulmahn (2003), 'Foreword by the Federal Minister for Education and Research' in '[From Bologna to Berlin. A vision taking shape](#)' available online at http://www.duz.de/docs/duz_special.html at page 1 [last accessed June 2010].

2010.²¹ Unhindered mobility of students, teachers and researchers within this area is to be achieved through the implementation of a set of action streams including the removing of obstacles to mobility and the creation of a readable and transparent system of degrees based on 3 cycles: undergraduate Bachelor degrees, Masters degrees, and doctorates. Other areas of activity focus on quality assurance, acceptance and transferability of qualification and credits and creating a European dimension in higher education.²² The first part of this section briefly sets out the development of the Bologna Process and explains how it operates. It then moves onto to examining the main aims and linked action streams in more detail

The development of the Bologna Process

The foundation for the Bologna Process were laid in 1998, when the Sorbonne Declaration on the harmonisation of the architecture of the European Higher Education system was signed in Paris by Germany, the UK, Italy and France.²³ The following year Ministers of 29 countries met in Bologna to discuss the future of European Higher Education and sign a declaration outlining some of the aims already spoken about in Sorbonne, adding others and committing themselves to the creation of a European Higher Education Area by 2010. A policy framework for action was set up to achieve the aims of the Bologna declaration. Generally known as the Bologna Process, the framework's overriding goal is '*transparency and comparability in the interest of Europe-wide mobility*'.²⁴ Since the Bologna Declaration was made the ministers responsible for higher education from the signatory countries have met every two years to assess the progress made and set the agenda for the next two years. The ministers are supported by a Bologna Follow Up Group (BFUG) which carries out

²¹ The EHEA was in fact officially launched in March 2010 at the Budapest-Vienna Ministerial Conference which also marked the 10th anniversary of the Bologna Process

²² Bologna Declaration of 19th June 1999. Joint declaration by the European Ministers of Education. http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/BOLOGNA_DECLARATIO_N1.pdf [last accessed December 2010]

²³ Sorbonne Joint Declaration. Joint declaration on harmonisation of the architecture of the European higher education system. Available at http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/SORBONNE_DECLARATIO_N1.pdf [last accessed December 2010]

²⁴ Gaetgens (2003), 'Moving towards a European Higher Education Area' in '[From Bologna to Berlin. A vision taking shape](#)' available online at http://www.duz.de/docs/duz_special.html at page 5 [last accessed June 2010].

the majority of the work between ministerial meetings and whose work is overseen by a Bologna Process Board.²⁵

The Bologna Process Objectives

It is worth considering the objectives contained in the Bologna declaration in more detail even though doctorates were not initially part of the Bologna Process. Later developments within the Process however make the doctoral phase in higher education subject to those objectives. Doctorates are now considered separately as the 3rd cycle of study and the Bologna reforms as a whole apply to the doctoral level. The key purpose of the Bologna Process is the '*adoption of a system of easily readable and comparable degrees*'.²⁶ The aim is to bring clarity to the plethora of systems across Europe. Students, teachers, researchers and employers should be able to assess the level of qualification held regardless of where that qualification has been obtained. The introduction of what was at first a two-cycle system and is now three-cycle one, quality controls and transferable credits and the diploma supplement, will go some way to promote the comparability of systems. The Bologna declaration stipulates that this will encourage mobility and enhance employability and competitiveness.²⁷

Bologna initially envisioned the implementation of two main cycles of study across Europe. '*Access to the second cycle shall require successful completion of the first cycle studies, lasting a minimum of three years. The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification*'.²⁸ Postgraduate degrees of 1-2 years then follow as a further qualification which not only provides access to non-academic labour markets but also to further study towards the award of a doctorate. Doctorates were explicitly added to the Bologna Process framework as the 3rd cycle of study in 2003. This is discussed further below.

The promotion of mobility is listed as one of the objectives of the Bologna Process. Any existing obstacles to free movement are to be removed for students, teachers and administrative staff. In fact most of the Bologna Process aims are designed to make moving between higher education institutions within all the signatory countries as easy as

²⁵ The EHEA permanent website which was launched in March 2010 together with the EHEA provides a useful overview of how the Bologna Process works. See <http://www.ehea.info/> [last accessed December 2010]

²⁶ Bologna Declaration op cite note 22

²⁷ ibid

²⁸ ibid

possible.²⁹ However, if students are to be mobile and undertake periods of study in other countries they need to be assured that those periods will be recognised and not be wasted time.³⁰ The Bologna process thus proposes the '*establishment of a system of credits – such as in the ECTS [European Credit Transfer System] system – as a proper means of promoting the most widespread student mobility*'.³¹ The use of a credit system brings with it the need to offer programmes of study in discrete, separable units which give rise to a certain number of credits which can then be transferred from one institution to another. The ECTS is already used in mobility programmes such as ERASMUS and SOCRATES for which it was originally designed.³² Bachelor courses are to have between 180 -240 credits whereas Masters- level degrees will normally require the completion of 90 -120 credits.

As Nyborg pointed out at the Bologna follow-up seminar in Berlin in 2004 '*the recognition of qualifications between the Bologna partners is based on the general provisions of the Lisbon Recognition Convention*'.³³ The legal provisions relating to the recognition of qualifications is considered in more detail in chapter 4 but it is worth noting here that the Convention stipulates that similar qualifications should be recognised and accepted unless there are substantial differences. Nyborg goes on to comment that many institutions are still in the habit of looking for identical qualifications to qualify the candidate for admission and he notes that '*more openmindedness will be necessary for mobility between different national systems*'.³⁴ ECTS may go some way to address these problems. The diploma supplement, a document attached to a higher education diploma or degree with the aim of '*improving international 'transparency' and at facilitating the academic and professional recognition of qualifications*'³⁵ may further improve matters in this regard. It describes the nature and level of the studies that were pursued and successfully completed. The supplement is created by the national institutions on the basis of a template developed by a Joint European Commission - Council of Europe - UNESCO working party.³⁶ The widespread use of the diploma supplement should help to reassure students, teachers and employers alike that it is possible to show what a student has achieved and to what level

²⁹ Ibid.

³⁰ The legal issues around the recognition of qualifications are discussed in detail in the next chapter.

³¹ Bologna Declaration op cit note 22.

³² Mobility schemes are discussed in more detail in chapter 8.

³³ Nyborg. P. (2004), 'the Bologna process from Berlin to Bergen', Presentation to the Berlin Seminar 20th September 2004, at page 3.

³⁴ Ibid

³⁵ see http://europa.eu.int/comm/education/policies/rec_qual/recognition/diploma_en.html [last accessed November 2010].

³⁶ See http://europa.eu.int/comm/education/policies/rec_qual/recognition/ds_en.pdf [last accessed November 2010].

they have studied. Comparability in terms of quality might of course raise a separate issue and to this issue we now turn.

Much work has been done in relation to quality assurance within the Bologna Process and there is now agreement that national quality assurance systems should exist in each signatory country. These systems should include an independent body responsible for quality assurance and a system of evaluation and accreditation of institutions and their programmes. The aim is to encourage a quality culture within higher education institutions, which is where the primary responsibility for quality assurance will lie. Across Europe the national quality-assurance systems vary greatly and therefore the European Network for Quality Assurance in Higher Education (ENQA) develops guidelines, policies and procedures to be followed by the Bologna Signatories. The Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) were adopted in 2005 and work is underway to aid the implementation of these standards across the EHEA. Implementation is to be achieved through a series of workshops and reviews which allow participants to share good practice and experiences. Quality Assurance therefore is making progress although of course differences remain not only between countries but also within them.

The changing higher education landscape: The Bologna Process' influence

The Ministers for education met again in Prague in 2001; Berlin in 2003, Bergen in 2005, London in 2007 and Leuven in 2009 to evaluate the progress of the Bologna Process. Most recently they met in March 2010 in Vienna and Budapest to formally launch the EHEA. In Prague they reaffirmed their commitment to the framework put forward in Bologna and added further points. Lifelong learning is to be seen as *'an essential element of the European Higher Education Area'*.³⁷ Ministers further agreed that to increase the competitiveness of European Higher Education worldwide is an important objective of the process. It is however the meeting in Berlin and the resulting Communiqué that are of greatest significance in relation to the doctoral phase, which had been largely left aside until then. In the original Bologna declaration it had, together with the Masters degree, formed the postgraduate cycle of Higher Education. Thus the Masters and doctoral degree were not originally seen as necessarily consecutive. However, in Berlin it was agreed that

³⁷ Prague Communiqué (2001), 'Towards The European Higher Education Area'. Communiqué of the meeting of European Ministers in charge of Higher Education in Prague on May 19th 2001. Available at http://www.ond.vlaanderen.be/hogeronderwijs/bologna/documents/MDC/PRAGUE_COMMUNIQU E.pdf at page 2

the doctoral phase should fall within the Bologna process in its own right and that it should be subject to the suggested reforms as the 3rd cycle of study. Ministers emphasised the importance of research and research training and the promotion of interdisciplinarity in enhancing the competitiveness of European Higher Education.³⁸

The model of higher education envisaged by the Bologna Process is based on the Anglo-American model and as such closely matches the UK system. Farrington and Palfreyman comment that '*[t]here has been no need to make any changes in the UK's higher education laws since the Bologna principles can be achieved under the autonomy of the HEIs [Higher Education Institutions]*'.³⁹ Indeed the system of undergraduate, masters and doctoral degrees will be familiar to the UK reader. However the Bologna process is said to have '*evolved into a driving force for concrete HE reform in practically all participating states*'⁴⁰ and indeed in many countries whole scale reform was necessary. In countries where, as in Germany, Poland or Bulgaria, higher education was conducted on the basis of a one-cycle diploma programme lasting on average 5 years, major reorganisation of programmes was necessary. This is perhaps what led Corbett to suggest that '*[t]he European Higher education area may be set to transform the European State's higher education institutions as fundamentally as the nation state changed the medieval universities*'.⁴¹ This transformation is geared towards the increasing internationalisation of higher education and the facilitation of mobility at that level. By creating comparable systems and encouraging recognition and transferability of qualifications, mobility becomes easier within cycles as well as when moving between them.

However, the Bologna Process reforms are conceptualised very much in the context of undergraduate mobility, ensuring transferability of credits and compatibility of study periods. There is no straightforward way of simply slotting doctorates into that same framework. They are by their nature much more difficult to measure and are of course far less structured than taught undergraduate and postgraduate courses. Giving credits which can be transferred makes little sense in relation to an independent and highly individual piece of work or in relation to a thesis and may also be problematic in relation to generic or subject-specific skills training. Furthermore, quality assurance in the sense

³⁸ Berlin Communiqué (2003) op cit note 14.

³⁹ Farrington and Palfreyman (2006), 'The Law of Higher Education', Oxford: Oxford University Press at page 83.

⁴⁰ Bulmahn (2003) op cit note 20.

⁴¹ Corbett, A. (2005), 'Universities and The Europe of Knowledge' Basingstoke: Palgrave Macmillan at page 192.

envisaged by the Bologna Process is also not easily applied to doctoral studies: there is no taught programme to assess or validate and each doctoral research project is individual and highly specialised. Overall therefore it was initially difficult to see how the Bologna Process could be applied to doctoral research when the framework was so clearly geared towards structured, taught programmes. However, the Ministers agreed in 2003 that doctoral research should be brought within the scope of the reforms and have since then considered its specific position in more detail. Before considering how policy engages specifically with the 3rd cycle of studies it is worth first considering the parallel development of the ERA. We will then move to discuss how both policy frameworks deal with doctoral research.

The European Research Area

In Lisbon in March 2000 the European Council met to discuss a new strategic goal for the EU in the fields of employment, economic reform and social cohesion. The council agreed that the EU should strive to become *'the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth'*.⁴² Research is seen as vital in building a knowledge economy and the EU therefore turned its attention to re-evaluating its policies in the area. The EU has had an interest in research and development for some time and had significantly widened the scope of its involvement in the 1980s.⁴³ The Single European Act 1987 gave the Union explicit competence to formulate its own research and development policy and most of that policy was focused on funding projects through Research Technology and Development (RTD) frameworks. However, there was a lack of coordination of research policy both within the Union across different policy areas and with the Member States and their respective RTD policies.⁴⁴ Thus *'it cannot be said that there is today a European policy on research. National research policies and Union policy overlap without forming a coherent whole'*.⁴⁵ The idea of an ERA was formulated to bring some coherence to the separate systems. The ERA moves away from a focus of funding individual research projects on a relatively uncoordinated basis and is to be achieved

⁴² Presidency Conclusions Lisbon European Council 23 And 24 March 2000 at page 1

⁴³ See for example investment in technology programmes such as ESPRIT and BRIDGE and later Regional Innovation Programmes as well as the RTD (Research Technology and Development) framework programmes.

⁴⁴ Kaiser, R. and Prange, H. (2002), 'A New Concept of Deepening Integration? – The European Research Area and the Emerging Role of Policy Coordination in a Multi-level Governance System'. 6 (18) [European Integration Online Papers](#).

⁴⁵ European Commission (2000), 'Towards a European Research Area' COM (2000) 6 final, January at Page 7

through a series of measures forming part of the Lisbon strategy (or Lisbon agenda). The aims of the ERA and strategies to achieving it include measures such as networking existing centres of excellence, physically and virtually; a more coherent approach to research policy and funding; better and more efficient use of resources; improving the attractiveness of research careers; and crucially in this context, more abundant and more mobile human resources and greater mobility of researchers. This section begins by exploring these strategies in a little more detail to gain an appreciation of how they might impact on doctoral research.

Making Most Effective Use of Resources: The ERA Objectives

Networking Centres of Excellence is seen as an important aspect of the ERA and has underpinned much of the Commission's approach to research in recent times. The 2007 Green Paper on the ERA suggests that research should be carried out in networks of highly specialised institutions, allowing regions or countries to become increasingly specialised in certain scientific areas, and thus concentrating resources in those institutions best able to use them effectively and efficiently.⁴⁶ Linked to the aim of creating centres of excellence is the belief that this approach will lead to a more coherent approach to research funding and better use of the resources available:

'Most European research institutions lack critical mass, and within the confines of sub-optimal national systems, have difficulties meeting expectations with the resources available to them...Therefore some concentration and specialisation is necessary to permit the emergence of both European centres of excellence competitive on the global scale and a rich network of universities and public research organisations across the entire EU which excel in addressing research and training needs at national, regional and sectoral level'.⁴⁷

Centres of Excellence not only allow for focused R&D spending but also have the potential to increase the attractiveness of research careers. If such centres are well funded, well equipped and well networked, the training which could be provided within these centres and their networks will be of high quality as will the research taking place there more generally. In addition, well-funded positions will attract the brightest talent in the scientific labour market further increasing the competitiveness of the ERA. The role played by such

⁴⁶ European Commission (2007b) op cit note 17.

⁴⁷ Ibid.

centres of excellence as well as prestigious funding schemes in attracting doctoral candidates is a theme we will return to in chapter 8 when considering the importance of professional networks and mobility schemes.

It is clear that mobility and increased investment in research and in particular in human resources underpin the ERA: *'The share of so-called 'knowledge workers' in a country's total employment and its ability to produce high-tech products and sell them on international markets thus constitute important indications of international economic success.'*⁴⁸ The EU has thus devoted a significant amount of attention to the mobility of the highly skilled, and in particular to that of scientists and academics.⁴⁹ Their mobility is seen as crucial and in 2001 the European Commission foresaw the need for a further 700000 researchers in order to sustain a competitive science base in Europe.⁵⁰ Mobility, it is argued, should encourage the more effective training of researchers as well as providing a workforce in those regions where it is needed. Ackers et al suggest that *'The very notion of a 'European Research Area' rests on the basic idea that creating a European-level labour market (or recruitment pool) increases the opportunity for a more effective matching of resources supporting both competition (excellence) and specialisation'*.⁵¹ In the context of doctoral research this could for example mean the matching of the interests and talents of doctoral researchers to supervisors wherever they are situated within the region.

A Recruitment Pool for Future Researchers: The ERA and Doctoral Candidates

In spite of this focus on human resources, the ERA has not yet engaged specifically with doctoral research and the mobility of doctoral researchers.⁵² The ERA considers doctoral candidates only in so far as they are future researchers. They are the pool from which future researchers, with whom the ERA is predominantly concerned, will be recruited. In ERA policy they are rarely considered as a distinct group in their own right. For example,

⁴⁸ European Commission (2003a), 'Key Figures 2003-2004', Brussels: European Commission at page 72.

⁴⁹ European Commission (2001) op cit note 12. European Commission (2003b), 'Communication from the Commission to the Council and the European Parliament. Researchers in the European Research Area: One Profession, Multiple Careers'. COM(2003) 436 final.

⁵⁰ *ibid*

⁵¹ Ackers, H.L., Gill, B. and Guth, J. (2008) op cit note 9.

⁵² Indeed there is little engagement between education policies and the ERA generally although arguably the Lisbon Agenda has changed the focus of education policies as articulated in Ertl, H. (2006). 'European Union Policies in Education and Training: The Lisbon Agenda as a Turning Point?' *Comparative Education*, 42(1), 5-27. See also Keeling, R. (2006). 'The Bologna Process and the Lisbon Agenda: The European Commission's Expanding Role in Higher Education Discourse'. *European Journal of Education*, 41(2), 203 – 223.

the policy documents forming the basis of the ERA make little mention of doctorates. The founding Commission Communication⁵³ makes only two references to doctoral research, both in the context of the loss to Europe of European doctoral researchers moving to the US for post-doc positions. In 2005 the European Commission published The European Charter for Researchers and The Code of Conduct for the Recruitment of Researchers⁵⁴ which addresses 'all researchers in the European Union at all stages of their career'.⁵⁵ It only makes one direct reference to '*researchers in their training phase*'⁵⁶ which relates to building a structured relationship with their supervisors. The lack of specific engagement with doctoral research in the Charter and Code has consequences for how those documents are perceived and implemented in Member States. For example the UK Concordat to support the Career Development of Researchers⁵⁷ specifically refers to 'individuals whose primary responsibility is to conduct research and who are employed for this purpose' a formulation that in the UK context actually excludes doctoral candidates.⁵⁸ While this might not be the intention of the concordat, the language used within it focuses strongly on employed researchers and pays scant attention to doctoral candidates.

The 2007 Green Paper on the ERA mentions doctoral studies only briefly and recognises that:

*'European doctoral programmes and further training should meet stringent quality standards, fulfil the needs of both academia and business, and be recognised across Europe.'*⁵⁹

It also poses the question:

*'How could the specific education and training needs of researchers be addressed at all stages of their careers, starting with post-graduate and doctoral curricula, building on the Bologna process for higher education?'*⁶⁰

⁵³ European Commission (2000), op cit note 45.

⁵⁴ European Commission (2005b), 'The European Charter for researchers and The Code of Conduct for the Recruitment of Researchers'. Brussels: DG Research.

⁵⁵ *ibid* at page 9.

⁵⁶ *ibid* at page 14.

⁵⁷ The Concordat to Support the Career Development of Researchers

⁵⁸ See chapter 6 which considers the situation of doctoral candidates coming to the UK in more detail.

⁵⁹ European Commission (2007b), 'Green Paper: The European Research Area: New Perspectives' COM(2007) 161 final at page 12.

⁶⁰ *ibid*.

The ERA framework does not offer any answers to that question and instead seems to be looking toward the Bologna Process and EHEA for guidance: *'The ongoing inter-governmental Bologna Process is set to address some issues such as curricula development in doctoral programmes and quality assurance'*.⁶¹ The Commission does go on to recognise that some EU initiatives such as joint doctorates under Erasmus Mundus will also contribute to the effective training of researchers but leaves any detailed consideration to the EHEA.⁶²

The need for greater inclusion of the doctoral phase in ERA thinking is now being recognised implicitly, with statistics on doctoral researchers being included in the ERA Key Figures for example⁶³ and the EU specifically considering indicators in relation to doctoral candidates and their mobility.⁶⁴ Recent Council Conclusions recognise this need more explicitly and emphasise *'the need to accelerate progress and to amplify the initiatives designed to strengthen the attractiveness of the European Higher Education Area, of research and of scientific careers, as well as to strive to strengthen the links between the fields concerned by coordinating the Lisbon Strategy with the Bologna Process around the doctorate and the modernisation of higher education'*.⁶⁵

The 3rd Cycle of Study: The EHEA and Doctoral Candidates

However, references to doctorates in ERA documentation remain mere rhetoric rather than providing concrete measures or even engagement. In terms of ascertaining what the distinct issues in doctoral research might be and providing practical ways forward, the ERA offers little. In contrast, the EHEA has engaged formally with doctoral research. It has been the 3rd cycle of Higher Education within the EHEA framework since 2003.⁶⁶ Since then the characteristics of a 'Bologna' doctorate and thus potential issues have been fleshed out: doctoral programmes within the EHEA are to provide a structured framework within which an independent piece of work can be completed. The independent work should be carried out complemented by a programme of skills training (both generic and discipline-specific)

⁶¹ European Commission (2008d), 'The European Research Area Partnership: 2008 Initiatives'. Brussels: European Commission at page 24.

⁶² The role of joint programmes and fellowship schemes are discussed further in chapter 8.

⁶³ European Commission (2008a), 'A more research-intensive and integrated European Research Area: Science, Technology and Competitiveness key figures report 2008/2009'. Brussels: European Commission.

⁶⁴ *ibid.*

⁶⁵ European Council (2008), 'Better Careers And More Mobility: A European Partnership For Researchers'. Council Conclusions 13671/08 at paragraph 5.

⁶⁶ Berlin Communiqué (2003) *op cit* note 14

and a doctorate should take 3-4 years full time or equivalent if undertaken on a part-time basis. The implications of these characteristics are considered in a little more detail.

The idea of a doctorate being an independent piece of work which makes an original contribution to knowledge is not in the least controversial and it is unsurprising that this requirement has been picked up by those shaping the Bologna Process. The other characteristics are perhaps less straightforward. Including skills training as part of doctoral degrees may not seem problematic for those of us familiar with structured doctoral programmes and graduate schools but it does have implications for the way doctoral research is organised and carried out.⁶⁷ For example a traditional German model of doctoral research involving almost completely independent work and completion of a thesis with minimal interaction between candidate and institution would no longer be possible if skills training becomes a compulsory component of the doctorate. Structured skills-training programmes also reduce the flexibility of doctoral research and if implementation is strict and inflexible may in fact make mobility more difficult.

Compulsory skills training also has implications for doctoral candidates' status, or at least how they are conceptualised: the integration of (compulsory) skills-training courses highlights the similarities between doctoral candidates and students more generally whereas the requirement to carry out independent work which makes an original contribution to knowledge places them firmly in the 'researcher' camp. However, it can also be argued that including a training element in doctoral research does not detract from the fact that they should be considered researchers, as training and learning new skills is a feature of most professional occupations and would be required of post-doctoral researchers or lecturers. However, it seems that the EHEA does not consider the training of doctoral candidates in this way but instead conceptualises it as 'studies' more akin to the sort of teaching and learning experienced at Masters level. Combining the two elements of research and studies as requirements for a doctorate in the EHEA further suggests that doctoral candidates cannot satisfactorily be placed in one category or the other.

Bridging the Gap between the ERA and EHEA: Doctoral Level research

The development of the EHEA and the ERA has been running in parallel, the former being driven by the Bologna Process with the aim of creating an area in which students and teachers can move freely; the latter being an EU initiative aiming to create a 'dynamic

⁶⁷ Koepernik, C. and Warner, S. (2006) 'Akademische Schlüsselqualifikationen' in Koepernik, C, Moes, J. and Tiefel, S. (2006) eds GEW-Handbuch Promovieren Mit Perspektive Bielefeld: Bertelsmann

knowledge based economy'.⁶⁸ However, the doctoral stage does not fit neatly into either of these frameworks. Doctoral level researchers can be seen as students as well as researchers.⁶⁹ Their work bears hallmarks of both. On the one hand they are scientists in training or under instruction, they often have to take part in a certain number of taught classes or seminars, they often register as postgraduate students at their institution and they pay fees in some cases. On the other hand, they are independent researchers working on an individual project with responsibility for their own work and time management. They often carry out other teaching and research duties for their institution and/or supervisor. The boundaries between student and researcher can therefore be blurred and it is important to remember that the doctorate was not initially considered part of the Bologna Process reforms. It was not until 2003 that the Process widened its focus to include doctoral research. The Berlin Communiqué included doctoral research as an area which needed to be considered. In 2005 a Bologna Follow-up seminar was held in Salzburg to discuss the role of doctorates in the Process and most of the recommendations made there were incorporated into the Bergen Communiqué of 2005. The core component of a doctorate compatible with Bologna should be the advancement of knowledge through original research. It should be 3-4 years in duration (full time equivalent (FTE)) and should include structured programmes which promote interdisciplinary and transferable skills. In the Bergen Communiqué the relevant ministers said:

'With a view to achieving better results we recognise the need to improve the synergy between the higher education sector and other research sectors throughout our respective countries and between the EHEA and the European Research Area. To achieve these objectives, doctoral level qualifications need to be fully aligned with the EHEA overarching framework for qualifications using the outcomes-based approach'.⁷⁰

Not only was the EHEA looking to the ERA; the converse was also true. As part of the Lisbon strategy, the 'Education & training 2010' agenda was developed. The European

⁶⁸ Presidency Conclusions Lisbon European Council 23 And 24 March 2000 at page 1.

⁶⁹ For a similar idea expressed in the UK context see Delamont, S. et al (1994). 'Suspended Between 2 Stools: Doctoral Students in British Higher Education' in Coffey, A. and Atkinson, P. Occupational Socialisation and Working Lives, Avebury, 138-153.

⁷⁰ Bergen Communiqué (2005), 'The European Higher Education Area - Achieving the Goals', Communiqué of the Conference of European Ministers Responsible for Higher Education, Bergen, 19-20 May 2005 available at <http://ec.europa.eu/education/policies/educ/bologna/bergen.pdf> at page 3 [last accessed December 2010].

Commission noted: *'The "Education & Training 2010" work programme recognises the extreme importance of modernisation in higher education – over and above the reforms called for in the Bologna Process which, a fortiori, are also important for achieving the Lisbon Objectives'*.⁷¹ Both initiatives thus acknowledged that they cannot be successful in isolation but that there must be a link between the two.

Doctoral candidates as early career researchers (in training) allow the bringing together of the ERA and EHEA. The doctoral phase allows students to move into the world of research through a transition phase which straddles both frameworks. Doctoral mobility moves the student experience of comparatively structured and risk-free mobility into the more complex context of scientific mobility. The importance of doctoral programmes in bridging the gap between the EHEA and the ERA has been noted by the European Universities Association (EUA): It states that *'[t]o achieve the ambitious "Lisbon Objectives", Europe both seeks and needs to increase the number of researchers and research related careers, and doctoral training programmes can be seen as a cornerstone in reaching such a goal'*. The EUA then continues its report very much in the language of Bologna, claiming that universities are 'principal stakeholders' in the debate on the 'third cycle'.⁷²

The status of doctoral candidates

The government ministers responsible for the Bologna Process have recognised the dual status of doctoral research by saying: *'We consider participants in third cycle programmes both as students and as early stage researchers'*.⁷³ The European Commission has also recognised doctoral candidates as *'students, staff members, workers or even researchers'*.⁷⁴ In doing so national Ministers, as well as the EU have acknowledged the different status afforded to doctoral researchers in different contexts and different countries. The variety of pathways leading to a doctorate and this perception of doctoral research as a bridge between the ERA and EHEA result in an ambiguous position for the doctoral researchers themselves. The status of doctoral candidate in any given context is often not entirely clear: are they students or staff members; are they neither, or both? For example, the

⁷¹ European Commission (2005a), 'Communication from the Commission of 20 April 2005 - Mobilising the brainpower of Europe: enabling universities to make their full contribution to the Lisbon Strategy', COM(2005) 152 final at page 11.

⁷² European Universities Association (2005), 'Doctoral Programmes for the European Knowledge Society. Results of EUA Doctoral Programmes Project'. Brussels: EUA at page 8 available at http://www.eua.be/eua/isp/en/upload/Doctoral_Programmes_Project_Report.1129278878120.pdf [last accessed November 2010].

⁷³ Bergen Communiqué (2005) op cit note 70.

⁷⁴ European Commission (2003b) op cit note 49 at page 16.

position of graduate teaching assistants (GTAs) in the UK is one associated with doctoral candidates who receive scholarships from their institutions. Although the UK has a tendency to view doctoral candidates firmly as students and most GTAs would be considered students rather than employees of the university, they are actually not dissimilar from the German *Wissenschaftlicher Mitarbeiter* [academic staff member] positions in which doctoral candidates hold a particular type of employment contract with the university which obliges them to carry out certain teaching or research duties throughout their time as a doctoral candidate.

These distinctions may not seem of great importance: Doctoral candidates may simply choose the institution they wish to undertake their doctoral research at and follow that institution's application procedure. Especially if the doctoral position attracts funding in the form of university scholarships, pay for work done, a stipend or other research funding, doctoral candidates may not be concerned whether they are seen as students or as employed researchers. Once a candidate has been accepted, the doctoral research takes whatever form is usual at that particular institution. It may not matter whether 'pay' is received in the form of a salary or scholarship and whether it covers fees as well as maintenance, whether additional duties are performed or whether a structured programme of skills training is in place. In fact, doctoral candidates may use some of these considerations to help them decide where they wish to carry out their doctorate and institutions may bear these issues in mind when competing to attract the best doctoral researchers. However, this notion of choice can be questioned.⁷⁵ In most cases doctoral candidates are not in a position to choose between a number of different positions offering different status and thus different rights and entitlements. In most cases they may simply be relieved to have found a position at all and questions about the implications of the type of position may well not arise until later on during their research. Chapters 5 and 6 will revisit some of the issues relating to access to doctoral positions in the national contexts studied in relation to this thesis. Chapter x discusses the importance of networks, both informal and formal in securing doctoral positions and opportunities for international mobility.

The policy framework set by the ERA and EHEA sends some contradictory messages. The doctorate is dealt with predominantly within the Bologna Process and this reinforces the view that doctoral candidates are really essentially students, although it is acknowledged

⁷⁵ Ackers, H.L. (2005), 'Moving People and Knowledge: Scientific Mobility in the European Union', 43(5) *International Migration* 99-131. Ackers, H.L. and Gill, B. (2008) op cit note 15.

that they cannot be conceptualised in quite the same way as undergraduates and taught postgraduates. The ERA, while hardly referring specifically to doctoral candidates at all, does recognise the importance of education and training in achieving the ambitious Lisbon objectives. In contrast, in some of its specific actions, the EU insists on the status of doctoral candidates as researchers rather than as students. Under the Marie Curie Mobility Scheme, which is discussed in detail in chapter 8, any doctoral positions must now be positions with employment contracts and all associated rights.⁷⁶ This may in part be due to the fact that mobility adds a further complication to the question of status. While the ERA and EHEA are beginning to explore a European concept of a doctorate, it cannot yet be said to exist. Doctoral research takes place in many different contexts and doctoral researchers are conceptualised in many different ways. There is therefore no category of doctoral researchers to which specific rights and entitlements in law can be attached. While, as we shall see in the next chapter, researchers as ‘workers’ exist as a definitional category and students are also clearly defined in EU law, the same cannot be said for doctoral candidates. This becomes obvious when considering free-movement rights within the EU. It also becomes crucially important in that context because the rights associated with ‘workers’ are more generous than those afforded to ‘students’ or other categories of migrants. However, although underpinned by mobility, neither the EHEA nor the ERA make reference to the free-movement rights of EU citizens or how the policy frameworks relate to those legal rules. This is puzzling given that it is these rights which the mobile actors on which the EHEA and ERA are so reliant will be drawing on.⁷⁷ Without the legal framework ensuring free movement rights of EU citizens, the obstacles to the EHEA and ERA would remain insurmountable. The status of doctoral candidates is important because it could have a significant impact on their entitlements in the host state and thus on the mobility patterns of this group. In the words of the European Commission: ‘Doctoral candidates are considered to be students, staff members, workers or even researchers. Thus, the financial situation and social security rights of many doctoral candidates are still precarious’.⁷⁸ We will consider the legal entitlements in more detail in the next chapter and will examine

⁷⁶ Research Executive Agency (REA) (2010), ‘The Marie Curie Actions FP7 Financial Guidelines’ [online] available at http://cordis.europa.eu/fp7/mariecurieactions/itn-manage_en.html [last accessed November 2010].

⁷⁷ There is also not much academic commentary analysing the frameworks in combination. Some commentators have considered the Bologna Process from an EU Law perspective but even here the free movement of persons provisions rarely feature. See for example Garben, S. (2010). ‘The Bologna Process: From a European Law Perspective’. *EUJ* 16(2), 186-210.

⁷⁸ European Commission (2003b) *op cit* note 49 at page 16. See also Eichenhofer, E. (1997). ‘The Social Security of Migrants in the European Union of tomorrow. Osnabrück: Universitätsverlag

whether doctoral candidates fall in the worker category, the student category or whether they should form their own definitional category of EU migrants.

Conclusion: Bringing the ERA and EHEA together or falling between the gaps?

As we have seen, it is difficult to put doctoral candidates categorically into either the student or researcher camp. While the ERA does not explicitly deal with doctoral candidates in any great detail, there are many policies within the ERA that will affect doctoral candidates both directly and indirectly. Science funding will impact on the availability and quality of doctoral positions. Measures to increase the attractiveness of research careers will also make doctoral study in those areas more attractive, if only by association. Policies around the mobility of researchers will in many cases also apply to doctoral candidates, as we have seen. In contrast, the EHEA does deal explicitly with doctoral candidates as the 3rd cycle of study. However, it is clear that seeing doctoral candidates as students can be problematic. Seeing doctoral candidates as a distinct group and treating them as such at policy level is one possible solution. Doing so would allow us to acknowledge that they straddle both policy frameworks and cannot be subsumed under one or the other grouping. This in turn would facilitate an evaluation of how the policies address the needs of this specific group of scientists.

As we have seen above there is an increasing awareness that the ERA cannot be successful without the EHEA and vice versa and that the doctoral phase of education/research may provide the link required to bring the two together. If this is to happen, both policy frameworks need to make more explicit how the policies and action streams should apply specifically to doctoral candidates and recognise where additional measures might be necessary. For example, discussions and policies on the portability of research grants and student loans between Member States would need a separate consideration of the portability of doctoral research grants or scholarships. There needs to be consideration of recognition of qualifications both in terms of access to doctorates and recognition of doctorates, and legal rights and entitlements need to be clarified for this specific group of mobile scientists. While the ERA and EHEA have implications for doctoral researchers, regardless of whether they are mobile or not, it is when mobility is added to the context that the difference in status across and within countries can be particularly problematic. The rights accessible under European Union free movement of persons law will be

dependent on the status of the person seeking to move and access those rights. It is the specific legal entitlements to which we now turn in the next chapter.

Chapter 4: Doctoral Candidates and Free Movement of Persons Law

In order to make the free circulation of the actors within the ERA and EHEA a reality, they require the right to move from their home state to their host state, a right of residence in the host state as well as additional rights allowing them to live their everyday lives. The right of doctoral candidates or indeed any EU citizen, to move and reside freely in the territory of the Member States subject to the limitations specifically set out in EU law is fairly uncontroversial.¹ However the extent of any limitations and indeed additional rights once residing in a host Member State will depend on the status of the doctoral candidate in EU Law. Traditionally the most extensive free movement and associated rights have been afforded to workers and for this reason it is useful to begin with an examination of those rights. The discussion is focused on those rights likely to be of importance to mobile doctoral candidates such as the right to access education and training, access to social advantages, and the rights of their family members. The chapter next considers the test for EU worker status and questions whether doctoral candidates can in fact be considered workers and thus access the rights associated with that status or whether they must 'make do' with student status. The remainder of the chapter then considers the extent to which the concept of EU citizenship might be used to re-evaluate the free movement of persons law in this area and to ensure the free movement rights of doctoral candidates are adequately developed.

At the Top of the Hierarchy: EU Migrant Workers' Rights

While the citizenship provisions² now provide a right to move and reside freely for all EU citizens subject to limitations within the Treaty and secondary legislation, it is imperative to understand the scope and level of protection afforded to different categories of migrant.³ Workers' rights are predominantly dealt with under Article 45 TFEU and Regulation 1612/68.⁴ Article 45 guarantees the free movement of workers within the EU subject only

¹ Article 21 TFEU and Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States Official Journal L158/77. Hereafter CRD

² CRD op cit note 1.

³ Steiner, J. and Woods, L. (2009) 'EU Law' 10th Edition, Oxford University Press at page 455.

⁴ Regulation (EEC) No 1612/68 of the Council of 15 October 1968 on freedom of movement for workers within the Community Official Journal L 257, 19.10.1968, at page 2.

to limitations justified on the grounds of public policy, public security or public health.⁵ It prohibits discrimination based on nationality as regards access to employment, remuneration and other conditions of work and employment. Regulation 1612/68 takes up the non-discrimination point in its first recital and also calls for equality in '*all matters relating to the actual pursuit of activities as employed persons*'.⁶ Article 1 of the Regulation clarifies the Treaty provisions now contained in Article 45 TFEU stating that any national of a Member State has the right to take up an activity as an employed person, and pursue such activity in the territory of another Member State under the same conditions as nationals of that state.

Social Advantages for Workers: Access to Education and Other Rights

The right to access education and vocational training provisions for workers themselves is enshrined in Article 7(3) of Regulation 1612/68. Cases such as *Gravier*⁷ and *Blaizot*⁸ confirmed that vocational training is to be interpreted broadly to include university studies unless those studies are solely to enhance general knowledge and that conditions of access also fell within the scope of the Treaty.⁹ Therefore any fees charged have to be the same for nationals of the host state and other EU nationals.

Workers are also entitled to social and tax advantages under Article 7(2) of Regulation 1612/68. The term 'social advantages' has been interpreted broadly. In *Even*¹⁰ the European Court of Justice (ECJ) confirmed that social advantages were '*those which, whether or not linked to a contract of employment, are generally granted to national workers primarily because of their objective status of workers or by virtue of the mere fact of their residence on national territory*'.¹¹ Social advantages can then be claimed in a variety of situations and cover things such as minimum income allowance for a family member or unemployed worker (*Hoeckx*¹² and *Scrivner*¹³); childbirth allowance (*Commission v Luxembourg*¹⁴) or childbirth loan (*Reina*¹⁵). *Matteucci*¹⁶ confirmed that a scholarship for

⁵ Article 45 TFEU is almost identical to its predecessor Article 39EC. Reference to 'Community' in the old provisions was changed to 'Union' following implementation of the Lisbon Treaty so the substantive law itself as well as applicable case law remains unchanged.

⁶ Regulation 1612/68 op cit note 4. at page 2.

⁷ Case 293/83 *Gravier v City of Liege*[1985] ECR 593

⁸ Case 24/86 *Blaizot v Universite de Liege and others* [1988] ECR 379

⁹ Case 293/83 *Gravier* op cit note 7 and Case 24/86 *Blaizot* op cit note 8

¹⁰ Case 207/78 *Ministere Public v Even and ONPTS* [1979] ECR 2019

¹¹ *ibid* at paragraph 22

¹² Case 249/83 *Hoeckx v Openbaar Centrum voor Maatschappelijk Welzijn* [1985] ECR 973

¹³ Case 122/84 *Scrivner and Cole v Centre Public d'Aide Sociale de Chastre* [1985] ECR 1027

¹⁴ Case C-118/91 *Commission v Luxembourg (Re Maternity Allowance)* [1994] 2 CMLR 781

study abroad arising from a reciprocal agreement between Germany and Belgium fell within the scope of Article 7(2) and the judgement in *Lair*¹⁷ clarifies that student loans and grants may also be classed as a social advantage:

*The answer [...] must therefore be that a grant awarded for maintenance and training with a view to the pursuit of university studies leading to a professional qualification constitutes a social advantage within the meaning of Article 7 (2) of Regulation No 1612/68.*¹⁸

The rights of workers thus seem well established. Workers are entitled to access to university studies on the same basis as host country nationals and in addition are able to access a whole host of social advantages. Their children have access to educational facilities on the same basis as national children and their family members have rights relating to employment and access to social advantages by virtue of the Citizens Rights Directive (CRD).¹⁹

Doctoral candidates who can achieve worker status will therefore be able to access a whole host of rights and entitlements ranging from access to university and scholarships on the same grounds as nationals of the host state to child benefit, tax benefits, access to education for their children as well as certain benefits for their spouses. Those not moving as ‘workers’ but instead asserting their rights as students have fewer rights particularly in relation to social advantages. Gaining worker status therefore seems to be the preferable option for most EU citizens wishing to move to another Member States, as this status unequivocally affords the most generous rights. The next section considers how EU citizens and doctoral candidates in particular can establish worker status.

Genuine and Effective Work: Doctoral Candidates as EU Workers

The fact that the concept of ‘worker’ cannot be defined by individual Member States but is instead an EU concept is well established.²⁰ Also well established is the requirement of

¹⁵ Case 65/81 *Reina v Landeskreditbank Baden-Württemberg* [1982] ECR33

¹⁶ Case 235/87 *Matteucci* [1988] ECR 5589

¹⁷ Case 39/86 *Lair v University of Hannover* [1988] ECR 3161

¹⁸ *ibid* at paragraph 28. See below for a more detailed discussion of this case and related case law

¹⁹ CRD op cit note 1. See CRD Art. 2 for who is a ‘family member’. The importance of family rights is discussed in detail in chapter 7.

²⁰ Case 75/63 *Hoekstra (nee Unger) v Bestuur der Bedrijfsvereniging voor Detailhandel en Ambachten* [1964] ECR 177

genuine and effective work that is not marginal and ancillary.²¹ Doctoral research does not appear to require the expansion of that definition of work. The classic definition coined in *Lawrie-Blum* still stands:

'the essential feature of an employment relationship is that for a certain period of time a person performs services for and under the direction of another person in return for which he receives remuneration'.²²

The work carried out must be 'genuine and effective'²³ rather than 'marginal and ancillary'.²⁴ It is worth looking at this definition in detail in relation to doctoral candidates and their 'work'.

Is doctoral candidates' work actually work?

Doctoral candidates unquestionably work in a relationship of subordination and under direction and in many cases receive some form of remuneration. However, it is the type of remuneration that may prove problematic. Doctoral candidates often receive their 'pay' in the form of scholarships or stipends rather than as salaries. However, the ECJ has been open to wide interpretations of 'pay' both in the workers context as well as in other arenas. In *Steymann*,²⁵ for example, the ECJ accepted payment in kind in the form of accommodation and keep as remuneration for the purposes of defining worker status. In *Trojani*²⁶ the ECJ clarified that the origin of funds used to pay the potential worker was irrelevant and board and lodging from a charity in return for the performance of some work could be seen as remuneration. Case law from the area of equal pay law provides further examples of the ECJ's willingness to interpret pay broadly. In *Garland v British Rail Engineering Ltd*²⁷ pay was held to cover the provisions of travel benefits following retirement, and in a number of cases, of which *Barber*²⁸ is perhaps the most well known, the ECJ established clearly that pension contributions paid by employers to a contracted-out scheme are indeed pay. In accordance with the ECJ's broad approach to remuneration it seems clear that researchers' stipends for example would be classed as remuneration/pay in EU law. It thus seems difficult to justify why, for example, a

²¹ Case 53/81 *Levin v Staatssecretaris van Justitie* [1982] ECR 1035

²² Case 66/85 *Lawrie-Blum v Land Baden Wuerttemberg* [1986] ECR 2121 at paragraph 17

²³ Case 53/81 *Levin* op cit note 21

²⁴ *ibid*

²⁵ Case 196/87 *Steymann v Staatssecretaris van Justitie* [1988] ECR 6159

²⁶ Case C-456/02 *Trojani* [2004] ECR I-7573

²⁷ *Garland v British Rail Engineering Ltd* [1983] 2 AC 751

²⁸ Case C-262/88 *Barber v Guardian Royal Exchange Assurance Group* [1990] ECR I-1889

scholarship payment to a doctoral candidate should not be treated in the same way as a postdoctoral researcher's research stipend. Based on this interpretation, doctoral candidates clearly fall within the Lawrie Blum definition of carrying out work. The next hurdle to overcome is therefore the question of genuineness and effectiveness of that work.

If it is work, is it genuine and effective?

Commentators have argued that doctoral research makes a significant contribution to science²⁹ and that doctoral candidates are important members of research teams and laboratories.³⁰ These observations seem to point to the conclusion that this type of work is genuine or effective scientific work. The argument is further strengthened when other research and teaching duties undertaken by doctoral candidates are also taken into account. Many share their considerable expertise and knowledge with students through teaching or demonstrating duties, and many also help in the research team carrying out research activities not directly linked to their thesis.³¹ Certainly the policy rhetoric suggests doctoral candidates perform important and genuine scientific work:

'Doctoral education is a major priority for European universities and for EUA. It forms the first phase of young researchers' careers and is thus central to the drive to create a Europe of knowledge, as more researchers need to be trained than ever before if the ambitious objectives concerning enhanced research capacity, innovation and economic growth are to be met'.³²

It therefore seems clear that the work carried out by doctoral candidates comes within the definition of genuine and effective work that EU law requires. The remaining hurdle that needs to be overcome therefore relates to whether or not the work carried out can be seen as marginal and/or ancillary.

²⁹ European Universities Association (2005), 'Doctoral Programmes for the European Knowledge Society', Brussels: EUA. European Universities Association (2007), 'Europe's Universities beyond 2010: Diversity with a common purpose', Brussels: EUA and Borrell-Damian (2009), 'Collaborative Doctoral Education. University-Industry Partnerships for Enhancing Knowledge Exchange', DOC-CAREERS Project, Brussels: EUA.

³⁰ *ibid*

³¹ It is clear that part time work does not preclude having EU worker status. See for example Case C-357/89 Raulin v. Minister van Onderwijs en Wetenschappen [1992] ECR I-1027

³² Professor Georg Winckler - EUA President 2005-2009 quoted on <http://www.eua.be/events/eua-council-for-doctoral-education/> [last accessed November 2010].

Do 'studies' render the 'work' marginal and ancillary?

The fact that genuine and effective work has been established, will not necessarily always entail that, even categorised as workers, doctoral candidates have access to all the rights and social advantages normally provided to workers. The ECJ has previously held that there are certain circumstances in which even workers do not have access to all rights and social advantages normally associated with that status. It handed down two judgments concerning exactly this issue on the same day. In *Lair*³³ the ECJ accepted that student loans and grants could be social advantages but refused to allow Lair access to them even though it seemed to accept that Lair was a worker. It more explicitly considered the situation of students who could also be seen as EU workers in another case: *Brown v Secretary of State for Scotland*.³⁴ These two cases are interesting because the ECJ held that in some cases worker status does not automatically provide access to benefits if the worker is also a student. Brown was a dual French and UK national who having completed his secondary school education in France came to the UK, entering into employment described as "pre-university industrial training ". He then commenced his studies in electrical engineering. The ECJ agreed that he was an EU worker. One would therefore expect him to have access to the same social advantages as host nationals. In *Lair* the ECJ had already confirmed that maintenance grants for university study were indeed social advantages.³⁵ However the ECJ held:

'Nevertheless, it cannot be inferred from that finding that a national of a Member State will be entitled to a grant for studies in another Member State by virtue of his status as a worker where it is established that he acquired that status exclusively as a result of his being accepted for admission to university to undertake the studies in question. In such circumstances, the employment relationship, which is the only basis for the rights deriving from Regulation No 1612/68, is merely ancillary to the studies to be financed by the grant'.³⁶

The reasoning in *Brown* effectively prevents doctoral candidates from using their dual status as workers as well as students to claim social advantages on the same basis as nationals of host states. Even if they can show that they are engaged in genuine and effective economic activity and thus have worker status, it is still open for the host state to

³³ Case 39/86 *Lair op cit note 17*

³⁴ Case 197/86 *Brown v Secretary of State for Scotland* [1988] ECR 3205

³⁵ Case 39/86 *Lair op cit note 17* at paragraph 28

³⁶ Case 197/86 *Brown op cit note 34* at paragraph 27

find that they hold that status '*exclusively as a result of being accepted for admission to university to undertake the studies in question*'.³⁷

The reasoning in these cases is confusing in that the ECJ seems to accept worker status but then withhold rights. It could have taken an alternative approach and argued that the work done in these cases was ancillary to the qualification being sought and that therefore the student in question is not actually a worker at all. While the result may be the same in the cases of *Brown* and *Lair*, conceptually there is a considerable difference. The ECJ approach leaves the door open to the denial of rights to workers who have traditionally benefitted from the most generous entitlements and social advantages. It also seems to run contrary to established ECJ case law and European policy by denying rights to this category of citizens.

The second approach, categorising the work as ancillary, allows rights and entitlements to be limited in relation to those whose main purpose in exercising free movement rights is clearly educational rather than work related. This is likely to cover situations such as the one in *Brown* and *Lair* and potentially of course also many doctoral candidates. However, this approach may also leave open an option to treat doctoral candidates differently from students generally. In the student cases, it was not argued that the academic work carried out as part of the studies is 'work' in the EU law sense. The activity which affords both *Brown* and *Lair* worker status was undertaken in addition to and separate from their studies. However, if we accept, as argued above, that doctoral research is genuine and effective work in its own right, it cannot be ancillary to the qualification sought because it is precisely the work carried out as part of the 'studies' that is the genuine and effective work. To illustrate with an example: A doctoral candidate works in a laboratory carrying out a specific set of experiments which forms part of a bigger set of experiments. These experiments as well as any publications which the doctoral candidate may be involved in writing must be seen as genuine and effective work and would certainly be seen as such if carried out by post-doctoral researchers working on the same projects. The fact that a qualification is sought on the basis of that work should be irrelevant. In other words, while a student might have to consider the extent to which the work and the qualification sought are linked, that question does not arise in doctoral research because the 'work' and the 'studies' are one and the same thing.

³⁷ *ibid*

Seeing doctoral 'studies' as genuine and effective work in their own right also avoids the unfortunate situation whereby students who work in a job which is completely unrelated to their studies might be considered as workers and be entitled to social advantages and rights whereas those who take a job related to their studies but are otherwise in the same position, would not be entitled to the same benefits even though they are classed as workers.

Doctoral candidates as workers: A definitional conundrum

In theory then it is clear that most doctoral candidates will be able to bring convincing cases that they are workers because they can satisfy the definition discussed above. However even for those who are clearly workers, access to social advantages is not a foregone conclusion if the approach taken in *Brown* is followed. Doctoral candidates are thus highly dependent on the particular interpretation of their status and resulting entitlements in the national context within which they seek to exercise their free movement rights.³⁸ While *worker* might be an EU concept, *doctoral candidate* is not. There is a consensus that doctoral research is independent academic work carried out under supervision but whether this activity is classified as studying or 'on the job' training depends very much on the national or even institutional context. Guth, Ackers and Gill note that '*notwithstanding the commitment of the Bologna process to create a level playing field in the area of European Higher Education, marked diversity remains between national systems*'.³⁹ In a study concerning doctorates in the social sciences Ackers et al also noted that '*despite efforts to encourage harmonisation in doctoral programmes across the European Union, the concept of 'doctoral research' encompasses a wide and in some respects growing degree of diversity*'.⁴⁰ In other words, the output (thesis and viva) is generally the same but the path taken to get there varies enormously. It is doubtful, for instance, whether a doctoral candidate could enforce their status as worker and access the associated social advantages in a national context such as the UK, which classifies doctoral

³⁸ Chapters 5 and 6 consider two national contexts in detail. Chapter 5 considers the context in Germany where many doctoral candidates are afforded worker status. Chapter 6 considers the UK as the second case study which provides an insight into a national context treating doctoral candidates as students.

³⁹ Guth, J. Ackers, H.L. and Gill, B. (2008), 'Migration Processes and Their Determinants: Professional Factors' in Ackers, H. L. and Gill, B. 'Moving People and Knowledge: Scientific Mobility in an Enlarging European Union' Cheltenham: Edward Elgar

⁴⁰ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility In The Social Sciences'. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool.

candidates unequivocally as students. Doctoral candidates not falling within the worker category are likely to rely on EU migrant student rights and these rights are examined next.

Doctoral candidates as students: Free movement but no social advantages

As the discussion above indicates, doctoral candidates can rely on their EU worker rights in some instances but they have to clearly bring themselves within scope of the established definition. Because there is no EU definitional category of doctoral candidate, whether or not they will be able to satisfy the criteria for worker status is highly dependent on national interpretations. Where they cannot, they must rely on rights afforded to other categories of EU citizens. In most cases they will therefore fall within the category of EU migrant student. The free movement rights of students are also relatively well established in EU law. Article 165 TFEU recognises that '*encouraging mobility of students and teachers*'⁴¹ is one aim of EU action, and Article 166 TFEU on vocational training has been used in conjunction with the equality principle now contained in Article 18 TFEU as the basis for the development of mobile students' entitlement to access to higher education in another Member State. The landmark ruling came in *Gravier*⁴² in which the Court held that although education policy fell within the exclusive competence of Member States: '*access to and participation in courses of instruction and apprenticeships, in particular vocational training, are not unconnected with EU law*'.⁴³ Doctoral research can be said to be a '*form of education which prepares for a qualification for a particular profession, trade or employment or which provides the necessary skills or training for such a profession, skill or employment*'⁴⁴ and thus satisfies the definition of vocational training in *Gravier*. Doctoral candidates' right to pursue this sort of activity in a Member State other than their home state is therefore uncontroversial. Much more controversial is the support they are entitled to in carrying out their work.

In *Lair*⁴⁵ the ECJ held that the provision of maintenance grants for university students who were not workers was not, at that time, covered by EU law, although registration and tuition fees were. Maintenance grants were a matter of national educational policy which fell within the exclusive competence of Member States: '*it must be stated that at the*

⁴¹ Article 165(2) TFEU

⁴² Case 293/83, *Gravier op cit note 7*.

⁴³ *ibid* at paragraph 19

⁴⁴ *ibid* at paragraph 30

⁴⁵ Case 39/86 *Lair op cit note 17*

present stage of development of Community law assistance given to students for maintenance and for training falls in principle outside the scope of the EEC Treaty'.⁴⁶

Similarly, although migrant students have a right of residence in host states for the duration of the course⁴⁷, conditions of residence '*such as the covering of maintenance costs and health insurance*'⁴⁸ imposed by Member States were not in contravention of EU law according to *Raulin*.⁴⁹ These rulings were reinforced by Directive 93/96/EEC⁵⁰ governing residence rights of students. This Directive contained the resources requirement in Article 1 that a student '*shall not be a burden on the host social security system*'⁵¹ and specifically stated that the rights do not include maintenance payments in Article 3. There thus seemed little hope that doctoral candidates from other Member States would have access to financial support through grants and scholarships in the same way as home students.

The seminal case of *Grzelczyk*⁵² then provided some hope for students looking for financial support in their chosen host state.⁵³ Grzelczyk was a French national who pursued further education in Belgium. During his fourth year of study, Grzelczyk fell on financial difficulties and applied for the Belgian Minimex allowance. The Minimex was available to all residents of Belgium and was a type of income support for those without adequate resources. He was initially granted the benefit but that decision was then reversed on the grounds that he was neither a Belgian national nor an EU worker.

The ECJ noted that '*Article 3 of Directive 93/96 makes clear that the directive does not establish any right to payment of maintenance grants by the host member state due to the right of residency*'.⁵⁴ It however went on to say that '*a student's financial position may change with the passage of time for reasons beyond his control*'⁵⁵. Furthermore

'a student national ... who found himself in exactly the same circumstances as Mr Grzelczyk would satisfy the conditions of obtaining the minimex. The fact

⁴⁶ *ibid* at paragraph 15

⁴⁷ CRD Article 7 (1)(c)

⁴⁸ Case C-357/89 *Raulin op cit note 31*

⁴⁹ *ibid*

⁵⁰ Directive 93/96 on the right of residence for students [1993] OJ L317/59. This Directive has now been superseded by the CRD which contains very similar provisions.

⁵¹ Directive 93/96 on the right of residence for students [1993] OJ L317/59 Article 1

⁵² Case C-184/99 *Grzelczyk v. Centre Public d'Aide Sociale d'Ottignies-Louvain-la Neuve*

⁵³ See for example Iliopouou, A. and Toner, H. (2002), 'Casenote on *Grzelczyk*', Common Market Law Review 39:3, 609-620

⁵⁴ Case C-184/99 *Grzelczyk p cit note 52*

⁵⁵ *ibid* at paragraph 45

that Mr Grzelczyk is not of Belgian nationality is the only bar to its being granted to him'.⁵⁶

Therefore the ECJ found that the Belgian authorities had breached Article 12EC (now Article 18TFEU).

The ECJ was influenced by two key principles in their decision. Firstly they considered the notion of proportionality and seemed to conclude that refusing the Minimex to a fourth year student who had supported himself for the first three years of his course was not proportionate.⁵⁷ It was therefore legitimate in this case to effectively side-step the provisions in Directive 93/96. Arguably the ECJ felt able to reach this conclusion because of their view of the emerging importance of EU citizenship. While they did not evaluate the concept fully or attach specific rights to it, EU citizenship does seem to underpin their decision and we will return to a full discussion of EU citizenship below. In paragraph 31 of the judgment the ECJ famously proclaimed that '*Union citizenship is destined to be the fundamental status of nationals of member states, enabling those who find themselves in the same situation to enjoy the same treatment*'.⁵⁸ Although this is clearly an ambitious aspiration, the decision itself was in actual fact not as far-reaching as it appeared and is actually of limited use to doctoral candidates seeking to move abroad for study purposes. *Grzelczyk* applies in cases where students initially meet the resources requirement but run into financial difficulties at some point during their studies and then apply for help. Where this happens non-nationals should be treated the same way as nationals. While commendable, this is a long way from host states supporting migrant students as a matter of course.

Grzelczyk was fairly quickly followed by another landmark decision in the *Bidar*⁵⁹ case. For the first time the ECJ was faced with a student admitting from the outset that he did not meet the resources requirement.⁶⁰ *Bidar* had applied for a student loan but had been turned down because he was not 'settled' in the UK. The ECJ ruled that financial assistance to students did fall under EU Law and therefore should be subject to the non-

⁵⁶ *ibid* at paragraph 29

⁵⁷ We return to the principle of proportionality and its importance in the development of rights for EU citizens further below.

⁵⁸ *Case C-184/99 Grzelczyk* *op cit* note 52 at paragraph 31

⁵⁹ *Case C-209/03, The Queen (on the application of Dany Bidar) v London Borough of Ealing, Secretary of State for Education and Skills* [2005] ECR I-2119

⁶⁰ For analysis of the decision see for example Barnard, C. (2005) 'Case C-209/03 *Bidar*' (case note) 42 *CML Rev* 1465; Golyner, O. (2006) 'Student Loans: The European Concept of Social Justice According to *Bidar*'. 31 *EL Rev* 390

discrimination principle between home and other EU nationals. In an attempt to limit the financial implications for Member States, and in order to avoid paving the way for an enormous wave of cases, the ECJ did however agree that, where proportional, applicants should demonstrate that they are integrated into host society. The decision was hailed as revolutionary but closer scrutiny reveals that it is not so far-reaching after all. *Bidar* had already been in the UK for a number of years completing his secondary school education but that period did not count towards achieving 'settled' status. In practice, for the UK context at least, all that changed was that residence for the purpose of education could now count towards achieving the settled status which would demonstrate the necessary link with the host country. The need to establish a 'real link' with the host state before being entitled to claim benefits is a mechanism by which the ECJ has kept alive Member State sovereignty amidst the expansion of the personal scope of EU law following the introduction of EU citizenship.⁶¹ How a real link is established seems ultimately to be left to the Member States and, importantly, should also be appropriate to the circumstances of the claimant and the benefit claimed. O'Brien thus argues that *'the potentially transient nature of migrant student residence, and subsequently low potential contributions to the host state, has lent legitimacy to a higher real link test'*.⁶² Establishing a real link can be difficult for students and doctoral candidates alike so for most doctoral candidates the ECJ's judgment had little impact. The research data underpinning this thesis confirms that in most cases doctoral candidates have not spent sufficient time in their chosen host state prior to their doctoral studies to establish a real link. In some cases doctoral students have already undertaken undergraduate studies in the host country and in such cases *Bidar* would benefit those wanting to stay on in that same host state for doctoral research.⁶³ In most cases though the period spent abroad at undergraduate level is of too short a duration to give rise to a real link with that Member State.

Jacqueline Förster - worker status, real link or a bit of both?

The case of Jacqueline Förster⁶⁴ indicates that Member States have some degree of flexibility in determining what might constitute a real link and in particular in deciding the length of residence required to show sufficient integration in the host state. The case is a

⁶¹ O'Brien, C. (2008), 'Real Links, abstract rights and false alarms: the relationship between the ECJ's 'real link' case law and national solidarity. *ELRev* 643

⁶² *ibid* at page 653

⁶³ For a more detailed discussion of the link between undergraduate experience abroad and doctoral mobility see chapter 8.

⁶⁴ Case C-158/07 Förster v Hoofddirectie van de Informatie Beheer Groep [2008] ECR I-8507

further example of the ECJ's relatively restrictive application of the real link requirement imposed on non-economically active citizens if they wish to claim social advantages.

In this case Ms Förster moved to the Netherlands and shortly afterwards enrolled on a university course. She held various employed positions throughout her initial studies and was granted a maintenance grant because the Dutch authorities considered her an EU worker. When she stopped working for a period of time the authorities concluded she was no longer entitled to the grant and asked her to pay back the amount awarded for that specific period. Ms Förster argued that she should either be regarded as a worker for the whole of the year even though she had worked only for the first half or that alternatively she was, by that time, sufficiently integrated in the Netherlands to be entitled to the maintenance grant following the decision in *Bidar*. The ECJ agreed with the Dutch authorities and confirmed that Ms Förster could no longer be considered a worker under the relevant provisions⁶⁵ and that a five-year residence requirement before allowing students access to the benefit was not incompatible with EU law in general and the *Bidar* case in particular. This is unsurprising given that CRD refers to five-year residence requirements.⁶⁶ What is more striking is that the ECJ concluded that it was irrelevant that Ms Förster's primary intention in moving from her native Germany to the Netherlands had been to study.⁶⁷ This is a judgment that is not easily reconcilable with the judgement in *Brown*, in which of course the motive for moving to the UK was clearly relevant; had it not been, *Brown*, who the ECJ accepted was a worker surely would have been entitled to equal treatment and therefore a maintenance award as an EU worker. The reason he was not entitled was the fact that his main reason for moving to the host state was to begin university studies there. In *Förster*, the intention to move to the Netherlands simply to study was held to be irrelevant to her claim for equal treatment:

'However, [Article 3 of Directive 93/96] does not preclude a national of a Member State who, by virtue of Article 18 EC and the provisions adopted to implement that article, is lawfully resident in the territory of another Member State where he or she intends to start or pursue education from relying during

⁶⁵ Regulation (EEC) No 1251/70 of the Commission of 29 June 1970 on the right of workers to remain in the territory of a Member State after having been employed in that State OJ, Special Edition 1970 (II), p. 402

⁶⁶ The CRD stipulates a period of 5 years after which a right to permanent residence should be given. See Article 16 CRD

⁶⁷ Case C-158/07 *Förster* op cit note 64 at paragraph 44. See Marzo, C. (2010). 'A New Method of Interpretation Linked to European Citizenship: the *Förster* Case. Web JCLI [2010] 3.

that residence on the fundamental principle of equal treatment enshrined in the first paragraph of Article 12 EC' (Now Article 18TFEU).⁶⁸

However the point explicitly at issue in *Brown*, namely whether worker status in these circumstances also gave rise to access to student maintenance was not argued in *Förster*. The Dutch authorities had been happy to pay the grant as long as Ms Förster was a worker. This may explain the difference in attitude. In addition nearly 20 years lie between the judgments, and attitudes and approaches to student mobility as well as EU competence in this area have developed. Ms Förster's work also seems not to have been as directly linked to the university study she was undertaking, and acceptance on the course was not a prerequisite of the employment.

Förster and Doctoral Candidates

The case opens the possibility of doctoral candidates who can clearly establish worker status to claim maintenance payments on the basis that the ECJ considered it irrelevant whether study was the main purpose for mobility. *Förster* thus seems to overrule *Brown*. However, this will seemingly only be the case if there is not so close a link between the employment and the doctoral studies as to render one dependant on the other. A distinction can therefore be made between the situation in *Brown* where there is a link between the studies to be undertaken and the work carried out and the situation in *Förster* where there is no such link. This is where the judgment becomes problematic for doctoral candidates: for many of them their paid work is likely to be too closely linked. In most cases the link between their employment and their doctoral research will be more akin to the link between Brown's work and studies than that of Ms Förster. In other words, the employment which gives rise to worker status will be dependent on acceptance on the institution's doctoral programme and, following the reasoning in *Brown*, will thus not give rise to access to maintenance. The ECJ has never explicitly overruled *Brown* and it is a likely that this sort of reasoning will be applied should an appropriate case arise. In order to access maintenance grants as students though, doctoral candidates would have to satisfy a residence requirement to show their genuine links with the host society and *Förster* confirms that this period can be up to five years. Some doctoral candidates may therefore be able to access maintenance grants and other social advantages, whereas others in very similar circumstances will not. This lack of consistency in entitlements for the same category of EU citizens seems unsatisfactory and

⁶⁸ *Ibid* at paragraph 43

can hardly be considered compatible with a policy which is trying to encourage the mobility of researchers within the EU.

Doctoral Candidates and Other Social Advantages: It is not all about Maintenance Grants

Furthermore, the student cases are predominantly concerned with the right to one particular social advantage, that of maintenance grants or other assistance in paying for and supporting themselves through studies. While this is of course a concern for doctoral candidates, it is often not the only one. In fact, funding for doctoral research is far more complex and varied than the types of funding available at undergraduate level and is usually awarded on a competitive basis. It is therefore less likely to be an issue for those doctoral candidates who have already secured a place although it may of course be an issue when searching for positions which are viable for the candidates concerned. Doctoral candidates are likely to have reached a stage in their lives at which they can no longer be described as completely footloose or without ties and responsibilities. They might therefore need to access a range of social advantages that is much broader than merely relating to maintenance awards or loans. Access to child care and family-related benefits for example are likely to feature much more in relation to doctoral candidates who often are older than most undergraduate students. Doctoral candidates are also more likely to consider the rights of their family members to move with them and seek work or access social advantages while in the host country. Many are partnered, some are parents or have caring responsibilities for their own parents and so have to make important decisions that affect not only themselves but also their families. For those classed as students rights in this area are limited, especially if the doctoral candidate's family members are not EU citizens in their own right. The legal entitlements in relation to family members as well as the importance of family ties in relation to mobility are explored in detail in chapter 8. This chapter now moves on to consider the possible implications of EU citizenship for enhancing and supporting the free movement rights of doctoral candidates.

Doctoral candidates as EU citizens.

In *Grzelczyk* the ECJ famously proclaimed that Union citizenship would become the fundamental status of all EU citizens.⁶⁹ What then is Union citizenship? Citizenship in a broad sense refers to the participation in and membership of a community.⁷⁰ Barnard notes '*...there are 3 interconnected strands of citizenship: rights and duties, membership and participation*'.⁷¹ Similarly Bellamy identifies rights, participation and solidarity as key citizenship concepts.⁷² Notions of citizenship have however generally been developed in the context of nation states⁷³ and Union citizenship has its own distinctive features⁷⁴ and complements rather than replaces national citizenship.⁷⁵

Citizenship of the Union, now enshrined in Part two (Articles 18 -25) TFEU, was formally introduced into the EC Treaty as a way of bringing Europe closer to its people and enhancing the legitimacy of the EU.⁷⁶ European citizenship was seen as encouraging a European identity and a way of making the Union meaningful in more than just an economic sense.⁷⁷ However elements of citizenship were already apparent in the original Treaties and have been developed throughout the history of the EU. Economic free movement rights bear the hallmarks of citizenship albeit for a selected few. The granting of social rights to the economic elite and the extension of some of those rights to families and those not economically active can all be couched in citizenship terms. The constitutionalisation of citizenship rights through inclusion in the Maastricht Treaty can

⁶⁹ An aspirational statement which is now codified in recital 3 preamble of the CRD.

⁷⁰ Marshall, T.H. (1950), 'Citizenship and Social Class'. Cambridge: Cambridge University Press

⁷¹ Barnard, C (2007), 'Substantive Law of the EU'. Oxford: OUP

⁷² Bellamy, R. (2004), 'Introduction: The making of Modern Citizenship' in Bellamy et al (eds) (2004) 'Lineages of European Citizenship: Rights, Belonging and participation in 11 Nation States'. Basingstoke: Palgrave MacMillan

⁷³ Shaw, J. (1997b), 'The Many Pasts and Futures of Citizenship in the European Union'. 22 EL Rev 554 and Shaw, J. (1998), 'Citizenship of the Union: First Steps in the European Court of Justice'. 4 European Public Law 533.

⁷⁴ Currie, S. (2008), 'Migration, Work and Citizenship in the Enlarged European Union' Farnham: Ashgate. Particularly chapter 1

⁷⁵ Article 17(2)EC now Article 20TFEU

⁷⁶ See Chalmers et al (2006), 'European Union Law' Cambridge: Cambridge University Press. Ackers, H.L and Dwyer, P. (2002), 'Senior Citizenship? Retirement, Migration and Welfare in the European Union', Bristol: Polity Press. Currie, S. (2008), 'op cit note 74. Particularly chapter 1.

⁷⁷ Currie, S (2009), 'The Transformation of Union Citizenship' in Dougan, M. and Currie, S (ed), '50 Years of the European Treaties. Looking back and thinking forward' Oxford: Hart Publishing.

thus been seen as signifying a new chapter in development of status of the individual in the EU.⁷⁸ As Currie notes

'Citizenship, therefore, stretches further than the articulation in Articles 17-22EC [now Articles 20-25 TFEU] per se, so as to incorporate the traditional economic free movement provisions, read alongside the extensive interpretation provided by the ECJ of the social rights of economic migrants. It also finds expression via the equal treatment principle in Article 12 EC [now Article 18 TFEU] and various pieces of secondary legislation'.⁷⁹

Whichever way citizenship is considered in the EU context there is no escaping the fact that the citizenship provisions are inextricably linked to free movement. In order for any of the citizenship provisions to become active some kind of cross-border element is necessary.⁸⁰ This is perhaps most obvious in the key citizenship provision enshrined in Article 21 TFEU, which gives every citizen of the Union the right to move and reside freely within the territory of the Member States, subject to the limitations and conditions laid down in the Treaty or secondary legislation. While this close link with migration has been seen by some as limiting the scope and effectiveness of Union citizenship⁸¹ its impact on free movement rights is nonetheless worth noting and celebrating.

The right of doctoral candidates, or indeed any EU citizen, to move and reside freely in the territory of the Member States subject to the limitations specifically set out in EC law is fairly uncontroversial. It is the scope of the limitations that proves problematic. One of these limitations is the resources requirement contained in Article 10 CRD which states: *'Persons exercising their right of residence should not, however, become an unreasonable burden on the social assistance system of the host Member State during an initial period of residence'*. This provision, which replaced the student directive containing similar wording,

⁷⁸ Shaw, J. (1997b), op cit note 73. For developments of these arguments and analysis of EU citizenship more generally see for example: Maas, W. (2007) *Creating European Citizens* Rowman and Littlefield, Lanham MD; O'Leary, S. (1997) *The Evolving Concept of Community Citizenship: From the Free Movement of Persons to Union Citizenship*. Kluwer Law International, Alphen an den Rijn; Besson, S & Utzinger, A. (2007) 'Introduction: Future Challenges of European Citizenship – Facing a Wide-Open Pandora's Box' 13 EUJ 573; Davies, G. (2005) "'Any Place I Hang My Hat?" or: Residence is the New Nationality' 11 EUJ 43; Davis, R. (2002) 'Citizenship of the Union...rights for all?' 27 EL Rev 121; Kostakopoulou, T. (2007) 'European Union Citizenship: Writing the Future' 13 EUJ 623; Spaventa, E. (2008) 'Seeing the Wood despite the Trees? On the Scope of Union Citizenship and its Constitutional Effects' 45 CML Rev 13

⁷⁹ Currie, S. (2008), op cit note 74 at page 149.

⁸⁰ Currie, S (2009), op cit note 77

⁸¹ *ibid* and Editorial comments (2008) 'Two-speed European Citizenship? Can the Lisbon Treaty Help Close the Gap?' 45 CML Rev 1.

was thought to exclude measures such as student grants from the scope of EU law. However, as seen above, the ECJ has been willing to bring such considerations within the scope of the Treaty. The concept of Union citizenship has been instrumental in the extension of rights and entitlements to non-economically active citizens generally and students in particular. It is therefore worth considering whether the citizenship provisions and jurisprudence currently provide an avenue for clarifying doctoral candidates' position in EU law.

The citizenship provisions in the Treaty provide symbolically important rights to move to and reside freely in the territory of another Member State, but the real impact of citizenship can best be observed when considering citizenship provisions in conjunction with claims for equal treatment under Article 18 TFEU. An early case demonstrating this is *Martinez Sala*⁸² in which the ECJ concluded that a national of one Member State lawfully resident in another Member State can rely on Article 12 EC (now Article 18 TFEU) in order to claim equal treatment with nationals of the host state in relation to matters which come within the scope of the Treaty. *Martinez Sala*,⁸³ which concerned a former migrant worker who had been resident in the host state for some considerable time, is the first case which considers the rights of EU migrant citizens independently of their economic activity. The approach taken by the ECJ in *Baumbast*⁸⁴ takes this process further by allowing residence rights to Mr Baumbast and his family despite the fact that Mr Baumbast was no longer an EU worker and did not meet the sufficient resources and health insurance requirements set out in the legal provisions. The ECJ held: *'The Treaty of the European Union does not require that citizens of the Union pursue a professional or trade activity, ... in order to enjoy the rights provided in Part Two of the EC Treaty, on citizenship of the Union'*.⁸⁵ However most of the citizenship cases involve the application of some limitations to that basic premise. In *Grzelczyk*,⁸⁶ discussed above for example the sufficient resources requirement placed on students was not overruled; In *Trojani*⁸⁷, the ECJ noted that lawful residence could be withdrawn in cases where the requirements of lawful residence (i.e. sufficient resources) were no longer met. In *Bidar*⁸⁸ and *Förster*⁸⁹ a period of residence could be

⁸² Case C-85/96 *Martinez Sala v Freistaat Bayern* [1998] ECR I-2691

⁸³ *ibid*

⁸⁴ Case C-413/99 *Baumbast and R v Secretary of State for the Home Department* [2002] ECR I-7091

⁸⁵ Case C-413/99 *Baumbast* op cit note 84

⁸⁶ Case C-184/99 *Grzelczyk* op cit note 52

⁸⁷ Case C-456/02 *Trojani* op cit note 26

⁸⁸ Case C-209/03, *Bidar* op cit note 59

⁸⁹ Case C-158/07 *Förster* op cit note 64

required to establish a real link with the host society before benefits would be granted. In fact most of these decisions can be understood in terms of a real link requirement. Starting with *Martinez Sala*⁹⁰ it is evident that she had spent considerable time in Germany, the host state, and had previously contributed to the host state economy through her economic activity. *Grzlyczyk*⁹¹ had spent some time in the host state and had gone to considerable effort to support himself for the first three years of study. He had therefore established a link with the host society. It is also easy to see the real link in *Baumbast*⁹², where the family had spent considerable time in the UK and were also clearly committed to staying there.

If EU citizenship is considered together with the real link requirements therefore, it does not help doctoral candidates to access EU law rights. Most doctoral candidates will struggle to establish a real link with their chosen host state if it continues to be equated to time spent as lawfully resident in the host state. Whether re-considering real link in terms of commitment to the host country might change this situation is considered further below and in Chapter 6.

While the requirement for real link has meant that EU citizenship stops short of granting rights to non-economically active migrants purely on the basis of their citizenship status, the principle of proportionality has been used to soften the blow of such a requirement and grant rights and benefits to which there is, on a strict application of the legal provisions, no entitlement. It is this use of proportionality to which we now turn.

Proportionality

In the context of EU enlargement⁹³ Currie notes that

'the Court's use of proportionality has injected a greater degree of flexibility into the black-letter provisions and allowed it to extend residence (and equal treatment) rights to some individuals who fall outside of the formal legislative regime'.⁹⁴

⁹⁰ Case C-85/96 *Martinez Sala* op cit 82

⁹¹ Case C-184/99 *Grzelczyk* op cit note 52

⁹² Case C-413/99 *Baumbast* op cit note 84

⁹³ The implications of the EU enlargement rounds of 2004 and 2007 are discussed in further detail in chapter 5 and 7.

⁹⁴ Currie, S. (2008), op cit note 74 at page 168.

This is a claim worth investigating further in relation to doctoral candidates. Two key cases provide useful illustrations: *Baumbast*⁹⁵ and *Grzelczyk*.⁹⁶ In *Baumbast* the ECJ confirmed that Article 18 EC did confer free standing rights on EU citizens. *Baumbast* was a German national who had lived and worked in the UK before obtaining employment with a German company which required him to work abroad outside the EU. His wife and their 2 children remained in the UK. The renewal of Mr *Baumbast* and his family's residence permits was refused on the grounds that he was no longer a migrant worker and did not have sufficient sickness insurance. He therefore did not meet the relevant resources requirement. The ECJ held that *'a citizen of the Union who no longer enjoys the rights of residence as a migrant worker in the host Member State can, as a citizen of the Union, enjoy there a right of residence by direct application of Article 18(1)'*.⁹⁷ The ECJ further confirmed that the right of residence was subject to the limitations and conditions set out in the treaty and secondary legislation but went on to say: *'those limitations are applied in compliance with general principles of EU law and, in particular, the principle of proportionality'*.⁹⁸ Although Mr *Baumbast* might not have had the required medical insurance in the UK, he did have medical insurance in Germany, where the family travelled to receive any treatment. Mr *Baumbast* and his family were not reliant on the host state for any financial benefits or help and in fact Mr *Baumbast* had previously engaged in economic activity, thus contributing to the economy in the UK. Taking all those matters into consideration the ECJ felt that denying the family their right to residence was not proportionate.

Similar reasoning is evident in the case of *Grzelczyk*. The facts are familiar from the discussion above. The ECJ took the view that Rudy *Grzelczyk* should be granted a minimum subsistence allowance on the basis that he was lawfully resident in another Member State and not granting him the benefit would be contrary to the non discrimination principle in Art 12EC (now Article 18TFEU). The fact that this obviously meant that student *Grzelczyk* did not meet the 'sufficient resources' criteria was not sufficient to deprive him of his lawful residence. The ECJ, though not explicitly, did in effect consider whether doing so would be proportionate and came to the conclusion that it would not. *Dougan* and *Spaventa* provide a useful summary of the situation:

⁹⁵ Case C-413/99 *Baumbast* op cit note 84

⁹⁶ Case C-184/99 *Grzelczyk* op cit note 52

⁹⁷ Case C-413/99 *Baumbast* op cit note 84 at para 94

⁹⁸ *ibid*

'Baumbast...illustrates the application of proportionality to the 'health insurance' requirement imposed... The earlier case of Grzelczyk illustrates (though more in hindsight than in the explicit reasoning of the judgment itself) the application of the principle of proportionality to the requirement of 'sufficient resources' set out in the Residency Directives'.⁹⁹

Applying the proportionality principle to the limitations and conditions of residence may be of benefit to some doctoral candidates as it allows for the extension of rights to students: *Grzelczyk* moved on from cases such as *Brown* and paved the way for Danny Bidar as discussed above. The proportionality principle might be of particular use to doctoral candidates who, once established in the host state, require access to social advantages. If their claim is not one for maintenance while they are studying but relates to something else, such as, for example, child benefit, they may be in a strong position to argue that denying them such an advantage is not proportionate. In relation to the rights of their families, in particular third-country national family members, doctoral candidates may be able to rely on arguments similar to those put forward in *Baumbast* to establish rights and entitlements for their partners, children or other dependents. In essence the argument would be that doctoral candidates, once lawfully resident and enrolled on a doctoral programme or engaged in doctoral research, should have access to all social advantages on the basis of their citizenship status. The longer the doctoral candidate has already been engaged in doctoral research in the host state the stronger the argument becomes that denying social advantages to them is not proportionate.

However the focus on proportionality in relation to citizenship does not assist in reconceptualising doctoral candidates as a distinct group of EU citizens because it simply replicates the categories already established: on the one hand doctoral candidates as workers who may have all the rights associated with that status and on the other doctoral candidates as students whose rights have been developed but remain limited by the sufficient resources and health insurance requirements, albeit now proportionality bound. The proportionality argument may help explain the reasoning in cases such as *Brown* and *Lair* in which social advantages were denied to workers who were also students. Although not explicit, it is possible that the ECJ felt that extending certain entitlements to those who are workers but also students was not proportionate and would place an unfair burden on certain host states. Understanding the cases in terms of proportionality may again allow

⁹⁹ Dougan, M. and Spaventa, E. (2003). 'Educating Rudy and the Non-English Patient: A Double Bill on Residency Rights Under Art 18 EC'. 28 *EL Rev* 699 at page 703.

distinctions to be drawn between undergraduate and taught Masters students as against doctoral researchers. While it may not be proportionate to require host states to support students from other Member States who have no connection with the them and with no regard to whether they carry out an economic activity alongside their studies or not, there may be an argument to suggest a host state should support doctoral candidates.¹⁰⁰ In relation to this group the host state is more likely to benefit from the investment made in a candidate in terms of the research carried out, contributions made to the economy as well as potential future returns connected with producing a highly skilled and educated workforce. In other words, it should be easier for a doctoral candidate to establish a real link with the host state than it is for a student. If a real link to the scientific community in the host state can be interpreted as a commitment to the scientific community in the future and thus a real link to the country in the longer term, then the limitations placed on granting rights purely on the basis of citizenship status discussed above could be by-passed in this specific context.

Following this reasoning on to its logical conclusion, one might construct an argument on the notion that the important part of the limitation on free movement rights is the requirement that the migrant shall not become an unreasonable burden on the host state. This is, if you like the legitimate aim; the sufficient resources requirement and the health insurance requirements are the proportionate means of achieving that aim. One might then argue that doctoral candidates are not, however conceptualised, an unreasonable burden on the host state but, on the contrary, they actually make a significant contribution to their hosts state and thus should have access to social advantages in their own right.

Conclusions: The need for a holistic approach to the ERA and EHEA

Citizenship does not provide a solution to the dual status problem doctoral candidates face, but it may offer an alternative way of thinking about mobile doctoral candidates. EU citizenship has the potential to shift the focus in free movement of persons law from the activity, economic or otherwise, of the person concerned and towards the person's status as an EU citizen. While there are of course socio-economic arguments as to why the provision of benefits to some EU citizens should perhaps be restricted, it is arguably time to draw the line in a slightly different place between those deserving of access to all social

¹⁰⁰ For a discussion on the financial implications of free movement of students see Dougan, M. (2005b). 'Fee, Grants and Dole Cheques: Who covers the cost of migrant education within the EU?' 42 *CML Rev* 943

advantages a host state has to offer and those who are not. It might for example be drawn between all those making a contribution to society, be it through work, service provision, volunteering, preparing for work through study or training or some other means, and who were to be treated the same and allowed to access social advantages as against those who made no contribution were not to be allowed such access. Doctoral candidates would clearly fall within the former category. However, such a division would be a crude and unsatisfactory way of determining rights as it is unclear how one decides who makes no contribution and therefore is not entitled to social advantages. It is also unrealistic in socio-economic terms to expect some Member States to shoulder the bulk of the cost that one-way migration flows based on such a system could cause.

However, limiting full access in the traditional way to economically active citizens only also seems unsatisfactory. A middle ground may be found by taking the Lisbon agenda, the Bologna Process and free movement of persons law as a framework which should provide the background for a holistic approach to the mobility of the actors specifically addressed by the policies of the ERA and EHEA. If the EU is serious about making the mobility of students, researchers, teachers and others involved in academia and research a reality then it would seem logical that those groups benefit from the most generous provisions in terms of free movement rights and legal entitlements and opportunities afforded. Using the citizenship provisions in conjunction with the policy of the ERA as well as the EHEA would provide a rationale for extending rights to doctoral candidates as a distinct group of EU citizens and ensuring that mobile doctoral candidates are not at a disadvantage when compared to nationals of their chosen host state.

Chapter 5: Moving as EU Workers: The German Case Study

The previous chapter has outlined the implications of EU status for doctoral candidates wishing to exercise their free movement rights. This chapter begins to examine some of those implications as they play out in the national context of the host countries studied in more detail. Although important concepts such as ‘worker’ relating to free movement rights tend to be defined at EU Law level, doctoral researchers have so far escaped such universal definition. While this may allow countries the flexibility to organise doctoral research as they wish and in line with their culture and traditions of higher education, it also means that it is difficult for doctoral candidates to argue that their EU law status is anything other than the status afforded to them by the host state. In the UK for example doctoral candidates are perceived as postgraduate students; in countries such as Finland or Norway they are seen as employees¹ and in Germany they could be either, depending on their exact individual circumstances, although the majority of natural scientists tend to fall within the worker category.²

This chapter provides the first of two country case studies and sets out the situation of doctoral candidates moving to Germany for doctoral research. The next chapter then considers the situation in the UK in detail. The case study countries have been chosen because they provide contrasting national contexts. In Germany doctoral candidates can often be seen as employees and are likely to be able to establish EU migrant worker status. In the UK doctoral candidates are seen as students so the two countries provide useful examples of how law and policy affects doctoral candidates depending on their status. The countries have also been studied in quite some detail in the research projects the author was involved in and the empirical data gathered provides an insight into the lived experience of doctoral candidates in the two countries. The chapters therefore consider more than just the legal and policy context in the countries studied and also examine the relationship between real life experience and the national legal and policy framework. This chapter begins by outlining the scientific context into which the candidates move, providing an insight into German science policy and how that maps on to the European agendas set by the ERA and EHEA. It then considers access to doctoral research positions in more detail, arguing that the German national framework has begun to

¹ Ackers, H.L., Gill, B. and Guth, J. (2008) ‘Doctoral Mobility In The Social Sciences. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool.

² Bennion, A. and Locke, W. (2010), ‘The Early Career Paths and Employment Conditions of the Academic Profession in 17 Countries’, 18(1) European Review 57 – 533.

recognise doctoral candidates as a specific group of scientists rather than students, whose needs can best be addressed by treating them as such. In Germany, it is argued, there exists a level playing field for nationals and other EU citizens alike when competing for doctoral positions. In addition many doctoral candidates benefit from employment contracts and associated rights and even where they do not and take up fellowship positions instead, they are likely to still fall within the definition of EU migrant worker and thus have access to social advantages under Regulation 1612/68³ as touched upon in the previous chapter. These rights and entitlements are discussed in turn before highlighting any gaps left by EU and national frameworks which doctoral candidates might fall into and pointing to areas where classifying doctoral candidates as a distinct group of EU citizens and scientists may strengthen their position in this context.

A Well Funded, International Context: The German Science Labour Market

Germany has one of the largest academic labour markets in the EU and is moving towards the target of three per cent GDP expenditure on research and development set as part of the ERA (2.64 per cent in 2008).⁴ According to the German Federal Ministry for Education and Research, there are around 750 publicly funded institutions and organisations carrying out research in Germany.⁵ That figure includes 105 universities and 203 Universities of Applied Science⁶ as well as 80 research institutes run by the Max Planck Society (MPG) and over 160 research institutes run by other organisations such as the Helmholtz Association or the Fraunhofer Society.⁷ In addition there are many other publicly funded organisations with some research activity and two thirds of research in Germany is carried out by industry.⁸ In terms of research areas and scientific disciplines, Germany covers an enormous variety of fields from nanotechnology to marine and polar research.⁹ Furthermore, R&D is continuing to expand further whereas indicators show that it is

³ Regulation 1612/68 of the Council of 15 October 1968 on freedom of movement for workers within the Community *OJ L 257, 19.10.1968, p. 2–12.*

⁴ Bundesministerium für Bildung und Forschung (BMBF) (2010) 'Bundesbericht Forschung und Innovation 2010'; Berlin: BMBF

⁵ *ibid*

⁶ Statistisches Bundesamt Deutschland (Federal Statistics Office) (2010) 'Statistics of Higher Education' available online at <http://www.destatis.de/jetspeed/portal/cms/Sites/destatis/Internet/EN/Navigation/Statistics/BildungForschungKultur/Hochschulen/Hochschulen.psmi> [last accessed June 2010]

⁷ BMBF (2010) *op cit* note 4

⁸ *ibid* and Deutscher Akademischer Austauschdienst [German Academic Exchange Service] (DAAD) (2010a), 'Wissenschaft Weltoffen 2009'. Bielefeld: DAAD. Data also available online at <http://www.wissenschaft-weltoffen.de/> [last accessed June 2010]

⁹ A full list of the thematic priorities in German R&D policy can be found BMBF (2010) *op cit* note 4

stagnating in other leading countries such as the UK.¹⁰ Germany therefore appears to have embraced the rationale underpinning the ERA and Lisbon Agenda. European level statements regarding the importance of human resources and their mobility for the region's competitiveness and development are echoed at national level.¹¹ The Deutscher Akademischer Austauschdienst [German Academic Exchange Service] (DAAD) for examples states:

'International cooperation in research and academia means an increase in the visibility and desirability of Germany as a location for world-class research. These efforts contribute to Germany's competitive abilities in the marketplace, in cutting-edge technologies and scientific expertise. In turn, a reputation for excellence in science and technology helps attract not only foreign investment but also investment in the most important product of all – human potential'.¹²

The DAAD is not only eager to point out the advantages for Germany but also recognises the need to market the country to overseas researchers and suggests *'Germany is an open-minded and friendly country which offers scientists from all over the world an excellent research environment'*.¹³

Given Germany's position as an 'innovation leader'¹⁴ it is unsurprising that it is seen as one of the most popular destinations for mobile scientists.¹⁵ According to statistics reported in 2005, Germany together with France and the UK, hosts 54 percent of full time R&D workers in the then 25 EU Member States.¹⁶ Furthermore, three out of five foreign students in tertiary education are based in one of those three countries. There are a significant number of foreign researchers and academics working in Germany including many from Poland and Bulgaria.¹⁷ In fact Poland is the fifth and Bulgaria the 16th most important country of origin

¹⁰ Pro Inno Europe (2010) 'European Innovation Scoreboard 2009', Brussels: European Commission

¹¹ For a discussion of ERA policy and the rationale underpinning a focus on mobility of scientists, see chapters 1 and 3.

¹² Deutscher Akademischer Austauschdienst [German Academic Exchange Service] (DAAD) (2002), 'Discover Germany: Research and Academic Opportunities'. Bonn: DAAD at page 21.

¹³ *ibid* at page 6.

¹⁴ Pro Inno Europe (2010) *op cit* note 10.

¹⁵ Van De Sande, D., Ackers, H. L. & Gill, B. (2005), 'Impact Assessment of the Marie Curie Fellowships under the 4th and 5th Framework Programmes of Research and Technological Development of the EU (1994_/2002): Final Report'. Brussels: European Commission.

¹⁶ Götzfried, A. (2005), 'Science, Technology and Innovation in Europe', Statistics in Focus: Science and Technology 8/2005, Luxembourg: Eurostat.

¹⁷ Although it is not long since the existence of any coherent internationalisation strategy in Germany was questioned: Berchem, T. (1991). 'The Internationalisation of Higher Education: The German Perspective'. Higher Education, 21, 297-304.

based on the total number of foreign scientists in Germany.¹⁸ Germany also hosts a significant number of doctoral candidates and seems to be keen to attract them to Germany and support them. The statistics show that considerable effort and funding are being invested in doctoral level science in Germany. The MPG hosted a total of 2048 doctoral candidates in 2004 of which 1865 were foreign nationals¹⁹ and the Deutsche Forschungs Gemeinschaft [German Research Foundation] (DFG) spent 13 million euros on doctoral stipends in their graduate schools in the natural sciences²⁰ and overall funded 1219 foreign doctoral candidates directly through their programmes.²¹ The DAAD funded a total of 6743 foreign doctoral candidates in 2007 with the Helmholtz Association funding a further 700.²² According to Wissenschaft Weltoffen, there were 12024 directly funded foreign doctoral candidates in Germany in 2007.²³ Further statistics show that of the 25190 doctorates that were awarded in Germany in 2008, 14.5% went to foreign nationals.²⁴ 177 doctorates were awarded to Polish nationals and 84 to Bulgarians.²⁵

Being Part of the Scientific Community: Germany's Engagement with Doctoral Research

Germany has, in policy terms, engaged more directly with doctoral mobility than the ERA as a whole. The publication 'Doing a Doctorate in Germany'²⁶ provides an overview of different types of doctoral programmes and funding options as well as general information on living and researching in Germany and is explicit about the fact that doctoral candidates in Germany are part of the scientific community rather than merely students: *'Doctoral students in Germany are part of [the] research process. Gaining a doctorate is seen as the*

¹⁸ DAAD (2010a) op cit note 8.

¹⁹ Max Planck Gesellschaft (MPG) (2005) 'Facts and Figures - the Max Planck Society' available online at

<http://www.mpg.de/english/illustrationsDocumentation/documentation/otherPublications/index.html> [last accessed June 2010]. No more recent figures available directly from the MPG although DAAD (2010a), op cit note 8 suggests a figure of 2146 foreign doctoral candidates being supported by the MPG in 2007

²⁰ Deutsche Forschungs Gemeinschaft [German Research Foundation] (DFG) (2007) 'Jahresbericht'. Bonn: DFG

²¹ DAAD (2010a) op cit note 8

²² ibid

²³ ibid

²⁴ Statistisches Bundesamt Deutschland (Federal Statistics Office) (2010) op cit note 6.

²⁵ DAAD (2010a) op cit note 8, It is worth noting that doctoral candidates working at Max Planck Institutes have the option of registering for their doctorate at a German University or an institution in their home country and therefore the number of doctoral degrees awarded will not be equal to the number of candidates completing their doctoral research in Germany in any given year

²⁶ Deutscher Akademischer Austauschdienst [German Academic Exchange Service] (DAAD) (2010b), 'Doing a Doctorate in Germany 2010'; Bonn: DAAD

*first phase of a research career.*²⁷ Furthermore, German law specifically provides for the creation of research assistant positions for those wishing to gain a doctorate.²⁸ These positions can be in research institutions such as the Max Planck Institutes or in universities and are a clear example of engagement at legal and policy level with doctoral research. Germany has also addressed the question of international mobility and in particular of attracting doctoral researchers to Germany. The emergence and growth of structured doctoral programmes is one example of specifically addressing the needs of international doctoral candidates: The DAAD notes that *'structured doctoral programmes enrich the higher education system and expand the opportunities for international students to gain a doctorate in Germany'*.²⁹

The Legal Framework

The legal framework for doctoral research in Germany is made up of several layers of legal measures. The German constitution stipulates that responsibility for the higher education systems be divided between central government and the federal states. Central government is responsible for determining the general principles involved in organising the university system, which are set out in the German Hochschulrahmengesetz [Higher Education Framework Act] (HRG). On the basis of this Act, the 16 federal states formulate their own higher education laws and policies, which regulate further details. Responsibility for everyday operations lies almost exclusively with the federal states.

The HRG does not specifically deal with doctoral research in any detail. There are a number of sections, however, which are potentially relevant to doctoral candidates, particularly to those from abroad: Universities must encourage international and in particular European co-operation and exchange;³⁰ take into account the specific needs of foreign students;³¹ recognise study periods and qualifications gained abroad if equivalence

²⁷ *ibid* at page 5.

²⁸ See in particular the Hochschulrahmengesetz in der Fassung der Bekanntmachung vom 19. Januar 1999 (BGBl. I S. 18), das zuletzt durch Artikel 2 des Gesetzes vom 12. April 2007 (BGBl. I S. 506) geändert worden ist [Higher Education Framework Act; hereafter HRG] and the Wissenschaftszeitvertragsgesetz vom 12. April 2007 (BGBl. I S. 506) [Academic Fixed-Term Contract Law] discussed further below.

²⁹ DAAD (2010b) *op cit* note 26 at page 5.

³⁰ HRG §2 (5)

³¹ HRG §2 (5)

can be established;³² and allow employees in research assistant or doctoral positions enough time during their contractual employment to complete their thesis.³³

Further detail can be found in the laws of the federal states. In general all those states agree that a doctorate is evidence of independent in-depth scientific research which is assessed by a dissertation or thesis and an oral defence. Entry requirement is at least the completion of a first degree, and no tuition fees are charged for doctoral candidates. There are however potentially significant differences in relation to registration and entry requirements: Half of the federal states will not accept a Bachelor degree alone for admission to a doctoral programme whereas in one case (Berlin) admission cannot be made conditional upon gaining a further or postgraduate degree. Five federal states stipulate that doctoral candidates should be registered with the university or register if they are not already members of the university because of an employment relationship. In seven states universities are to provide research relevant study courses and enable candidates to gain key skills and one state (Berlin) stipulates in its law that the language of doctorate can be other than German.³⁴ Bremen and Berlin recognise that a doctorate can be awarded for several separate but linked pieces of work³⁵ whereas other states are silent on the issue of language or exact format of a doctoral thesis, leaving significant scope for universities to set their own regulations. Doctoral ordinances examined for this research suggest that the universities recognise the needs of non-national doctoral candidates. Entry requirements often specifically referred to the acceptance of equivalent foreign qualifications, and regulations concerning the language of the thesis often explicitly provided for English as a possible language or at least recognised the need to allow exceptions where German was considered to be the usual language of the thesis.³⁶

Doctoral candidates moving to Germany are moving into a rich research environment with a long history of scientific excellence and an internationally diverse workforce.³⁷ They are joining a scientific community which situates itself as a slightly separate entity from either

³² HRG §20

³³ HRG §53

³⁴ Berliner Hochschulgesetz vom 13 Februar 2003 das zuletzt durch das Dienstrechtsänderungsgesetz vom 19. März 2009 geändert worden ist

³⁵ Ibid and das Bremische Hochschulgesetz in der Fassung der Bekanntmachung vom 9. Mai 2007

³⁶ For more detail on the legal framework surrounding doctorates in Germany and more detailed examples for doctoral ordinances see Guth, J. (2007c), 'Destination Germany: Early Career Scientific Mobility, the Bologna Process and Choosing Whether and Where to Move'. TH Marshall Fellowship Report. Available at <http://www.brad.ac.uk/management/people/pubs/?author=jguth>

³⁷ BMBF (2010) op cit note 4.

the national community or the international community in Germany and as such plays its own part in shaping doctoral mobility. This is something we will return to in chapter eight. For the purposes of this chapter, it is important because it suggests that Germany is used to hosting foreign scientists at all levels and has rules and regulations in place at national, regional and institutional level which ensure that it remains an attractive destination and which accommodate the needs of doctoral candidates to, for example, complete their thesis in a language other than German. We have already touched on some of these measures and will consider others later in this chapter and in chapter eight in relation to exchange and mobility schemes.

Access to doctoral positions: a level playing field?

Funding for doctoral research from the funding bodies mentioned above, as well as other sources, provides contract research positions, scholarships and stipends. In addition doctorates can be funded through earnings from other employment or other private means. In mathematics and the natural sciences close to 80% of doctoral researchers work in a scientific context in universities and research institutions as staff or as contract researchers on funded projects.³⁸ A survey of nearly 10000 doctoral researchers in Germany, shows the three most important sources of funding in mathematics and the natural sciences to be staff positions at universities and research institutes, third-party project funding and scholarships.³⁹

This funding pattern was reproduced within my sample of doctoral candidates in Germany. Out of the 23 respondents who did their doctorate in Germany only three did not have a PhD position. The other 20 were or had been employed as researchers on fixed-term, part-time contracts in research institutions or universities. It is not always easy to determine whether these positions are funded directly by the institution, through scholarship programmes or through third-party projects and in many cases the candidates themselves did not know. Kalina for example could tell the author no more than that she got paid directly from the university but that she was not sure where the funding for her post came from. This was typical and suggests that candidates generally did not apply for funding, scholarships or stipends but in fact for positions at research institutes or universities.

³⁸ Duz Special (2004), 'Zur Situation Promovierender in Deutschland' Berlin: Raabe available online at http://www.duz.de/docs/duz_special.html [last accessed June 2010]

³⁹ *ibid* at page 15

PhD positions in Germany are advertised in the same way as any other scientific positions and a quick internet search reveals a plethora of such job adverts. Indeed our respondents were aware of the ease with which positions could be found in Germany with Georgi commenting: *'there were many open positions in Germany; really you could just browse the internet'*. All adverts are formulated in employment-related rather than study-related terms and contain phrases such as *'The successful candidates will be working in a highly interdisciplinary research environment'*; or *'Salary will be according to the appropriate German civil service level as well as the usual public sector social benefits'*.⁴⁰ The idea that doctoral candidates are seen as part of the academic community is encapsulated in a statement added to many of the adverts found: *'The University of [...] aims to increase the number of women among the faculty staff and therefore explicitly encourages the application of female scientists'*.⁴¹ The doctoral candidates interviewed in Germany also used the language of 'work' rather than 'study' when talking about their positions. Bozena for example refers to salary; Kalina and Violeta refer to their jobs.

The job adverts for doctoral positions found were no different from those for any other employment positions in the science sector and these positions are thus open to EU nationals on the same basis as host state nationals. In other words, EU citizens moving to take up those positions are unquestionably exercising their rights to *'to accept offers of employment actually made'*; and *'to move freely within the territory of Member States for this purpose'*.⁴² Doctoral candidates in this context are then no different from other scientists moving to take up advertised positions and are thus clearly moving as EU workers rather than students. As such they have the right to equal treatment in relation to access to those positions and their terms and conditions of employment under Regulation 1612/68. Article 6 of that Regulation provides that

'The engagement and recruitment of a national of one Member State for a post in another Member State shall not depend on medical, vocational or other criteria which are discriminatory on grounds of nationality by comparison with those applied to nationals of the other Member State who wish to pursue the same activity'.

⁴⁰ Various adverts for PhD positions in Germany on the German job search engine www.icjobs.de; last searched in March 2010. All adverts were presented in English;

⁴¹ Various adverts for PhD positions on the German job search engine icjobs.de; last searched in March 2010, my emphasis.

⁴² Article 45(3)(a) and (b)TFEU

Doctoral candidates applying for these positions cannot be discriminated against, even indirectly, on the grounds of nationality. Indirect discrimination in this context is a relatively straightforward concept. It refers to a situation where a national provision applies equally to nationals of the host state and nationals of other Member States but is in fact likely to disadvantage the latter. In such cases, the ECJ has tended to focus on the restrictive effect of the provision. For example in *Bosman*⁴³ the ECJ held the football transfer rules allowing football clubs to restrict the movement of players even once they were out of contract to be in breach of Article 45 TFEU because they were a clear obstacle to the free movement of workers. While the rules applied to all players, those wanting to exercise free movement rights were placed at a disadvantage because of them. There are exceptions however: indirectly discriminatory measures can be justifiable if they are in the public interest, are applied in a non-discriminatory manner, are suitable to achieving the objective pursued and are proportionate.⁴⁴

Indirect Discrimination and Doctoral Research: Language Requirements and Recognition of Qualifications

In the context of doctoral research work, there are two particular areas where indirect discrimination is likely to occur: firstly, in relation to language requirements and secondly in relation to the recognition of qualifications. Article 3 of Regulation 1612/68 prohibits provisions which limit the opportunities for non-national EU citizens to apply for, be offered and take up employment in the host state even *'where, though applicable irrespective of nationality, their exclusive or principal aim or effect is to keep nationals of other Member States away from the employment offered'*.⁴⁵ A language requirement would prima facie therefore fall foul of Article 3 because it is much easier for host country nationals to satisfy and is likely to deter non-nationals from applying. However Article 3 specifically disapplies the prohibition in relation to *'conditions relating to linguistic knowledge required by reason of the nature of the post to be filled'*.⁴⁶ This means that when deciding whether or not a language requirement is lawful, the question to consider is whether the linguistic knowledge is required because of the nature of the job in question.

⁴³ Case C-415/93 *Union Royale Belge des Sociétés de Football Association ASBL & others v. Jean-Marc Bosman*; [1995] ECR I-4921

⁴⁴ See Case C-55/94 *Gebhard v Consiglio dell'ordine degli avvocati e procuratori di Milano* [1995] ECR I-4165

⁴⁵ Regulation 1612/68 op cit note 3. *Article 3(1)*

⁴⁶ *ibid*

This makes some practical sense; there is little point in appointing someone to, say, a customer-services position in Germany if they do not speak sufficiently fluent German. Even where a job could be carried out without being able to speak a particular language, the ECJ has recognized the importance of language in maintaining cultural heritage. In *Groener*⁴⁷ an Irish requirement that teachers spoke Irish even where teaching could be in English was upheld in the interest of protecting the Irish language. The ECJ noted the importance of the Irish language as part of school life and culture and concluded that the protection of that heritage and culture was a legitimate aim and the requirement that all teachers could participate in that culture through being able to speak Irish was a proportionate means of achieving that aim. It is therefore not just the language required narrowly practical terms but also language skills necessary to become part of the particular cultural context which will be seen as important when assessing whether or not linguistic knowledge is required by reason of the nature of the post.

Placed in a scientific context this raises an interesting question. Most science groups use English as the lingua franca of their work; most scientific publications are in English and scientific conferences generally take place in English.⁴⁸ An English language requirement thus makes considerable sense in relation to scientific jobs, including doctoral positions. In general most positions in Germany would require the applicant to demonstrate their ability to speak German to a sufficiently high level. However, in science, German language skills are less important. Considering a German language requirement in the light of Article 3 of Regulation 1612/68 would suggest that linguistic knowledge of German is not required to technically carry out the post and interact with colleagues and supervisors; nor is it important in this context for cultural reasons or to protect the German language and heritage. Requirements to have a working knowledge of German when the working language of a research group is English would therefore fall foul of the provisions in Regulation 1612/68. The question is more difficult in those limited cases where the group's working language is in fact German. A careful consideration of whether the job requires German linguistic knowledge would be needed and care must be taken not to assume that

⁴⁷ Case C-379/87 *Groener v Minister for Education and the City of Dublin Vocational Educational Committee* [1989] *ECR* 03967

⁴⁸ For the importance of English as a working language in the higher education sector see Hilgendorf, S. (2005), 'Brain Gain Statt Brain Drain: The Role of English in German Education' *World Englishes*, 24 (1); Falagas, M.E. et al (2005). 'Penetration of the English Language in Science: the case of a German national interdisciplinary critical care conference'. *Critical Care*, 9(6), 655-656.

the ability to speak German is a legitimate requirement simply because the majority or even all of the scientists already working in the group are German speakers. In cases where the work involved the participation of the general public or interaction with other stakeholders who would not be expected to communicate in English, it might however be justifiable to require the ability to speak German to a high standard.

However, an English language requirement for a position in Germany falls within the scope of the Regulation in the same way as a German language requirement does. The question is: does the requirement to speak English to a high level constitute a provision which applies equally to nationals and non-nationals but whose *'exclusive or principal aim or effect is to keep nationals of other Member States away from the employment offered'*?⁴⁹ The answer here has to be that it is not and that the requirement is therefore legitimate. In fact the requirement advantages nationals from those Member States where English is the native language and then places all other States where nationals would have learnt English as an additional language in the same position. The nationals of the host state may thus be at a disadvantage when compared to native English speakers from the UK or Ireland.

Rather than focusing on discrimination or disadvantage to one particular group, an alternative approach to assessing the lawfulness of provisions in this area is to consider whether or not they hinder market access.⁵⁰ The English language requirement could potentially hinder access to the positions by doctoral candidates whose language proficiency is not high and in particular by those whose home education systems have not traditionally taught English as the first foreign language. It could thus be argued that those from Eastern Member States would be at a particular disadvantage because until recently Russian rather than English was the first foreign language there. However, even if this interpretation brought the requirement within the scope of Article 3, it seems that linguistic knowledge here is required because of the nature of the job. Doctoral scientists will not be able to function effectively in the scientific community in which they seek to work unless they can communicate effectively with colleagues, peers and supervisors. In other words, there exists a legitimate aim which is in the public interest (facilitating effective work in R&D) and the language requirement, if applied in a non-discriminatory manner, is a

⁴⁹ Regulation 1612/68 op cit note 3. *Article 3(1)*

⁵⁰ See the example of *Bosman* given above where the focus is on whether the measure in question restricts access to the market rather than whether or not the measure disadvantages a particular group.

proportionate means of achieving that aim. In addition, English language proficiency is arguably important to allow the doctoral candidate to become a fully established part of the scientific community, and thus, following *Groener*⁵¹, even where linguistic knowledge is not essential for being able to carry out the day-to-day work, it is important for the wider context in which doctoral scientists work.

The absence of a German language requirement was important for the respondents as many could not speak German. While they were competent and confident English speakers, they generally only spoke conversational German, if any at all. Valentina notes that *'In the institute most of the people are not German so the working language is English'*. Sylwia elaborates stating that *'Most of the Max Planck institute doesn't speak German'*. She also notes that for students coming to study there is a language test but that this does not apply for anyone taking up a doctoral positions: *'If you come to study you have to do the test but if you come for PhD you don't have to'*. While many, such as Sylwia and Joanna, were learning German, they were doing so not because of their work but because of informal conversations and integration into the host state. Joanna who was about to move to Germany, when asked about whether the working language of her host lab in Germany would be English or German responded: *'Well I think rather English but informal conversations are in German so that's why I'm learning, the official language of the lab is English'*. Imposing a language requirement for these doctoral positions would have made them far less attractive to the respondents and in many cases would have meant that they could not have applied for them. In the absence of an objective justification, this would have been in clear contravention of the Regulation 1612/68 for being indirectly discriminatory against non German nationals and for restricting access to the market. Many research groups did however require a working knowledge of English, which makes sense as that is the language doctoral candidates need to master in order to carry out their work and which is lawful, as the discussion above illustrates.

Recognition of qualifications for the purposes of work

A further example where indirect discrimination may take place is in relation to the recognition of qualification. This is a useful example to consider for two main reasons. Firstly, the recognition of their qualifications was of great importance to doctoral

⁵¹ Case C-379/87 *Groener* op cit note 47.

candidates moving abroad and as such a legal issue that they engaged with most directly, although it was not conceptualised as a legal issue but rather an administrative one. Secondly, the sort of recognition of qualification and therefore the legal framework applicable depends on the status of the doctoral candidate. In the case of a worker the qualifications already held have to be recognised twice, once for the purposes of the work and once for the purposes of registering for the doctoral degree. Where the doctoral candidate only holds student status, their qualifications need only be recognised for study purposes.

The question of recognition of qualifications across EU Member States is complex.⁵² The right to request a certain level of qualification and/or experience in relation to specific economic activities, whether employed or self-employed is not particularly controversial. There is a clear public policy objective to ensure that those carrying out professions are in fact properly qualified to do so. The legislation relating to the recognition of qualifications relates to regulated professions. A regulated profession is one which requires a specific professional qualification for access or pursuit.⁵³ Whether or not scientists in general or scientists at doctoral level in particular fall within the regulated professions depends on the circumstances. In most cases they will not, although there might be some positions, especially those related to biomedical sciences, which do.⁵⁴

Presuming therefore that the doctoral positions do not fall within regulated professions, the recognition of qualifications for employed positions must be considered in the context of non-discrimination under Art 18 TFEU. The case of *Angonese*,⁵⁵ in which a bilingual Italian national was refused admission to a competition for a particular job on the basis that he did not hold a certificate of bilingualism issued in the province in questions, illustrates the importance of employers allowing equivalent qualifications and experience. The ECJ pointed out that

'even though requiring an applicant for a post to have a certain level of linguistic knowledge may be legitimate and possession of a diploma such as

⁵² See for example: Peixoto, J. (2001), 'Migration and Policies in the European Union: Highly Skilled Mobility, Free Movement of Labour and Recognition of Diplomas', *International Migration* 39:1, 33-61

⁵³ Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications [2005]OJ L255/22 Art 3(1)

⁵⁴ *ibid.* For regulated professions in Germany see the Anabin database at <http://www.anabin.de/> [last accessed June 2010]

⁵⁵ Case C-281/98 Roman Angonese v Cassa di Risparmio di Bolzano SpA [2000] ECR I-04139

the Certificate may constitute a criterion for assessing that knowledge, the fact that it is impossible to submit proof of the required linguistic knowledge by any other means, in particular by equivalent qualifications obtained in other Member States, must be considered disproportionate in relation to the aim in view.⁵⁶

Although the case was about language qualifications, the same applies to other types of qualifications. Requiring a degree from a German university for employment purposes would be discriminatory and unlawful.

As the doctoral candidates are also registering for an academic qualification, the question of recognition of qualifications also arises in relation to acceptance as a doctoral candidate. The recognition of academic qualifications is discussed further in the next chapter in relation to doctoral candidates who have student status. As noted above it is important to recognise that the qualifications of doctoral candidates moving as workers must technically be recognised twice. Firstly they have to be recognised and accepted as a suitable qualification to allow entry to 'the third cycle of study', to use Bologna Process language, and secondly they must be recognised as suitable qualifications to take up the advertised position as a worker. In most cases, the recognition will however be dealt with as part of one procedure. For example, if a university sets certain entry requirements for doctoral research, the linked doctoral position will not ask for qualifications which do not meet those requirements. Research institutes also tend to match their requirements to fit in with what is required by the universities awarding the doctorate.

German PhD positions seem to be based on the recognition that doctoral candidates carry out scientifically important and genuine work, often as part of research team in which they are integrated as junior team members. They imply a recognition that doctoral candidates are a distinct group of scientists, offering both terms and conditions in the form of employment contracts or similar as well as recognising training and supervision needs. This type of position therefore acknowledges that the work carried out and the qualification sought cannot be separated from each other in this context. When considered in this light, the important question in EU law discussed in chapter four, of whether the work carried out is ancillary to the qualification, does not arise. The adverts discussed above make quite clear that the work to be carried out is not marginal but in fact a genuine and effective

⁵⁶ *ibid* at paragraph 44

contribution to a larger scientific project and that the doctoral candidate is expected to work as part of the scientific community, and in particular as a member of the staff of the institution concerned. This becomes even clearer when considering the doctoral positions available at research institutes such as the Max Planck Institutes (MPIs). Doctoral candidates working at these institutes register for their doctorate at a university (which could be a university in their home country) because the institutes do not have degree awarding powers. They are therefore working at the institute to carry out a job and, while this work leads to the writing up of a thesis for submission to a university, the job itself exists independently. The recognition of qualification for study purposes and for work purposes further supports the notion that doctoral candidates' scientific activity in Germany can and mostly is, conceptualised as work.

In Germany, then, the national context and national science and education policy determine the status of doctoral candidates as workers and it seems likely that EU citizens moving to Germany in this context would be classed as EU migrant workers regardless of the fact that their employment is likely to lead to the submission of a thesis and the gaining of a qualification. However, one respondent casts doubt on whether the reality is quite so straightforward: Violeta commented

'but the visa that we get here is a PhD student visa not a worker visa. [...] So this is sometimes not so good like after I think 5 years in Germany you can get a permanent visa but this PhD visa the time was not counted. That was a shame because we pay the taxes like normal workers'.

This case does illustrate that Germany seemed to be treating doctoral candidates as a separate category of migrants rather than as workers. In the context of Polish and Bulgarian nationals this highlights an important issue in relation to EU enlargement which is considered next.

Reversing the Rights Hierarchy: Transitional Measures Move Workers Down and Students Up

We have so far assumed that EU citizens moving to Germany would have full access to all free movement rights guaranteed by the Treaty and secondary legislation. However, the extension of those rights to 12 new Member States following the 2004 and 2007

enlargement rounds, most of which were seen as poor when compared to the EU15,⁵⁷ was not straight forward.⁵⁸ According to Stalford

'one of the most significant and yet controversial aspect of the [...] accession process [was] the extent to which the new states' nationals [would] acquire immediate and unlimited mobility rights and the concomitant social and economic benefits attached to the free movement of persons provisions. Consequently the free movement of persons rights proved the most controversial issue to be negotiated in the accession process'.⁵⁹

As a result of the accession negotiations, the Accession Treaties of the 16th April 2003⁶⁰ and 25th May 2005 include the introduction of a transitional period in a number of areas, including the free movement of persons.⁶¹ The transitional arrangements in this area allow the existing Member States to derogate from Articles 1-6 of Regulation 1612/68 for a maximum of 7 years. In other words, the transitional measures allow Member States to restrict migrant workers' right to access the labour market. Such restrictions do not, however, apply to students. In some cases it may thus be in the doctoral candidates' interest not to have EU worker status in order to avoid the restrictions.

The transitional measures for both the 2004 and 2007 enlargements are based on a two + three + two model. The first two years allows the existing Member States to govern access to the labour market for nationals of the joining Member States through national measures and bilateral agreements. Those measures can be continued for a further three years as long as the European Commission has been notified. Measures can be continued

⁵⁷ EU15 refers to the pre 2004 members of the EU, EU8 refers to the 8 Eastern European Countries which joined in May 2004 and EU2 refers to Bulgaria and Rumania which joined in January 2007 and EU.

⁵⁸ Currie, S. (2006), "Free' Movers? The Post-accession Experience of Accession-8 Migrant Workers in the United Kingdom'. 31(2) European Law Review 207-229

⁵⁹ Stalford, H. (2003) 'The Impact of Enlargement on Free Movement: A Critique of Transitional Periods' 2003 Third Meeting of the UACES Study Group on the Evolving EU Migration Law and Policy. The University of Liverpool at page 1.

⁶⁰ Treaty of Accession 2003 O.J. L236/46 of 23rd September 2003. Article 24 of the Act of Accession refers to the annexes which contain the detailed transitional arrangements for each accession state (See Annexes V – XIV). The measures concerning the 8 eastern European states which joined the EU in May 2004 are the same and when referring to measures concerning the EU 8 the term annexes will be used.

⁶¹ Part 2 of the annexes

for a further two years providing the Member State is experiencing a serious disturbance to the labour market or the threat thereof.⁶² Thereafter full free movement rights apply.

Germany has had one of the strictest transitional regimes and continues to apply national measures to nationals of Member States which joined in 2004 and 2007.⁶³ Therefore Polish and Bulgarian scientists wishing to work in Germany will be subject to the regulations concerning work permits. This applies to those taking doctoral positions, too. Access to the labour market by nationals from new Member States is regulated by the Gesetz über den Arbeitsmarktzugang im Rahmen der EU-Erweiterung [Act on the Access to Labour Markets in the Context of the EU Enlargement].⁶⁴ The Act disapplies the relevant provisions of EU free movement law and confirms that access shall continue to be regulated by pre-existing bilateral agreements in relation to work in certain sectors and seasonal work in particular. For those wanting to work in other sectors, including the scientific sector, and secure more long term work permits, rules similar to those for non-EU nationals apply and reference must be made to the Zuwanderungsgesetz [Immigration Act] which regulates immigration into Germany.⁶⁵ The Immigration Act allows work permits to be issued under the Aufenthaltsgesetz [Residence Act] which states: *'the admission of foreign employees shall be geared to the requirements of the German economy, according due consideration to the situation on the labour market and the need to combat unemployment effectively'*.⁶⁶ A work permit is only issued if there is a concrete job offer and there are no job seekers who would take precedence (i.e. German or EU 15 nationals) available.⁶⁷ A distinction is made between less-qualified, qualified and highly qualified workers; the latter of which includes scientists with a specific expertise and other senior academics.⁶⁸ These highly qualified migrants can be issued a permanent residence and work permit as long as they are not

⁶² Part 2, Para 5, annexes

⁶³ Bosch, G. (2010), 'Wandel des deutschen Arbeitsmarktes durch die europäische Integration' Wirtschaftsdienst 2010 Sonderheft 19-25.

⁶⁴ Gesetz über den Arbeitsmarktzugang im Rahmen der EU-Erweiterung", Bundesgesetzgesetzblatt I 2004, 28th of April, 2004 (now § 284 Sozialgesetzbuch III (SGB III))

⁶⁵ Gesetz zur Steuerung und Begrenzung der Zuwanderung und zur Regelung des Aufenthalts und der Integration von Unionsbürgern und Ausländern (Zuwanderungsgesetz) zuletzt geändert durch Artikel 2 G. v. 20.12.2008 BGBl. I S. 2846

⁶⁶ Gesetz über den Aufenthalt, die Erwerbstätigkeit und die Integration von Ausländern im Bundesgebiet (Aufenthaltsgesetz) [Residence Act] neugefasst durch B. v. 25.02.2008 BGBl. I S. 162; zuletzt geändert durch Artikel 4 Abs. 5 G. v. 30.07.2009 BGBl. I S. 2437 §18(1)

⁶⁷ The so called Preference Rule contained in paragraph 14 of the annexes acknowledges the change in status of new Member State nationals by stating that a national of a new Member State takes priority over a non-EU national in the labour market; this provision is contained in § 39(6) of the Immigration Act

⁶⁸ Gesetz über den Aufenthalt, die Erwerbstätigkeit cit note 66 §19(2)

going to be a burden on the host state.⁶⁹ Whether or not doctoral candidates can benefit from the provision for the highly skilled seems doubtful. Doctoral candidates are usually junior scientists and are still developing their knowledge, skills and expertise. They would thus appear to fall outside the definition. However, there do appear to be instances where highly skilled permits have been issued to researchers at relatively junior levels. Jennifer for example was a Canadian researcher working as a fellow at a research institute in northern Germany. She did not have a PhD and was in fact considering registering for her doctorate. The German authorities accepted that she had specialist knowledge in her field and thus granted her a permanent residence and work permit under §19 of the Residence Act. This example suggests that where doctoral candidates can show that they bring a particular skill or specific knowledge and experience to a position, they may successfully claim to be within the provisions for the highly skilled, thus benefitting from a permanent residence permit and the right to work without further approval by the Federal Employment Agency. Others are granted a residence and work permit which is tied to a specific job and which lasts only for the duration of the job in question.⁷⁰ Nationals of new Member States are however entitled to a permanent permit once they have been employed in Germany for 12 months.⁷¹ As these transitional measures do not apply to students, doctoral candidates from new Member States may be in a better position to access doctoral positions if those positions are seen as student positions rather than as employment.

The situation for Polish and Bulgarian doctoral scientists coming to Germany is therefore governed by a mixture of EU law and national measures which in due course will become less complex when the transitional measures cease to apply. In spite of the transitional arrangements this research, in line with other work, indicates that many doctoral positions are being filled by candidates from new Member States so it appears that the measures have not deterred scientists from coming to Germany.⁷² Once a doctoral candidate has secured a position, no further discrimination can occur; the transitional arrangements apply to access only and do not extend to the terms and conditions of engagement.

⁶⁹ *ibid* §19(1)

⁷⁰ *ibid* §18(1)

⁷¹ See SGB III § 284 Arbeitsgenehmigung-EU für Staatsangehörige der neuen EU-Mitgliedstaaten

⁷² For a discussion of the impact of European integration generally and transitional arrangements in particular on the Germany labour market see Bosch, G. (2010), 'Wandel des deutschen Arbeitsmarktes durch die europäische Integration' *Wirtschaftsdienst* 2010 Sonderheft 19-25.

Workers: Taking advantage of employment terms and conditions

Being employed on PhD positions, as many respondents in Germany were, brings with it the advantage of an employment contract with the ensuing rights as well as social security benefits and pension entitlements. Of course the candidates must pay tax in the same way other employees do. Employment and labour law in Germany is complex and contained in part in the German Grundgesetz [the German Constitution] and in part in a profusion of statutes, collective agreements and case law. A full analysis is outside the scope of this chapter. However a summary of the key features of German employment law is useful in demonstrating the rights and entitlements of which employed PhD candidates can take advantage. The Grundgesetz guarantees free choice of occupation.⁷³ It also establishes the principle of equal treatment and in particular places an obligation on the state to effectively promote gender equality.⁷⁴ Equality Law in the context of employment is further enhanced through the Allgemeines Gleichbehandlungsgesetz [General Equality Act] (AGG)⁷⁵ which implements the EU Race Directive⁷⁶, Directive 2006/54/EC⁷⁷ and Directive 2000/78⁷⁸ and deals with the prohibition of discrimination on the grounds of sex, race, religion and belief, age, sexual orientation and disability. It also provides for freedom of association.⁷⁹ PhD candidates working in Germany are therefore protected in these areas.

The various German statutes lay down minimum requirements for paid annual leave of four weeks,⁸⁰ sick leave on full pay of six weeks,⁸¹ fully paid maternity leave for a period of 14 weeks and unpaid parental leave of three years, during which time the parent has a right to work part time.⁸² In addition there are regulations in relation to working time,⁸³ protection

⁷³ Art. 12 Grundgesetz

⁷⁴ Art 3 Grundgesetz

⁷⁵ Allgemeines Gleichbehandlungsgesetz vom 14. August 2006 (BGBl. I S. 1897), das zuletzt durch Artikel 15 Absatz 66 des Gesetzes vom 5. Februar 2009 (BGBl. I S. 160) geändert worden ist

⁷⁶ Directive 2000/43/EC of 29 June 2000 implementing the principle of equal treatment between persons irrespective of racial or ethnic origin.

⁷⁷ Directive 2006/54/EC of the European Parliament and of the Council of 5 July 2006 on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast).

⁷⁸ Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation

⁷⁹ Art. 9 para. 3 Grundgesetz

⁸⁰ Bundesurlaubsgesetz in der im Bundesgesetzblatt Teil III, Gliederungsnummer 800-4, veröffentlichten bereinigten Fassung, das zuletzt durch Artikel 7 des Gesetzes vom 7. Mai 2002 (BGBl. I S. 1529) geändert worden ist.

⁸¹ Entgeltfortzahlungsgesetz vom 26. Mai 1994 (BGBl. I S. 1014, 1065), das zuletzt durch Artikel 80 des Gesetzes vom 23. Dezember 2003 (BGBl. I S. 2848) geändert worden ist.

⁸² Mutterschutzgesetz in der Fassung der Bekanntmachung vom 20. Juni 2002 (BGBl. I S. 2318), das zuletzt durch Artikel 14 des Gesetzes vom 17. März 2009 (BGBl. I S. 550) geändert worden ist and

from unfair dismissal and regulation of redundancy⁸⁴ as well as a mandatory social security system which covers health insurances, unemployment insurance, home care and nursing insurance and pension contributions.⁸⁵ German employment law also relies heavily on collective agreements, so called Tarifverträge, which can make provisions for different terms and conditions as long as they are not less favourable than the minimum statutory provisions. Many of the employed doctoral candidates interviewed were subject to such collective agreements which operate in universities in Germany. These agreements set out the salary to be paid and also deal with other matters such as holidays, working hours and the use of fixed-term contracts for example. The use of part time and/or fixed-term contracts is of considerable relevance to doctoral candidates as most were employed on part time and fixed-term positions with their universities or research institutions. German law presumes that employees will be employed on a permanent basis and that time-limited or fixed-term contracts will be used only in exceptional circumstances. Their use is therefore carefully regulated in German law. Initially the HRG set out the relevant provisions for research staff⁸⁶ but they have now incorporated into the Wissenschaftszeitvertragsgesetz⁸⁷ [Academic Fixed-Term Contract Law] which regulates fixed-term contracts for staff working on third-party funded projects and also, importantly for our purposes, with such contracts during the so called qualification phase. The qualification phase is the time spent working at a university or research institute in order to develop the skills and knowledge necessary for a career in academia. Researchers can be employed on fixed-term contracts for six years while studying for their doctorate and a further 6 years while completing the second doctoral degree (habilitation).⁸⁸ The provisions are however relatively flexible so that there is no need to be working towards a formal qualification and the time limits can be exhausted even where the qualification in question

Bundeselterngeld- und Elternzeitgesetz vom 5. Dezember 2006 (BGBl. I S. 2748), das zuletzt durch Artikel 10 des Gesetzes vom 28. März 2009 (BGBl. I S. 634) geändert worden ist.

⁸³ Arbeitszeitgesetz vom 6. Juni 1994 (BGBl. I S. 1170, 1171), das zuletzt durch Artikel 7 des Gesetzes vom 15. Juli 2009 (BGBl. I S. 1939) geändert worden ist.

⁸⁴ Kündigungsschutzgesetz in der Fassung der Bekanntmachung vom 25. August 1969 (BGBl. I S. 1317), das zuletzt durch Artikel 3 des Gesetzes vom 26. März 2008 (BGBl. I S. 444) geändert worden ist.

⁸⁵ Deutsches Sozialgesetzbuch (German Social Law) in particular books 1,4,5,6 and 7.

⁸⁶ HRG s 57ff

⁸⁷ Gesetz über befristete Arbeitsverträge in der Wissenschaft In der Fassung vom 12.4.2007. BGBl. I S. 506.

⁸⁸ *ibid* §1. Habilitation is a second doctoral degree common in Germany and Eastern Europe including Poland without which the rank of Professor cannot be reached.

is achieved earlier.⁸⁹ In other words, in German law a doctoral candidate can be employed on a fixed term contract for up to six years.

Respondents talked very little about their actual employment terms and conditions. The interviews suggest that most doctoral candidates initially did not fully appreciate the terms and conditions of their employment or the deductions being made from their salaries for things such as health insurance. My respondent Kalina's comments were typical:

'Actually when I came here I didn't know anything about these things. I knew okay I get a position which will be paid, I didn't know what the amount of money would be but I heard that they in principle for such a project give money enough for living so I said okay for me this is enough; I like the job and I will have enough money for living and when I came here I realised that I would have pension insurance, a social insurance, health insurance, everything'.

However, it is important to note that a number of these rights and entitlements are only available to those actually employed by the institution concerned. However, research institutions in particular often offer fellowship contracts instead. In the case of fellowships, a stipend is paid tax free to fellows, who do not benefit from pension contributions and must arrange their own health insurance. Whether or not provisions are made for maternity and other parental benefits depends on the fellowship but in most cases doctoral candidates have to make their own arrangements.⁹⁰ Some key rights such as the equality law provisions and legislation relating to health and safety will apply to fellows in the same way as they do the employees as they apply to both employed and self-employed economic activity.⁹¹

Whether employee or fellow, doctoral candidates are likely to be classed as EU migrant workers for EU free movement law purposes,⁹² which means that even if they do not necessarily benefit from all the benefits of an employment contract, they do have access to social advantages associated with EU worker status. As discussed in chapter three, social

⁸⁹ Gesetz über befristete Arbeitsverträge in der Wissenschaft op cit note 87 §1.

⁹⁰ We will consider examples of fellowships and funding schemes in the context of maternity provisions in more detail in chapters 7 and 8.

⁹¹ See for example Allgemeines Gleichbehandlungsgesetz op cit note 75 §2.

⁹² See chapter 4 for a discussion on whether doctoral candidates meet the definition of EU migrant worker.

advantages might include provisions relating to childcare, access to certain types of benefits such as child benefit or financial products such as subsidised loans or public transport fare reductions. They will also be entitled to the same tax advantages as host state nationals and any differential treatment will breach Regulation 1612/68.

Conclusion

Germany provides a science labour market in which doctoral candidates can fully participate as junior members. They can take advantage of research assistant positions or fellowships which provide the framework and funding for doctoral research without imposing one particular pathway to the doctoral degree. The recognition of doctoral research as important to science and doctoral researchers as scientists in the first phase of their scientific career helps to establish a national context in which doctoral candidates can clearly be conceptualised as EU workers rather than students and thus access all the associated rights. This has significant implications for access to positions which in Germany takes place on a level playing field for EU citizens who are not subject to transitional arrangements. For the respondents of this research however the transitional arrangements add a further dimension or layer to the framework shaping their mobility. While one must generally assume that obtaining worker status is preferable and will attract the most generous free movement rights, this is not the case for nationals of most of the new Member States⁹³ in Germany. The transitional arrangements make accessing the labour market more difficult for those EU citizens and some may thus be in a stronger position to access opportunities if those opportunities are offered to migrant students rather than migrant workers.

Overall the research in the German context suggests that doctoral candidates are treated as a distinct group of scientists. Doctoral positions are framed in such a way as to specifically address their needs. They include elements of supervision and training and are set out to safeguard sufficient time for the completion of the doctoral thesis. In addition many of these positions are geared towards attracting international doctoral candidates and institutions are experienced and skilled at dealing with the paperwork required. Institutions help with immigration paperwork, registration with the authorities in Germany and recognition of qualifications, and assistance with housing and other matters is also provided. The context into which doctoral candidates move is one in which they are

⁹³ Transitional arrangements were not imposed on Malta and Cyprus when they joined the EU in 2004.

considered junior scientists contributing to the research in their field and it seems uncontroversial in this sense that they should be considered EU migrant workers. Considering them as a distinct group of EU citizens would however remove any questions about rights and entitlements in EU law. If they were considered economically active by virtue of their role as key actors in the ERA, status as workers would not be important and rights could be granted based on an economically active citizenship status which recognises the contribution doctoral candidates make to science. In the German context this idea does not seem far-fetched because doctoral candidates are already accepted as economically active workers. The next chapter therefore considers whether the conceptualisation of doctoral candidates as a distinct group of actors in the ERA and thus as economically active citizens, can help develop their rights in a national context where they are seen as students, and thus, as a rule, as economically inactive.

Chapter 6: Moving as an EU student: The UK Case Study

The previous chapter has explored the situation of doctoral candidates moving as EU workers to take up doctoral positions in Germany. This chapter provides the second of two country case studies and sets out the situation of doctoral candidates moving to the UK. In this context doctoral candidates will be seen as students¹ and this chapter contrasts the rights of workers discussed in the previous chapter with the rights of doctoral candidates who move as EU migrant students. It begins by outlining the scientific and higher education context into which the candidates move, thus providing an insight into UK science policy and how that maps onto the European agenda set by the ERA and EHEA. It then considers access to doctoral research positions in more detail, arguing that the UK system makes it unnecessarily difficult for nationals of other EU Member States to secure funded doctoral positions and that the UK aims to protect its own nationals in this context. By conceptualising doctoral candidates as students, the UK can justify not only the charging of tuition fees but also the exclusion of EU nationals from eligibility for maintenance awards. Student status further sends a less positive message about the value of doctoral research than worker status and also has implications for eligibility for important rights such as maternity rights, social security rights and social advantages. We will consider these issues throughout the chapter but in order to fully understand the context in which doctoral candidates in the UK study, this chapter first outlines the relevant labour market and higher education landscape in the UK.

The Science Labour Market in the UK

The UK has one of the most successful scientific and academic labour markets in the EU and is moving towards the target of three per cent GDP expenditure on research and development set as part of the ERA (1.79 per cent in 2008; up from 1.76 the previous year).² There are 166 Higher Education Institutions in the UK, 132 of which are in England.³ In addition research is carried out in around 30 research institutes owned and supported by

¹ This is so even though the UK has experienced some changes in the nature of doctorates by for example the introduction of professional doctorates and PhDs by publication. See Park, C. (2005). 'New Variant PhD: The changing nature of the doctorate in the UK'. *Journal of Higher Education Policy and Management*, 27 (2), 189-207.

² Office for National Statistics (2010), 'UK gross domestic expenditure on research and development 2008'. *Statistical Bulletin*. Newport: ONS

³ Higher Education Institutions include universities, university colleges specialist higher education institutions and other higher education colleges. See Universities UK at <http://www.universitiesuk.ac.uk> [last accessed October 2009].

the Research Councils or government departments and by industry. As in Germany, research in the UK covers a plethora of topics and is loosely grouped together into six areas, each of which is overseen by one of the research councils.⁴

The UK recognizes the importance of scientific excellence and research and development in building a strong economy. According to the Higher Education & Research Opportunities (HERO) website

*'The United Kingdom supports world class research communities in all areas of science, engineering, technology, the social sciences, arts and humanities. Researchers work in universities and other higher education institutions, research institutes and research centres across the country. [...] Research and development in the UK is well funded. Over £14 billion is spent each year by a combination of public bodies, private enterprise, the non-profit sector and international organisations'.*⁵

The UK, as Germany, is considered an 'innovation leader'⁶ and has a significant reputation for scientific and research excellence.⁷ It is therefore unsurprising that it is often cited as one of the most popular destinations for foreign scientists.⁸ The UK also hosts a significant number of foreign doctoral candidates. In the academic year 2008/2009 17,650 PhDs were awarded in the UK, the majority of which (14,165) were for full-time study. Biological and physical sciences together accounted for just under a third of all registrations.⁹ 52% of doctorates awarded to full-time students in this period were to students who were domiciled in the UK prior to their PhD and 48% came from abroad.¹⁰

⁴Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBRC), Engineering and Physical Sciences Research Council (EPSRC), Economic and Social Research Council (ESRC), Medical Research Council (MRC), Natural Environment Research Council (NERC) and Science and Technology Facilities Council. See <http://www.rcuk.ac.uk/default.htm> [last accessed November 2010].

⁵Higher Education & Research Opportunities website at www.hero.ac.uk [last accessed October 2009].

⁶Pro Inno Europe (2010), 'European Innovation Scoreboard 2009', Brussels: European Commission.

⁷Van De Sande, D., Ackers, H. L. & Gill, B. (2005), 'Impact Assessment of the Marie Curie Fellowships under the 4th and 5th Framework Programmes of Research and Technological Development of the EU (1994 /2002): Final Report'. Brussels: European Commission.

⁸ibid

⁹Higher Education Statistics Agency (HESA) 2010, 'Statistics online' available at www.hesa.ac.uk [last accessed November 2010].

¹⁰15% were domiciled elsewhere in the EU prior to their PhD and 33% in third countries. HESA (2010) op cit note 9.

In spite of the emphasis on excellence, the UK as a whole appears to be relatively low-key in its efforts to attract foreign doctoral candidates. Very little information for foreign doctoral candidates can be found on the Research Council websites,¹¹ and the British-Council-run site *educationUK*¹² or the HERO website,¹³ while providing useful information on scholarships, open doctoral positions and the research landscape, were not as well known among our respondents as some of the German webportals such as the DAAD website.¹⁴ Furthermore the *educationUK* site is very focused on students and fails to recognise doctoral candidates as a distinct group of postgraduates who are also early career researchers. Their promotional text highlights this:

*There are plenty of reasons why you should choose a postgraduate course in the UK. [...] While you're here, you'll be immersed in English, the world's most important business language. At the same time, you'll be part of a truly international community - 29.9 per cent of postgraduate students in the UK are international and you may find as many as 50 different nationalities on a single campus. With such fantastic experience behind you, you'll be ready to hit the ground running by the time you finish your course.*¹⁵

While this sort of promotion highlights the international student community as a great advantage of the UK and also points to the advantage of being immersed in English as a global language, it is also very student focused. It appears to be aimed at postgraduate students generally without making a distinction between taught and research postgraduates. It refers to courses without acknowledging the research element which makes up the bulk of doctoral 'studies'. For many doctoral candidates the doctorate marks the beginning of their academic career rather than the final stage of their education and they are likely to be more attracted to the sort of marketing which focuses on academic excellence, attractive working environments and a high standard of living as is evident in Germany's efforts to attract international doctoral candidates.¹⁶

¹¹ See www.rcuk.ac.uk which has links to all UK research councils

¹² www.educationuk.org

¹³ www.hero.ac.uk

¹⁴ www.daad.de

¹⁵ EducationUK. Postgraduate education. [online] at <http://www.educationuk.org/UK/Article/UK-postgraduate-study?ArticleTagValue=0&ArticleTagValueParam1=&ArticleTagValueParam2=> [last accessed October 2009].

¹⁶ See the previous chapter for a discussion on the German context

Individual universities are however a little better at promoting their excellence as well as their international appeal. The reputations of Oxford and Cambridge perhaps speak for themselves and both university websites do highlight their excellence in research and their international connections.¹⁷ Edinburgh was one of the few universities considered in this research that has a specific section for international students on their graduate admissions web pages. There they state:

*One of the reasons so many students from outside the UK come to Edinburgh is the University's impressive international reputation. Throughout the world, the excellence of our research and teaching is recognised, leading to collaborations with other key international universities, companies and organisations. For postgraduate students coming here, this means a guarantee that their degree will be globally recognised and respected.*¹⁸

Imperial College's 'international dimension' section within the Postgraduate prospectus section of their website also highlights that '*Imperial has many international links, all founded on core values of excellence in research*'.¹⁹ The University of Leeds, which also has a separate section for international students, comments that '*with an international reputation for research and innovation, the University of Leeds is one of the most popular universities in the UK*'.²⁰ Clearly then an effort is being made on an institutional level to highlight the UK's strengths and attract international candidates. However this effort is focused on attracting them to individual institutions and sometimes even specific schools or centres within those institutions rather than on enhancing the UK's 'pull' overall. This perhaps reflects the conceptualisation of doctoral candidates as students who are training to be researchers rather than contributing significantly to their discipline. If they are seen as students rather than as researchers in their own right, the work they carry out is not perceived as a contribution to the UK's overall research output and scientific excellence. Attracting them is considered less important to the UK than attracting more established senior scientists.

¹⁷ We have already briefly considered the 'pull' of centres of excellence in chapter one and will return to this issue in a little more depth in chapter eight

¹⁸ <http://www.edinburgh.ac.uk/studying/postgraduate/international/> [last accessed November 2010].

¹⁹ <http://www3.imperial.ac.uk/pgprospectus/imperialprofile/ourinternationaldimension> [last accessed November 2010].

²⁰ <http://www.leeds.ac.uk/international/university.htm> [last accessed November 2010].

It appears that this lack of clear national strategy for recruiting doctoral candidates from abroad is reflected in the picture which emerged from the empirical work carried out. Table 6.1 below shows a very different picture to the one presented in relation to Germany in the previous chapter. It highlights that funding of doctoral research is much more complex in the UK. Candidates had UK research council grants, or they took advantage of university provisions, either in terms of scholarships or in terms of fee waivers, or were sponsored by companies or indeed supported themselves.

Table 6.1: Respondents who registered for doctorate in the UK

UK01	ORS scheme for university research
UK03	Paid from US collaborative project
UK05	EPSRC studentship and EU Isaac Newton Studentship
UK09	UK company sponsored and ORS
UK11	Cambridge Overseas Trust
UK12	SOROS open society grant
UK13	University Scholarship and ORS fellowship for fees
UK15	University scholarship
UK18	University scholarship including fees for 2 years, then research position (full time) therefore no fees payable
UK21	Local Authority grant
UK23	Fee waiver; part time work
UK24	Unspecified Grant
UK25	University scholarship and then MRC fellowship in last few months to write up
UK27	ORS grant
UK29	EPSRC studentship

Source: Mobex 2 data

In the UK multiple funding bodies and separate funders for fees and maintenance awards were common. For example Kiril received a fees-only grant from a UK research council and a fellowship to cover his living expenses:

'it was an EPSRC funded place which again did not include living expenses but it included covering all the fees and then I separately applied for... I can't quite remember what they are called but it's a kind of European Union grant'.

Similarly Fryderyk received his funding from a company and an overseas researcher's grant: 'Well I got also the overseas research scholarship for it so I got ORS²¹ and I got Fujitsu who paid my PhD fees and salary'.

Doctoral Candidates and Tuition Fees: Re-enforcing student status

One of the most striking differences between the UK and Germany in the context of doctoral research is the existence of tuition fees, and this might account for some of the differences between countries. While in Germany doctoral studies have traditionally been free and remained free even when tuition fees were introduced at a lower level,²² the UK charges significantly high fees for doctoral studies. The UK careers service *Prospects* lists the annual postgraduate fees for science courses for non-EU students as being between £7000 and £9950.²³ But the table below shows that in some of the most popular institutions for our respondents, fees were significantly more than that. In addition, clinical courses, often charging fees of over £20000 for international students, are not included in the table. In the future the fees are set to be even higher as public funding is reduced or withdrawn completely.²⁴

Table 6.2: Maximum annual fee charged for 'home' (including EU) and international doctoral candidates at selected UK Universities for 2010/11 (science, non-clinical subjects)

University	Home fees	International fees
Cambridge	£3465	£14073
Edinburgh	£3400	£13550
Imperial College London	£3466	£17300
Leeds	£3466	£14200
Oxford	£3466	£14000

Source: adapted from various university websites 2010

According to Tzonka 'People don't come to the UK because of the fees, students I mean. Fees are impossible'. With accession to the EU, Polish and Bulgarian doctoral candidates

²¹ Overseas Research Students Awards Scheme

²² See <http://www.studis-online.de/StudInfo/Gebuehren/index.php> [last accessed May 2010]

²³ Prospects.ac.uk [last accessed May 2010]

²⁴ See Browne Review. Documentation and further information available at <http://hereview.independent.gov.uk/hereview/> [last accessed December 2010]

pay home rather than international student fees and although that currently represents a significant drop to around £3500 per year, it is still an amount which might discourage potential doctoral candidates from registering for doctorates in the UK. Tzonka considered the situation in the light of Bulgaria's accession to the EU: *'Some rich people yes they will start sending their children... because £3000 is one thing and £9000 is another'*. However, she clarified that most Bulgarians would not be able to afford even the home fees: *'it will be still too high'*.

However, the data reveals several instances of universities being flexible and waiving fees to allow doctoral candidates to register at a UK university. Monika, for example, explains her situation:

'My fee was waived but I had to support myself so initially I had a sponsor but then it changed and the sponsor withdrew. [...] That was actually my fiancé at that time but then you know that's what happened and I had to support myself, therefore I found a job [...] and I've been working for three and a half years now'.

In spite of the fact that she had to support herself Monika did not seem very concerned about the level of fees: *'Well actually from this year we can pay much less for PhD [...] What's £1,500 I think it's nothing really so I don't know why people are making such a fuss about it. I can't really understand'*.²⁵

In Lucjan's case the funding for his doctorate seemed very complex and piecemeal

'Actually I had three grants, one of them was a fees grant and that was from Cambridge Overseas Trust and I got a grant from the CVCP [Committee of Vice Chancellors and Presidents of UK Universities] which covered the difference between home and overseas fees and I had got a local grant from the Department of Neurosurgery which was covering my living expenses [inaudible]. Additionally there was one off equipment grant from a collaborating department, some travel and book money from the College'.

However, he went on to explain how he thought there had been discussions 'behind closed doors' and matters were really sorted out for him: *'Then the Cambridge institutions just*

²⁵ Monika is here referring to part time fees rather than full time ones

sorted it between themselves [...] and it was very little of my own pushing to get those things done’.

Lucjan’s example shows a high level of commitment and initiative on the part of the institution to secure funding for doctoral researchers but finances remain difficult. Our data corroborates examples reported in the media suggesting that the UK may be missing out on talent. Writing in the Guardian, Jessica Shephard quotes Vincenzo Raimo, director of the international office of the University of Nottingham, as saying:

If the UK is prioritising research, particularly in maths and science, which we claim to be doing, we ought to be getting the best people irrespective of where they come from. It would also make us much more competitive.²⁶

Shephard further notes that a ‘*pool of excellent students from the EU may be going elsewhere because they cannot afford to live and study for a PhD in the UK*’.²⁷

The data suggests that in spite of some flexibility and creativity on the part of UK institutions, the fees, or rather lack of funding for fees and maintenance, do discourage candidates from coming to the UK. Radka and Bozena, for example, had initially looked for opportunities to do their doctorate in the UK and for both of them the lack of available funding played a major role in their decision to take opportunities offered in Germany rather than continuing their search in the UK. Bozena explains:

‘Actually I started from the point that I really wanted to stay in England in fact and the professor that I was working with he suggested me to stay there for a PhD at the same laboratory but [...] I would need to apply for scholarships and other members of the faculty were saying there’s a high chance that I’d get the money but...I was not in the situation that I can take the money from my parents so I needed the guarantee so I was a bit disappointed and unhappy and simply said it didn’t work out’.

Bozena eventually decided to look for a position in Germany, where she knew that the funding of doctoral research positions was uncomplicated: ‘*I thought why struggle so much.*

²⁶ Quoted in Shephard, J. (2009), ‘Savings and loss’ The Guardian, Tuesday 14 April 2009

²⁷ Shephard, J. (2009) op cit note 26

I don't know Germany, I don't know German but it seems that it's much easier there and why not try'. A similar sentiment is expressed by Beata, who had successfully applied for a scholarship programme in Germany after first looking for a position in the UK. She said:

'I started to look only a few months before my Masters abroad; I first actually looked for Great Britain because I knew English and I didn't know any German but there was mostly projects for any bigger international programmes or PhD programmes you have to apply much much earlier and it was already too late. For individual PhD's, I don't know how it looks now with the funding, but first for people outside the EU the price is much higher so you have to find somebody who will fund your studies and someone who will give you some money to live with. Then I found an offer of this international PhD programme in [German city] which was still open for application.'

The empirical work thus suggests that tuition fees do negatively impact on the attractiveness of the UK as a destination for doctoral researchers, not necessarily because fees are charged, but because very few scholarships or funding opportunities are available to doctoral candidates from other EU Member States to cover fees and maintenance. This resonates with Piotr's experience in the US, where high tuition fees are also normally charged to both home and overseas doctoral candidates:

'They [the fees] were waived; the American system sort of promotes excellence. Those who pass exams have got a certain high level get a lot of support and of course I was a 'poor student from Poland' so but I didn't have any money on my own so they waived of state fees. [They are] certainly flexible when it comes to rewarding excellence or in more economical terms grabbing the best for themselves; [...] I mean there is no similar system here of attracting the best people or giving them some incentives to come here'.

Piotr highlights the tension between charging tuition fees and attracting the best candidates. There is of course a further tension in relation to doctoral candidates. Charging tuition fees conceptualises doctoral researchers as students and leaves little leeway to consider them as anything other than students. Indeed, the entire UK system reflects that conceptualisation and any doctoral candidate moving into that national context is likely to

be classed as an EU migrant student. The next section therefore considers the legal position in relation to access to doctoral positions in the UK.

Protecting Domestic Doctoral Students: Access to Doctoral Funding in the UK

It is worth remembering that support for maintenance or tuition costs for doctoral studies is not provided even for UK nationals as a matter of course. Generally doctoral positions and funding, whatever form it takes, are awarded on a competitive basis. The real question in this context is whether or not migrant doctoral candidates access doctoral positions and the help that is available to pay for doctoral studies on the same basis as nationals.

Adverts for doctoral research positions in the UK are not as easily negotiated as those in Germany. For example the website *findaPhD.com* lists details of many positions available across the UK but the advertisements tend to use the language of 'studies' rather than work and are full of phrases such as '*The project will appeal to students with an interest in...*'; '*The PhD student will be able to develop a research project in this field*'; '*This studentship will examine...*'; or '*The student will receive a stipend in the range £13,290 - £16,000 pa (tax-free)*'.²⁸ As well as the difference in language, the other striking difference between the advertisements for doctoral places in the UK and those in Germany relates to the eligibility criteria which are shown for each UK place. On this particular website eligibility is indicated by using a British flag, EU flag or a globe to indicate who is eligible to apply for the particular scholarship or grant. However, even where the symbol indicates that EU nationals can apply, this often subject to further conditions. Many state that EU nationals can apply for the part of the grant which covers tuition fees but must have been resident in the UK for at least three years to be entitled to the maintenance element of the grant. These restrictions are of course in line with the CRD and with the case of *Bidar* which held that a three year residence requirement was legitimate as discussed in detail in chapter 4. The Engineering and Physical Sciences research Council (EPSRC) for example stipulates that

'to be eligible for a full award (stipend and fees) a student must have Settled status in the UK and have been 'ordinarily resident' in the UK for 3 years prior to the start of the grant and not been residing in the UK wholly or mainly for

²⁸ From selected adverts on *findaphd.com*, last searched March 2010

the purpose of full-time education. (This does not apply to UK or EU nationals). All EU nationals are eligible to receive fees only if they do not have settled status in the UK'.²⁹

Because the places offered to doctoral candidates are not employment positions and the doctoral candidates are therefore not seen as EU workers, the provisions guaranteeing equal treatment in relation to access and terms and conditions enshrined in Regulation 1612/68 do not apply and discrimination is lawful. The CRD would of course guarantee equal treatment once lawful residence has been established but it also specifically excludes maintenance support for students from the scope of its provisions.³⁰

Conditions of access to university study, including the charging of tuition fees, must be the same for home and EU students and equivalent qualifications must be recognised. However, as seen above, support for maintenance remains specifically excluded under CRD. Member States are not obliged to provide financial support for other EU nationals even where they provide it for their own nationals unless the support relates specifically to fees. This may in part explain some of the piecemeal funding experienced by some of my respondents. Securing funding from a research council for example would cover only tuition fees, leaving maintenance funds to be found from other sources.

Dougan, writing in the context of undergraduates, notes that

'It might appear self-evident that, if the Union indeed wishes to promote greater cross-border participation in tertiary education as an essential component of the Lisbon agenda for economic growth, then the Community institutions should give serious consideration to extending the principle of non-discrimination beyond mere access to vocational training and the payment of registration/tuition fees, so as also to cover whatever maintenance assistance is provided to own nationals by the host society through grants, loans or other forms of social assistance'.³¹

²⁹ See EPSRC 'Student eligibility' [online] available at <http://www.epsrc.ac.uk/funding/students/Pages/eligibility.aspx> and further SI 1997/1972 Education (Fees and Awards) Regulations 1997 (as amended) [last accessed November 2010].

³⁰ Directive 2004/38/EC Of The European Parliament And Of The Council Of 29 April 2004 On The Right Of Citizens Of The Union And Their Family Members To Move And Reside Freely Within The Territory Of The Member States Article 24(2)

³¹ Dougan, M. (2005b), 'Fees, Grants, Loans and Dole Cheques: Who Covers the Costs of Migrant Education Within the EU?', 42 *CMLR* 943-986 at page 952

It may appear even more self-evident that competition for doctoral research positions should take place on a level playing field, allowing all EU nationals with the appropriate qualifications and experience to compete for the places available on the same basis. As Dougan notes in the context of undergraduate support, it is unrealistic and perhaps not necessary to argue for uniform support for students or doctoral candidates across the EU; what is important is that those moving into a host state receive the same support as nationals of that state. In the context of doctoral mobility it is less important whether the position is that of a worker or a student as long as access to it is based on the same criteria for all EU nationals and not, as in the UK context, dependant on establishing a 'real link' to the host State.³²

However, in relation to undergraduate studies, Dougan further notes that requiring host states to fund migrant students in the same way as home students would be likely to put a disproportionate burden on certain host states. This is especially the case where students return home following their studies because they then do not contribute to that state's economy through work following their studies. The flows of migrant students are fairly unidirectional, with students moving from East to West and with Germany, France and the UK hosting significant numbers of undergraduates from other Member States.³³ It would perhaps be pushing national solidarity to its limits to expect all of these students to have access to funding such as subsidised UK student loans.³⁴ However, doctoral research is unlike lower-level study, and arguably makes a much greater contribution to the scientific community and development of a country. It also speaks directly to the Lisbon agenda of creating a knowledge economy. While the financial burden in relation to undergraduates outweighs any of the benefits of encouraging more EU nationals to study in the UK, it seems clear that the benefits of being able to attract the best young scientific minds to study for doctorates in the UK outweigh the costs of opening up the competition for doctoral funding to EU nationals. In fact the cost of doing so is arguably no higher than of not doing so: no additional funding is required. It would simply require opening up the competition for the available funding to all EU nationals and therefore removing the

³² See further a spokeswoman for research Councils UK who confirmed that the UK research Councils are aware of the anomaly between the UK and other EU countries. Quoted in Shephard, J. (2009), op cit note 26

³³ European Commission (2008b) Erasmus Statistics. [online] available at http://ec.europa.eu/education/programmes/llp/erasmus/stat_en.html [last accessed June 2010].

³⁴ Although Jover has recognised the importance of an ethos of solidarity in educational policy which according to him should extend not only across national borders but also beyond those of the EU. See Jover, G. (2002). 'Rethinking Subsidiarity as a Principle of Educational Policy in the European Union' in Ibáñez-Martin, J.A. and Jover, G. *Education in Europe: Policies and Politics*, London: Kluwer

protective effect the regulations currently afford to UK nationals. In the long run this is likely to increase the attractiveness of the UK for doctoral candidates from other EU Member States. It will ensure that the UK is in a position to attract gifted scientists from across the region and will therefore increase the competitiveness of the UK.

This is particularly the case when the beneficial effects of scientific networks over the period of a career are taken into account. We will return to the question of networks in the chapter 8 but for now it is important to recognise that research suggests that networks shaped early in a career are likely to influence where scientists work in the future as well as whom they collaborate with.³⁵ In the words of an Oxford University Physics lecturer: *'If we grab [excellent researchers] when they are young, we stand a better chance of retaining their talent in the UK'*.³⁶

Gaining Admission: Language Requirements and Academic Qualifications

Access to doctoral research in the UK is not only dependent on funding but also on acceptance for a PhD programme at a host institution. Language requirements and recognition of academic qualifications thus require some consideration in the student context, just as they did in relation to workers. Indirect discrimination against nationals of other Member States in relation to conditions for access to university programmes is prohibited and, as in the case of workers, the most likely areas in which this sort of discrimination could occur are recognition of qualifications and language requirements. UK universities will usually insist on an English language qualification such as the International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL) and while there is some justification for doing so to ensure candidates have the ability to work successfully in English, there are problems, as Georgie explained when pointing out why Germany was a better option for him than the UK or other countries in Europe:

'Germany was in addition easier because they didn't have requirements for English for the language; so for Holland you had to take TOEFL or IELTS. I don't have problems with taking this, of course you need to prepare.... but for me the biggest problem has been of course the money. ... in Germany in most of the universities I didn't need any language tests'.

³⁵ See for example the discussion of networks in Ackers, H.L. and Gill, B. (2008), 'Moving People and Knowledge', Cheltenham: Edward Elgar.

³⁶ Todd Huffmann, quoted in Shephard, J. (2009), op cit note 26.

For doctoral candidates like Georgie the need for a language test certificate, which can be expensive, can be a real disincentive for moving to a particular country. Even where the tests are available free or cost is not a consideration, the need for the test is another preparatory burden for doctoral candidates wishing to go abroad, another hurdle to clear. Legally though, there is nothing wrong with the requirement to prove competency in the English language before registering for a doctoral programme at a UK university. Arguably the requirement is indirectly discriminatory against non-UK nationals and thus prohibited under Article 18 TFEU but it is justified as a proportionate means of ensuring that those registered for such a programme actually have the ability to complete it, which is surely a legitimate aim.

The academic recognition of qualifications is a little more complicated; at least in purely theoretical terms.³⁷ The Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention, 1997) stipulates that: *'Holders of qualifications issued in one of the Parties shall have adequate access, upon request to the appropriate body, to an assessment of these qualifications'*.³⁸ This assessment of the qualifications must be carried out in such a way as not to discriminate on a variety of grounds including gender, race, ethnic or national origin.³⁹ The implementation of the convention is overseen by a network of National Academic Recognition Information Centres and the European Network of National Information Centres on academic recognition and mobility. Their website gives the following advice:

*According to the principles of recognition for further studies (academic recognition) stipulated in the Convention on the Recognition of Qualifications concerning Higher Education in the European Region (Lisbon Convention, 1997), one country recognizes qualifications [...] given by institution/programme that is recognized as belonging to a system of higher education in another country (unless it can show that there are substantial differences between its own qualifications and the qualifications for which recognition is sought).*⁴⁰

³⁷ For an early consideration of the issues see Pertek, J. (1992), 'Free movement of professionals and recognition of higher education diplomas', *Yearbook of European Law* 12, 293

³⁸ The Convention on the Recognition of Qualifications concerning Higher Education in the European Region Article III.1(1)

³⁹ *ibid* Article III.1(2)

⁴⁰ ENIC-NARIC (2007) I would like to study in another country. [online] available at <http://www.enic-naric.net/index.aspx?s=p&q=1&r=1> [last accessed November 2010].

Country-specific information, including a list of recognised institutions, can be accessed from the networks' website, allowing doctoral candidates to check that they are indeed applying to a recognised institution as well as coming from one.⁴¹ Recognising a qualification as coming from a genuine and recognised institution is however not the same as recognising it as equivalent to a national qualification and given the lack of open-mindedness of institutions when comparing qualifications which was noted in chapter three, one might expect this to be an area where respondents reported problems yet institutions seem well equipped to deal with the recognition of qualifications efficiently. Some do this more transparently than others. While Cambridge for example simply refers to '*an equivalent standard from an overseas university*',⁴² Imperial College has a country tracker on its admissions website which indicates the sort of qualifications they would accept for admission to a PhD programme.⁴³ Making this sort of information available to potential applicants clearly meets the requirements of the Lisbon Recognition Convention for transparency in the assessment of foreign qualifications⁴⁴ but this is the exception rather than the rule. Most institutions appear to follow the same route taken by Cambridge and provide no further information on how equivalence is assessed. In practice this may not cause many problems but following Imperial's example would make one administrative hoop significantly easier to jump through.

Respondents, although clearly aware of the need for recognition, did not report any problems. Violeta notes '*Permission for doing PhD was ok because our university diploma was accepted and after that it was all very quick*'. Matyna explains '*The university in Poland gave me a report of my studies and all the classes were [listed] [...] I had the required points, they accepted them and I had rather good grades*'. Justyna, who completed her doctorate quite some time ago in the UK, reported a similar absence of difficulty: '*my university has been listed it's recognised in the west so there was no problem*'. Rada echoes the same sentiment and when asked if she experienced any problems in relation to recognition simply replied '*no*'. Recognition of qualifications for the group of scientists

⁴¹ See the relevant European Network of Information Centres/ National Academic Recognition Information Centres (ENIC/NARIC) web pages which have listings of all recognised Higher Education institutions in the countries studied; <http://www.enic-naric.net/index.aspx?c=Poland> and <http://www.enic-naric.net/index.aspx?c=Bulgaria> [last accessed November 2010].

⁴² Cambridge University Graduate Prospectus [online] available at <http://www.admin.cam.ac.uk/univ/gsprospectus/applving/entry.html> [last accessed November 2010].

⁴³ <http://www3.imperial.ac.uk/entryrequirements/graduate/countryindex> [last accessed November 2010].

⁴⁴ The Convention on the Recognition of Qualifications op cit note 38 Article III.2

studied as part of this research did not seem to be a significant issue. It was simply an administrative task to be completed.

Students: Rights, entitlements and issues

Being a student in the UK does bring with it certain advantages. Full-time students enjoy benefits such as student discounts, reduced travel cards and tax breaks such as not having to pay council tax. They might also receive one of the tax-free scholarships that have increased significantly over the last few years and which are not dissimilar to a research assistant's salary once tax and other benefits are taken into account.⁴⁵ However the status of the scholarship can prove problematic for some candidates because it is often not classed as income by banks or other authorities. These issues are dealt with in turn below.

There are benefits to being classed as a student and in some cases doctoral candidates are attracted to postgraduate research because it allows them to continue the student life style for a further period of time.⁴⁶ Where this is the case student discounts offered across many stores on an array of products⁴⁷ are a welcome bonus, as are discounted travel cards such as rail or bus passes. These perks are however just that, a welcome extra rather than a benefit which will attract doctoral candidates to the UK. The same can be said for the Council Tax exemption applied to full-time students. In fact in many cases council tax will still be payable because it is charged per dwelling, not per person. Unless all members of a household are full-time students, the tax will be payable.⁴⁸

Other than this potential council tax exemption, students are not entitled to benefits or tax breaks. They must pay income tax on any earnings above the personal allowance set annually by the government and cannot claim housing benefit or income support to supplement any earnings. Doctoral candidates must therefore make sure that any scholarship or other financial support they receive is sufficient to cover their living costs. For those receiving scholarships this was not problematic as they were mostly sufficient to

⁴⁵ Ackers, H.L., Gill, B., Coldron, K. And Oliver, E. (2008), 'Assessing The Impact Of The Roberts' Review Enhanced Stipends And Salaries On Postgraduate And Postdoctoral Positions'. RCUK Research Report available at <http://www.rcuk.ac.uk/rescareer/rcdu/enhanced.htm> [last accessed November 2010].

⁴⁶ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility In The Social Sciences'. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool

⁴⁷ See www.nus.org.uk for further detail on available discounts [last accessed November 2010].

⁴⁸ See Local Government Finance Act 1992 s1 and Council Tax (Discount Disregards) Order 1992/548 s4

cover living costs⁴⁹ but in some circumstances, where doctoral candidates were considering buying property for example, the dependence on a scholarship rather than a salary proved problematic:

*'But a big problem that I've found is that, well because we bought a house about a year ago and we've been looking to move and you struggle getting a mortgage so with a lot of people they're probably thinking well if I come back [to university], mortgage companies don't consider [the scholarship] money as income so you struggle in that sense.'*⁵⁰

As this doctoral candidate indicates, the money received from a scholarship is not classed as income in some important respects, and this can make it difficult for doctoral candidates to set up a permanent home in the host country. This is of course less of an issue for mobile doctoral candidates who have come to the UK solely for their doctorate and perhaps do not intend to stay permanently; or for those who prefer to rent property because of the possibility of future international mobility.

In addition students do not benefit from employment rights and social security provision including pension and health insurance. In the UK they will of course be able to make use of the National Health Service for health care.⁵¹ Emergency medical care will be free for everyone and other health care services can be accessed by EU nationals on the same basis as home nationals.

Conclusions

The UK remains a popular destination for doctoral candidates but there is some indication that it is falling behind in what has been termed the 'skills war'.⁵² Doctoral candidates wanting to come to the UK are often attracted by scientific excellence, perhaps based on the international reputations of Oxford and Cambridge and also the attraction of being immersed in English, the lingua franca of science. However the research data suggests that

⁴⁹ Ackers, H.L., Gill, B., Coldron, K. And Oliver, E. (2008), op cit note 45.

⁵⁰ PhD student interviewed as part of the RCUK study

⁵¹ The National Health Service (Charging of Overseas Visitors) Regulations 1989 (as amended). SI 1989/306. Section 4(1)(iii)

⁵² Iredale, R. (2003), 'The migration of professionals: theories and typologies', 39(5) International Migration, 7-26.

some find it difficult to secure doctoral positions, with funding as the biggest problem. The charging of tuition fees makes it difficult for doctoral candidates moving to the UK from other EU Member States. As they are conceptualised as students, they are not entitled to equal treatment with host nationals in relation to maintenance scholarships. EU doctoral candidates therefore do not compete on an equal footing with UK nationals unless they can establish a real link with the host society, which in the UK is deemed to be established through residence of three years or more.

Although there are potential drawbacks of being classed as a student, including the more limited family related rights discussed further in the next chapter, the biggest issue appears to be access to positions. Once funding has been secured, doctoral candidates appear to face relatively few problems. However, securing funding is problematic and many have to manage with merely piecemeal arrangements which can lead to financial insecurity. As students, they are denied access to benefits and social advantages and are at risk of losing their lawful residence status if they cannot show they have sufficient resources to support themselves and their family members. Thus the UK procedures make it more difficult for doctoral candidates to come to the UK and register for their doctorate. The UK does not explicitly acknowledge the contribution made by doctoral candidates to their scientific disciplines and places more emphasis on the student aspects of doctoral research by, for example focusing on generic skills training and structured programmes.

However, the UK system cannot be said to be unsuccessful and it remains attractive to foreign doctoral candidates. The structured nature of doctoral programmes can be seen as an advantage rather than a burden because it allows for comparatively quick completion of doctoral research in a very structured and clearly defined pathway. The opportunity to live and work in a native English speaking environment in a country with a well funded science base adds to the attraction of the UK. The reputational capital of the UK higher education system and some institutions such as Oxford and Cambridge also help to ensure the attractiveness of the country as a host state. If doctoral candidates are fortunate enough to secure a position and funding for the tuition fees and maintenance, the research suggests that they do not give their status and the associated legal rights any further thought. They are only likely to do so if their situation changes, if for example they start a family or acquire caring responsibilities; or if they face difficulties such as not being able to complete within the time limit set by their funding body. The extent to which these issues become

critical would partly depend on the individual context, including funding body or mobility scheme, and these issues are examined in chapter 8.

The UK context would not have to change dramatically to accommodate the idea of doctoral candidates as a distinct group of EU citizens with rights attached to that citizenship status. While doctoral candidates could remain students in the national context, preserving the long standing history and tradition of the sector and with it many of the things that attract doctoral candidates to the UK, a basic floor of rights linked to EU citizenship status could still be granted. Doctoral candidates then would not be dependent on establishing worker status to benefit from minimum health care and social security rights or indeed rights of equal treatment in terms of access to positions and funding. The argument here is not that all doctoral candidates all across the EU are treated in the same way but simply that doctoral candidates in one country are all treated the same and have a basic floor of rights to support them in their work. Without this equality of treatment within countries it is difficult to envisage the EHEA or ERA as areas where movement of researchers is genuinely encouraged and supported.

The citizenship status of EU doctoral candidates is important for their own mobility but may be particularly so in situations where they wish to take their families with them when they move. Their ability to do so potentially influences their mobility and mobility experience significantly. The next chapter therefore considers family rights and the influence of family on doctoral mobility in more detail.

Chapter 7: Doctoral Mobility, Families and Law

The previous chapters have discussed various measures and provisions which influence doctoral mobility in science. So far the focus has mostly been on the professional aspects of doctoral candidates' lives. Mobility and migration decisions are not however made on a purely professional basis and cannot be divorced from the doctoral candidates' personal circumstances. Melin and Janson for example acknowledge that there may be personal factors which stop doctoral candidates from becoming mobile.¹ They note the need to combine mobility with researchers' desire for private and family life. Yet in spite of the fact that just over 20% of doctoral candidates cite personal commitments as reasons for not moving,² on the whole family factors receive little coverage in the literature on doctoral mobility. In fact Kofman and Meetoo, writing about migration generally, note that '*Family migrations remain under-theorized and have been relatively neglected by academics and policymakers*'.³ This is in spite of '*Family related migration [being] the main channel of legal entry into the European Union*'.⁴ The lack of attention to family migration as well as family related issues more generally is also evident in the context of scientific mobility.⁵

Most literature on the highly skilled concentrates on professional factors shaping mobility. Personal circumstances have not sufficiently been studied and their impact is not yet fully understood. However there are some studies which are beginning to recognise the importance of family and personal issues in shaping mobility and migration decisions. For example Puustinen-Hopper recognised Finland's family friendly culture which encourages

¹ Melin and Janson (2006), 'What skills and knowledge should a PhD have? Changing preconditions for PhD-education and postdoc work', in Teichler U (ed), 'The Formative Years of Scholars'. Wenner-Gren International Series Volume 83, London: Portland Press.

² Avveduto, S. (2001) (ed.), 'International mobility of PhDs', in Innovative People: Mobility of Skilled Personnel in National Innovation Systems. Paris: OECD at page 13

³ Kofman, E. and Meetoo, V. (2008). 'Family Migration' in International Organization for Migration (IOM) 'World Migration 2008: Managing Labour Mobility in the Evolving Global Economy' at page 151

⁴ Ibid. There is of course some work considering these issues. For example: Bailey, A.J. and Boyle, P. (2004), 'Untying and Retying Family Migration in the New Europe', *Journal of Ethnic and Migration Studies* 30:2, 229-241; Baldassar, L. and Baldock, C. (2002), 'Linking Migration and Family Studies: Transnational Migrants and the Care of Ageing Parents', in Agozino, B. (ed.); Kofman, E. (2004), 'Family-Related Migration: A Critical Review of European Studies', *Journal of Ethnic and Migration Studies* 30:2, 243-262

⁵ With some notable exceptions for example: Ackers, H. L. (2004) 'Managing Work and Family Life in Peripatetic Careers: The Experiences of Mobile Women Scientists in the European Union', Women's Studies International Forum, 27(3), pp. 189-201; Wilson (1999) The Frustrating Career of the 'Trailing Spouse', The Chronicle of Higher Education, March 19, 1999; Stalford, H. (2005), 'Parenting, Care and Mobility in the EU: Issues Facing Migrant Scientists', Innovation 18:3, 361

the combination of research and family to be an important consideration for some doctoral researchers who choose Finland as a destination.⁶ Ackers et al further note that

'[p]artnerships often act as a strong anchor to the country in which the partner is residing' and that 'the presence of children very much coloured [the doctoral scientists'] attitude towards mobility and, in particular, length of stay'.⁷

In light of this beginning discussion, this chapter explores a more personal side of international mobility at doctoral level by considering the impact families have in shaping scientific mobility in this context. The chapter begins by revisiting the debate started in chapter two on the European free movement rights afforded to EU nationals. In this chapter the focus is initially on the rights of family members to entry and residence as well as access to the labour market, in order to establish the legal framework shaping the extent to which family members can accompany or join the doctoral candidates. The chapter then moves on to examine the impact of family ties in situations where the doctoral candidate moves alone, before considering other family related rights in the host countries, such as maternity provisions, family leave and provisions for child care. The final part of the chapter then turns to the specific situation of dual science career couples and explores the particular challenges faced by such couples and the impact they have on the mobility of doctoral candidates.

European Union Free Movement of Persons and Family Rights

Free movement of persons law recognised early in its development that the economically active who were to be encouraged to move were unlikely to do so if they could not take their families with them when exercising free movement rights.⁸ Family members thus have rights of entry and residence as well as the right to take up economic activity in a host state and these rights are derived directly from the status of the EU national they are moving with or joining.⁹ Of course doctoral candidates' family members who are themselves EU

⁶ Puustinen-Hopper, K. (2005) 'Mobile Minds. Survey of Foreign PhD Students and Researchers in Finland' Publication of the Academy of Finland 1/05, Helsinki, Finland

⁷ Ackers, H.L., Gill, B. and Guth, J. (2008), 'Doctoral Mobility In The Social Sciences'. Report to the NORFACE ERA-NETWORK. European Law and Policy Research Group, University of Liverpool at page 47

⁸ See Hervey, T. (1995) 'Migrant Workers and their families in the European Union: the pervasive market ideology of Community law' in Shaw, J & More, G (eds) *New Legal Dynamics of European Union*. Clarendon, Oxford

⁹ The rights are now enshrined in the Citizen's Rights Directive (CRD) Directive 2004/38/EC of The European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States. Official Journal of the European Union L 158/77.

nationals can take advantage of EU law provisions directly as well as deriving rights from the doctoral candidate in certain circumstances. Third-country nationals however have to rely on the doctoral candidates' EU citizenship status to gain the right to move and reside with the doctoral candidate as well as to access other rights and entitlements.¹⁰

Throughout the empirical work underpinning this thesis, the doctoral candidates' family members tended to be the same nationality as the doctoral candidates themselves and were usually therefore EU nationals in their own right. There were however instances where a consideration of third-country national status was important. This was particularly the case in relation to Bulgarian respondents who were, at the time of the empirical work, not yet EU nationals. This chapter therefore considers the rights and entitlements of family members who are themselves also EU nationals as well as the family members of EU nationals who themselves are third country nationals. Before doing so however, it is important to understand the EU law definition of the family and how it relates to the situation of the doctoral candidates in this study.

Who is a family member?

As Kofman notes 'when we speak of family migration... we mean the nuclear family as defined by the state'¹¹, we therefore need to know how family is defined. The EU idea of family includes the spouse, civil partner if civil partnerships are treated as equivalent to marriage in the host state, children who are under 21 or dependant and dependant direct relatives in the ascending line and those of the partner or spouse.¹² In other words only spouses or civil partners with marriage equivalent status and children under 21 have automatic family rights under the Citizen's Rights Directive (CRD). Older children and other direct relatives, while covered under Article 2 CRD, must be dependant to benefit. Article 3 CRD confers more limited rights on other dependant family members or those needing personal care as well as on members of the citizen's household and partners with whom the citizen has a durable relationship.

However, when determining who comes within the scope of the EU definition of family, the status of the EU citizen whose family is being considered once again becomes relevant. The definition above applies to those who are economically active, in other words, to workers

¹⁰ For further consideration of Third country nationals in this context see Barratt, G. (2003), 'Family Matters: European Community Law and Third Country Family Members', *Common Market Law Review* 40:2, 369-421

¹¹ Kofman, E. (2004) op cit note 4 at page 245.

¹² CRD op cit note 9 Article 2(2)

and the self employed, as well as EU citizens who are self sufficient. Article 7(4) CRD limits the scope of family for EU students residing in another Member State:

'By way of derogation [...] only the spouse, the registered partner provided for in Article 2(2)(b) and dependent children shall have the right of residence as family members of a Union citizen [exercising their Treaty rights as students]. Article 3(2) shall apply to his/her dependent direct relatives in the ascending lines and those of his/her spouse or registered partner'.¹³

Family members who can derive rights from an EU student are therefore limited to those who could be said to be immediate family whereas those who can derive rights from an EU worker include other relatives too.

Considering this from a traditional free movement of persons perspective this makes some sense. If family rights are granted in order to facilitate the free movement of economically active EU citizens, there is a weaker rationale for allowing family members the same entry and residence rights where the stay in host country is likely to be transient in nature as is often the case with student mobility. However, it has already been argued that doctoral candidates cannot be seen in the same way as undergraduate students or even taught postgraduates. Doctoral candidates, as key actors in the ERA and EHEA, should arguably receive the most generous free movement rights alongside other economically active citizens; and those rights should include a wide definition of family relationships to ensure that mobility is made as easy as possible for doctoral candidates who may rely upon family support or themselves have caring responsibilities which they want to continue to fulfil in their chosen host country. In order to fully understand the implications of family rights, three further issues arising out of the definitions given above need to be explored: How have they been implemented in the Member States; who is classed as a dependant; and what is a durable relationship which is 'duly attested'.¹⁴ We will consider these issues in turn.

Are partners really family members? Member State Implementation of CRD

Both the UK and Germany have implemented the provisions into national law and there do not appear to be problems with that transposition in relation to Article 2 CRD.¹⁵

¹³ CRD Article 7(4)

¹⁴ CRD Article 3(2)

¹⁵ European Commission (2008c) Report From The Commission To The European Parliament And The Council on the application of Directive 2004/38/EC on the right of citizens of the Union and their

'Transposition with regard to the rights of other family members under Article 3(2) is less satisfactory. Thirteen Member States [including Germany] have failed to transpose Article 3(2) correctly'.¹⁶ The relevant national legislation, the Freizügigkeitsgesetz/EU [free movement law/EU]¹⁷ does not contain a specific measure in relation to other family members under Article 3(2) CRD. General immigration rules provide German authorities with the power to grant residence permits in some specific cases related to family migration¹⁸ and while the authorities are to consider European Union Law in doing so, the measure is restricted to cases of particular hardship,¹⁹ thus ruling out those who are merely dependent or members of the EU citizen's household.²⁰ Further problems arise in relation to partners under Article 3(2) CRD. The German law uses the term *Lebenspartner* [life partner] as defined in the *Lebenspartnerschaftsgesetz* which seems to refer only to same-sex registered partnerships²¹ and thus excludes any other durable relationships such as non-registered same-sex partners or heterosexual non-married couples.²²

The UK by contrast appears to have implemented Article 3(2) CRD correctly. The Immigration (European Economic Area) Regulations 2006 (as amended)²³ use language which is almost identical to that of the Directive when defining extended family members.²⁴ The Regulations include civil partners under section 7(1)(a) as family members and then partners who can prove they are in a durable relationship with the EU national in section

family members to move and reside freely within the territory of the Member States COM(2008) 840 final.

¹⁶ Ibid at page 4.

¹⁷ Freizügigkeitsgesetz/EU vom 30. Juli 2004 (BGBl. I S. 1950, 1986), das zuletzt durch Artikel 7 des Gesetzes vom 26. Februar 2008 (BGBl. I S. 215) geändert worden ist"

¹⁸ Aufenthaltsgesetz in der Fassung der Bekanntmachung vom 25. Februar 2008 (BGBl. I S. 162), das zuletzt durch Artikel 4 Absatz 5 des Gesetzes vom 30. Juli 2009 (BGBl. I S. 2437) geändert worden ist in Part 6

¹⁹ Ibid § 36 (2)

²⁰ See further Milieu Ltd and Europa Institute (2008), 'Conformity Study for Germany Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States' [online] available at http://ec.europa.eu/justice_home/doc_centre/citizenship/movement/doc/germany_compliance_study_en.pdf [last accessed June 2010].

²¹ See Lebenspartnerschaftsgesetz vom 16. Februar 2001 (BGBl. I S. 266), das zuletzt durch Artikel 7 des Gesetzes vom 6. Juli 2009 (BGBl. I S. 1696) geändert worden ist" at § 1(1)

²² See further Milieu Ltd and Europa Institute (2008), op cit note 20. For critique of the EU provisions see for example: Stychin, C. (2005) 'Disintegrating sexuality: Citizenship and the EU' in Bellamy, R & Warleigh, A *Citizenship and Governance in the European Union*. Continuum, London; Bell, M. (2004) Holding back the tide? Cross-border recognition of same-sex partnerships within the European Union. *European Review of Private Law*, 12(6), 613. Elman, A. (2000). 'The Limits of Citizenship: Migration, Sex Discrimination and Same-Sex Partners in EU Law'. *Journal of Common Market Studies*, 38(5), 729-749.

²³ The Immigration (European Economic Area) Regulations 2006 SI 2006/1003

²⁴ Ibid at s. 8

8(5) as extended family members thus avoiding the problems evident in the German implementation.

Both countries have also chosen to implement a more limited definition of family members in relation to students provided for in the CRD. Both appear to be slightly more generous than the Directive itself but both do make a distinction between the economically active such as workers as opposed to students. In the UK *'a person shall not be treated ... as the family member of a student residing in the United Kingdom unless ... the person is the dependent child of the student or of his spouse or civil partner'*.²⁵

Extended family members, as those falling within Article 3(2) CRD are termed in the UK legislation, seem only to be classed as family members entitled to derived rights if the student has a permanent right of residence²⁶ or where

'the relevant EEA national is residing in the UK in accordance with these Regulations; or will be travelling to the United Kingdom within six months of the date of the application and will be an EEA national residing in the United Kingdom in accordance with these Regulations on arrival in the United Kingdom]; the extended family member wishes to accompany the relevant EEA national to the United Kingdom or to join him there; and in all the circumstances, it appears to the entry clearance officer appropriate to issue the EEA family permit'.²⁷

There thus appears to be some degree of flexibility for the UK authorities to allow extended family members to be issued with an EEA family permit following an extensive examination of the personal circumstances.²⁸

In Germany the law limits those deriving rights as family members to the students' spouse, partner and dependent children. There is no mention of other relatives, dependent or otherwise.²⁹ Therefore, where the doctoral candidate is a worker, long term partners can derive rights, as could members of their household, those requiring their personal care and dependent relatives. In contrast, where doctoral candidates are classed as students, only

²⁵ Home Office UK Border Agency (2010), European Casework Instructions [online] available at <http://www.ukba.homeoffice.gov.uk/sitecontent/documents/policyandlaw/ecis/> Chapter 3 at page 3. See also The Immigration (European Economic Area) Regulations 2006 SI 2006/1003 at s. 7(2).

²⁶ *ibid* at s.16(5) and s. 17(5)

²⁷ *ibid* at s.16(5) and s. 12(2)

²⁸ See The Immigration (European Economic Area) Regulations 2006 SI 2006/1003 at s.16(5) and s. 12(3)

²⁹ § 4 FreizügG/EU *op cit* note 17

spouses or civil partners recognised as equivalent to spouses and dependent children have rights as family members and only direct relatives fall under the more limited scope of Article 3 CRD and the national provisions, which in the case of Germany do not appear to fully transpose the EU measure. The UK has transposed the CRD more accurately and appears to be more generous in its interpretation of students' family members than Germany.

Who is a Dependant?

A dependant, fairly straightforwardly, is someone who is not in a position to support themselves. As the ECJ notes in Jia:

'According to the case-law of the Court, the status of 'dependent' family member is the result of a factual situation characterised by the fact that material support for that family member is provided by the Community national who has exercised his right of free movement or by his spouse'.³⁰

Whether or not that is the case is to be determined having regard to their financial and social conditions in the state from which they are seeking to move and not in the state which they move to. This is often of critical importance as dependence must therefore exist prior to reunification with the citizen in the chosen host state. The case of Jia³¹ provides a useful illustration of the ECJ's approach to 'dependent' in EU law. A Chinese national sought entry into Sweden to join her daughter and German son-in-law. While she was not dependent on the couple in her native China, the significantly higher cost of living in Sweden would have made her financially dependent on them following her move. This does not seem to be the intention of the Directive. The legislation aims to allow those dependent on EU citizens to move with them or join them when they otherwise would not be able to support themselves rather than create a situation where relatives of EU citizens are rendered dependent because of their mobility and family reunification. In the words of the ECJ:

'In order to determine whether the relatives in the ascending line of the spouse of a Community national are dependent on the latter, the host Member State must assess whether, having regard to their financial and social conditions, they are not in a position to support themselves. The need for material support

³⁰Case C -1/05 Jia v. Migrationsverket at para 35

³¹ Ibid

must exist in the State of origin of those relatives or the State whence they came at the time when they apply to join the Community national'.³²

For my respondents this may make it particularly difficult to take their parents, for example, with them while researching abroad. While they may not be dependents in a home state with a comparatively lower cost of living, many would in fact be dependent on the doctoral candidate following the move to the UK or Germany because of a higher cost of living and the lack of ability to work.³³ Following the established case law, they would however fall outside the definition of family used in the Directive and would therefore not have access to the derived rights enshrined within it. As mainly Polish or Bulgarian nationals however, they would now have citizenship rights based on their own status as EU nationals and we will consider these in more detail below.

Partners and derived rights

Article 3 CRD grants rights to partners of EU citizens where a durable relationship exists and that relationship is duly attested. Member States are to investigate the personal circumstances extensively. However, what exactly a durable relationship is or how it can be duly attested is less clear. The European Commission's guidance on the transposition of The CRD states that the Directive applies to '*a de facto durable relationship, duly attested*', this requirement must be assessed taking into account the Directive's aim '*to maintain the unity of the family in a broad sense*'.³⁴ The guidance further suggests that documentary evidence that the relationship is durable can be required by the host state but gives no guidance on what sort of evidence that might be. The UK border agency has the following advice:

'You would generally need to show us that you have been in a subsisting relationship for two years or more. This could be through joint bank or building society statements, joint tenancy agreements, council tax bills or evidence that you are both paying utility bills at the property at which you reside'.³⁵

³² Case C -1/05 Jia op cit note 30 at para 37

³³ While family members might have the right to work in the host state, they may not necessarily be able to. They may lack the necessary qualifications or language skills for example

³⁴ European Commission (2009), 'Communication on guidance for better transposition and application of Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States'. COM(2009) 313 final at page 5

³⁵ UK Border Agency (2009), 'Guidance Notes For Applying As A European National Or As The Family Member Of A European National' Version 1.0, July 2009. Available online at <http://www.ukba.homeoffice.gov.uk/sitecontent/applicationforms/eea/guide-eea.pdf> at page 4 [last accessed November 2010].

Out of the 94 doctoral candidates who responded to the MOBEX2 survey and/or were interviewed as part of that project, 70 were partnered and 24 were single. 12 reported having children. The proportion of partnered doctoral candidates and those with children was similar in the other projects informing this thesis. Out of those who were partnered some were married but the majority of those interviewed spoke of partners or boyfriends/girlfriends rather than husbands/wives. The fact that marital status would impact on rights was recognised by some of the respondents. Radka for example explains why she got married to an Austrian national:

'I wanted to work at a private company and at that point I was still in the chemical scientific field and then I applied for something more of interest to me but I didn't get just because I was not Austrian. So I thought yeah [getting married] is a good solution'.

Those who were not married seemed not to have considered using the doctoral candidates' EU citizenship status as a way of acquiring derived rights for their partners. Alicia for example states that she did not want to stay in Germany following her doctorate but that she would consider the UK partly because her boyfriend would not be subject to transitional arrangements there: *'Yes this is the advantage that we are in the new European Union and he can work in the UK'.*

This may be because of a lack of knowledge of legal rights or reflect the difficulty of proving relationship status especially if the couple did not live together prior to the doctoral candidate moving.³⁶ It may also be the result of the host states' implementation of the measure, which may suggest that partners who are not spouses or civil partners are not covered by the provisions especially where the doctoral candidate was classed as a student. However, in relation to doctoral candidates there are also further reasons many did not seek to bring their partners with them in the context envisaged here. Many were in dual career or even dual science career couples and their partners were able to take advantage of rights and entitlements in their own right, either as EU workers themselves or as highly skilled third-country nationals. We will return to the dynamics of mobility in this context below. Secondly most doctoral candidates did not see their move as permanent and the nature of their mobility was fairly transient. For a temporary move there is little reason to

³⁶ Given the complexity of the law outlined above a lack of knowledge is hardly surprising. See also Peers, S (2001), 'Dazed and Confused: Family Members' Residence Rights and the Court of Justice', *European Law Review* 26:1, 76-83

uproot family members especially where links with the home country can be maintained with relative ease for instance by frequent visits.³⁷

Rights of EU national family members

Family members under Article 2 CRD have the same rights to entry and residence as the EU citizen. Article 3 family members however enjoy more limited rights in this regard. The CRD notes that host Member States should '*in accordance with [their] national legislation, facilitate entry and residence*'³⁸ of those family members listed in Article 3. In the case of EU national family members this is not going to be problematic as they will have a right of entry and initial 3 months residence in their own right.³⁹ Following that initial 3 months, they may continue to have entitlements based on their own status as an EU worker, as self-employed or as a non-economically active EU citizen with sufficient resources and sickness insurance. If that is not the case they can rely on the EU migrant student or worker to derive a right of residence.

Where the latter is the case, the doctoral candidates' status in EU law may be of importance. Workers have, according to the CRD a right of residence for longer than three months. There are no further limitations placed on this; so there is no requirement for the worker to have sufficient resources and sickness insurance for themselves and their family members.⁴⁰ Students on the other hand only have a right of residence for longer than three months where they '*have sufficient resources for themselves and their family members not to become a burden on the social assistance system of the host Member State during the period of residence*'.⁴¹ In other words, even if doctoral candidates who are classed as workers earn only a limited amount of money which is insufficient to support themselves and their family; they continue to be lawfully resident and may in fact be entitled to social assistance.⁴² Students however, risk losing their lawful residence status if they no longer have sufficient resources to support themselves and their family. They must also show that they have comprehensive sickness insurance, something workers do not have to prove. As discussed in chapter three, these requirements are proportionality bound and cases such as *Baumbast*⁴³ and *Grzelczyk*⁴⁴ highlight that whether or not the sufficient resources and

³⁷ See the discussion of the geographic proximity below

³⁸ CRD Art 3(2)

³⁹ CRD Art 5 and 6

⁴⁰ CRD Art 7(1)(a)

⁴¹ CRD s7(1)(c)

⁴² See for example case 139/85 *Kempf v Staatssecretaris van Justitie* [1986] ECR 1741

⁴³ Case C-413/99 *Baumbast* and *R v Secretary of State for the Home Department* [2002] ECR I-7091

comprehensive sickness insurance requirements are met, must be decided on a case by case basis. They further highlight that recourse to social assistance cannot automatically lead to the conclusion that the migrant no longer has sufficient resources and thus to the withdrawal of their lawful residence.⁴⁵

For mobile doctoral candidates this means that having worker status provides a more comprehensive safety net should things go wrong and should they need to have recourse to social assistance because, for example, their income is insufficient to support themselves and their family. Where they have student status, however, the situation is more complex. Recourse to social assistance would indicate that the student no longer fulfils the residence requirements because they could no longer prove they would not be a burden on the host state. However, this cannot automatically lead to the withdrawal of lawful residence, as was seen in cases such as *Grzelczyk*⁴⁶ or *Bidar*.⁴⁷ Where doctoral candidates are therefore temporarily unable to support themselves and their family, they may not lose their lawful residence if they have previously been able to demonstrate they had sufficient resources and are likely to be able to do so again.

Transitional arrangements for Polish and Bulgarian nationals and family members' right to work

Family Members who enjoy the right of residence also have the right to take up employment or self-employment in the host state⁴⁸ as well as a right to equal treatment with host state nationals.⁴⁹ The right to work is however qualified in relation to EU nationals from those Member States joining the EU in 2004 and 2007.⁵⁰ The transitional arrangements have already been discussed in chapter 4 in relation to workers in Germany, so the EU and German provisions will not be rehearsed here. Instead the focus is on the UK provisions not previously discussed. The UK, while not restricting access to the labour market for nationals of the eight eastern European states joining in 2004, did put in place a monitoring scheme and then did restrict access in relation to Romanian and Bulgarian nationals. In the UK the workers registration scheme (WRS) was set up to monitor labour

⁴⁴ Case C-184/99 *Grzelczyk v Centre Public d'aide sociale d'Ottignies-Louvain-la-Neuve* [2001] ECR I-6193

⁴⁵ CRD Art 14(3)

⁴⁶ Case C-184/99 *Grzelczyk* op cit note 44

⁴⁷ Case C-209/03, *The Queen (on the application of Dany Bidar) v London Borough of Ealing, Secretary of State for Education and Skills* [2005] ECR I-2119 see chapter 4 for a detailed discussion of student status

⁴⁸ CRD Art 23

⁴⁹ CRD Art 24(1)

⁵⁰ Excluding Cyprus and Malta joining in 2004.

market participation by new Member States nationals following their accession to the EU in May 2004.⁵¹ The legal basis for measures relating those EU citizens can be found in two statutory instruments which came into force 1 May 2004: The Accession (Immigration and Workers Registration) regulations 2004 and the Social Security (Habitual Residence) Amendments regulations 2004.⁵² All workers from those eight EU Member States have to register with the scheme when they take up employment in the UK. Once an employee has been in employment for 12 months without interruption the registration requirement lapses and they are entitled to full free movement rights.

Bulgarian and Romanian nationals are subject to more stringent transitional arrangements, which means they require an accession worker card unless they work under the seasonal agricultural workers scheme or have been given leave to enter and remain in the UK before 1st January 2007 and have permission to work for a particular employer or in a particular category of employment. In most cases this requires the employer to secure a work permit in relation to the worker. There are some exceptions including au pairs, trainee GPs, qualified nurses or teachers and language assistants on approved exchange schemes. In addition a Bulgarian or Romanian worker will be exempt from the need to have an accession worker card once they have worked in the UK for 12 months or if they meet the conditions for a registration card as a highly skilled worker in which case they can apply for permission to work on the basis of the highly skilled status.

As confirmed in chapters 4 and 5, the transitional arrangements do not apply to students as they only allow Member States to derogate from certain EU law provisions. Therefore there are no additional restrictions placed on students from the new Member States. However, as we have seen these rights are much more limited than those of workers and also do not give rise to the same family reunification rights. So while it might be beneficial for doctoral candidates from new Member States to move as students so as to avoid the restrictions placed on workers through the transitional arrangements, student status will limit the rights their family members can derive as well as their access to social advantages.

Third country nationals moving as family members

Many Member States have strict immigration rules which make it difficult to bring third-country national family members into that state. EU citizens can therefore be at an advantage over many nationals who have not exercised their free movement rights but

⁵¹ The provisions for Romania and Bulgaria who joined in January 2007 are different and are briefly dealt with below

⁵² SI 2004/121 (Accession Regulations) and SI 2004/1232

wish to bring non EU nationals to live with them in a Member State. Once matters come within EU law, the parties can rely on the Directive rights and no further conditions can be imposed by the Member States. Jennifer, a Canadian junior social scientists considering registering for a doctorate in Germany for example was married to a German doctoral candidate. She confirmed that throughout her immigration process she did not try and rely on rights as his spouse but rather on trying to establish an independent right to enter and reside in Germany.

In *Akrich* the ECJ seemed to approach the question of third-country nationals joining EU nationals in the host state from a classic free movement of persons perspective. The ECJ said:

'In order to benefit [...]from the rights provided for in Article 10 of Regulation No 1612/68, the national of a non-Member State, who is the spouse of a citizen of the Union, must be lawfully resident in a Member State when he moves to another Member State to which the citizen of the Union is migrating or has migrated.

That interpretation is consistent with the structure of the Community provisions seeking to secure freedom of movement for workers within the Community, whose exercise must not penalise the migrant worker and his family'.⁵³

The rationale behind facilitating the movement of EU citizens' family members is to ensure that economically active EU citizens are encouraged to move. They are not likely to do so if they cannot take their family members with them. Arguably therefore there is no reason to allow preferential immigration rules for family members joining EU citizens in the EU for the first time. Not doing so would not put the migrant in a worse position than they were in in their home state:

'Conversely, where a citizen of the Union, established in a Member State and married to a national of a non-Member State without the right to remain in that Member State, moves to another Member State in order to work there as an employed person, the fact that that person's spouse has no right under Article 10 of Regulation No 1612/68 to install himself with that person in the other Member State cannot constitute less favourable treatment than that which they enjoyed before the citizen made use of the opportunities afforded

⁵³ Case C-109/01 *Akrich* para 50 and 51

by the Treaty as regards movement of persons. Accordingly, the absence of such a right is not such as to deter the citizen of the Union from exercising the rights in regard to freedom of movement conferred by Article 39 EC’..⁵⁴

The ECJ in *Akrich* thus held that for 3rd country nationals to take advantage of the family rights under the CRD they must be lawfully resident in an EU Member State. In other words, the rights do not apply for 1st time (lawful) entry into the EU. However, the CRD mentions no such limitation and it did not take long for the ECJ to change policy. In *Metock* it clearly reversed the *Akrich* decision:

*‘It is true that the Court held in paragraphs 50 and 51 of Akrich that, in order to benefit from the rights provided for in Article 10 of Regulation No 1612/68, the national of a non-member country who is the spouse of a Union citizen must be lawfully resident in a Member State when he moves to another Member State to which the citizen of the Union is migrating or has migrated. However, that conclusion must be reconsidered. The benefit of such rights cannot depend on the prior lawful residence of such a spouse in another Member State’.*⁵⁵

Thus, as soon as a third-country national falls within the definition of family member given in the Directive, they have *‘rights of entry and residence [...], without distinguishing according to whether or not the national of a non-member country has already resided lawfully in another Member State’.*⁵⁶ They will therefore have access to the labour market and to social advantages. Radka, cited above, confirmed that some doctoral candidates at least were aware of the possibility of acquiring rights based on being a spouse of an EU national. As a Bulgarian national living first in Austria and then in Germany prior to Bulgaria’s accession, she initially derived the right of residence and initially the right to work from her husband’s status. Radka was reluctant to talk about her private life but seems to have made strategic decisions in relation to marriage in order to secure maximum rights for herself. Ludwika was far less strategic but also acknowledged that being married to a Dutch and therefore EU national made it far easier for her to exercise free movement rights:

⁵⁴ Ibid at paragraph 53

⁵⁵ C-127/08 *Metock and Others v Minister for Justice, Equality and Law Reform* at paragraph 58

⁵⁶ Ibid at paragraph 54

'I think I would have a problem [getting permission to work] now after finishing my PhD here at the university but since I am married to a Dutch guy who also works here then I think it's different and I can have a permit to work here'.

EU law thus provides a framework in which doctoral candidates can bring family members with them to the host state. Where spouses and children are concerned this is relatively straightforward. Where other relatives or unmarried partners are to move with the doctoral candidate however, the doctoral candidate's status as either EU migrant worker or EU migrant student may determine whether or not the family member can derive rights from the doctoral candidate or whether they must rely on their own status as EU citizens or the immigration rules applying to third-country nationals. However, family and personal relationships can also influence doctoral mobility in another way.⁵⁷ Even where family members are not going to migrate with the EU citizen, they can impact on the destination choice of the migrant. Geographical proximity to family and friends can be an important factor in career and mobility decision making.⁵⁸ These factors are considered next.

Family ties, proximity and doctoral mobility

For younger doctoral candidates who have followed a direct route through higher education, a move for doctoral research is often the first time they leave home and candidates not only have to adjust to living in a foreign country but also to living away from their parents for the first time. In addition they must often consider partners and, for candidates who are further down their life course, children or elderly parents. Proximity to the home country and ease of travel can therefore be important for these scientists. Alicja, who was beginning to look for a post-doc position in the UK while completing her doctorate in Germany, talks about going back to Poland to visit her parents and her partner:

I: How long does it take you?

A: 4 hours [by car].

⁵⁷ See for example Ackers, H.L. and Stalford, H.E. (2007) 'Managing Multiple Life Courses. The Influence of Children on Migration Processes in the European Union' *Social Policy Review* (19) 321-342

⁵⁸ Ackers, H.L., Gill, B. and Guth, J. (2008), 'op cit note 7 and Ackers, H.L. and Gill, B. (2008), 'Moving People and Knowledge' Cheltenham: Edward Elgar.

I: It's not that long then.

A: Yes that was one of the reasons why I also decided to come here because it was not that far so it was just 400km so it's really okay. I think I couldn't stand to go less than once month and I may be afraid of going to the UK already, this is also why I'm concerned.

Alicja touches on the importance of transport links in shaping the attractiveness of a location for doctoral scientists. Germany is of course geographically much closer to Poland and Bulgaria and many respondents commented on that proximity: Jan for example said:

'There is one thing I would also like to add and that's for me it's very comfortable here, I live 200km from my home town and I have a very nice train connection.'

The advent of cheap travel between eastern and western Europe has changed the context of scientific mobility quite considerably. Affordable travel means that scientists working abroad can visit home much more frequently than would have been possible before. Visiting family and friends several times a year is no longer financially impossible and retaining active social and professional links in the home country is manageable with relative ease. Low-cost airlines have established routes to Bulgaria, Poland and other eastern European Destinations since 2004 and Underhill claims *'Head-spinning fares are uniting East and West as the founding fathers of the European Union would never have imagined'*⁵⁹ explaining that *'once a largely theoretical possibility, that sort of labor mobility becomes a practical option when flights cost less than a day's wages and no more than a bus ride'*.⁶⁰ Proximity to the home country does seem to be an important factor influencing mobility in science. In their study of student mobility, King and Ruiz-Gelices found that professional travel to Europe following the year abroad had increased when compared to previous studies and suggested that *'the increasing frequency and cheapness of travel to a progressively integrated and globalised Europe ... accounts for part of the difference'*.⁶¹

⁵⁹ Underhill, W. (2006), 'Budget Bonanza: A flotilla of low-cost airlines is redrawing the economic map of Europe'. Newsweek International, March 16.

⁶⁰ *ibid*

⁶¹ King, R and Ruiz-Gelices, E (2003) 'International Student Migration and the European 'Year Abroad': Effects on European Identity and Subsequent Migration Behaviour'. 9 International Journal of Population Geography 223 at page243.

Good travel connections allow scientists to maintain family and social links in the home country and the existence of such links can be an important consideration when choosing potential destinations. Alicja's comments make that point:

'so I'm looking also in the places where they have good connections with Poland. There are a lot of direct flights from London to my city and I'm also looking for a position not far from London'.

Good travel connections can therefore facilitate the mobility of those scientists who previously would have preferred to stay at home because of the cost and time factor involved in visiting home and maintaining social and professional links. The cheaper travel options have of course also led to many other improvements in science cooperation: they make conference attendances much more affordable and international collaborations easier because even a modest travel budget can now go relatively far. For doctoral candidates the ease of travel opens up new opportunities. Shorter trips abroad become much more feasible, allowing for research visits to carry out specific experiments, use specific equipment or receive training without necessarily having to take up residence.

However for those who are leaving home and are considering starting a family or indeed already have caring responsibilities, the legal framework governing family friendly rights in the host Member State can be of significant importance. The next section therefore considers the national law relating to family rights

Family Friendly Rights and Policies in the Host States

The UK has a relatively generous family rights framework for employees and some of the rights apply equally to those who fall short of achieving employee status but are nonetheless classed as workers. Maternity leave of 52 weeks is provided for all employees regardless of length of service, and statutory maternity pay is available for 39 weeks for employees with at least 26 weeks continuous service.⁶² Others may be entitled to maternity allowance. Paternity leave is less generous, with currently only 2 weeks being granted to new fathers.⁶³ In addition parents can take up to 4 weeks of unpaid parental leave per year until the child reaches age 5 (with an overall maximum of 13 weeks).⁶⁴ Time

⁶² See Employment Rights Act 1996 part VIII for the detailed provisions relating to Maternity leave

⁶³ Paternity Leave provisions are to be found in ss 80A-E Employment Rights Act 1996. The Additional Paternity Leave Regulations 2010 provide for additional paternity leave for fathers of babies born after April 2011. Where mothers do not take their entire leave entitlement, the remainder of up to 26 weeks in total may be taken by the father.

⁶⁴ S76 Employment Rights Act 1996

off in emergency situations to provide care for dependants can be taken pursuant to s57A of the Employment Rights Act 1996 but this time is again unpaid time off. While the statutory framework provides a floor of rights, many employers provide contractual benefits which far exceed the minimum laid down in the legislation. Cambridge University pays 18 weeks maternity leave at full salary and an additional 21 weeks at statutory maternity pay level,⁶⁵ while Leeds University, Imperial College and Edinburgh University offer 16 weeks at full pay and 23 weeks at statutory pay level.⁶⁶

A further potentially useful provision can be found in s80F of the Employment Rights Act 1996. It gives those with caring responsibilities the right to request flexible working, which is not strictly defined and can include a number of measures such as reducing hours or changing work patterns. The request has to be considered seriously although it can be refused if the change requested would have serious implications on the business.⁶⁷ Flexible working may be a useful way of combining work and family life. However research suggests that scientists often find it difficult to carry out their work on a part time basis and that particularly at the beginning of an academic career long hours are the norm, making it difficult to combine family and work.⁶⁸

However, the family rights outlined above do not apply to students. Students have no right to request flexible working and also do not have any entitlement to maternity or family rights as a matter of law. Some institutions make some provisions for students with families but those provisions are purely at the institution's discretion. *The Times Higher Education Supplement* reported a spokesperson for the Equality Challenge Unit as saying:

⁶⁵ Cambridge University Maternity Leave Policy [online] available at <http://www.admin.cam.ac.uk/offices/hr/policy/maternity.shtml> [last accessed November 2010].

⁶⁶ Leeds University Maternity Leave Policy [online] available at <http://www.hr.leeds.ac.uk/policies/Default.aspx?PGId=9> [last accessed November 2010] and Imperial College Maternity Leave Policy [online] available at <http://www3.imperial.ac.uk/hr/procedures/family> [last accessed November 2010] and Edinburgh University Maternity Leave Policy [online] available at http://www.humanresources.ed.ac.uk/policies/pols/Maternity_Benefits_Policy.pdf [last accessed November 2010].

⁶⁷ S80G Employment Rights Act 1996

⁶⁸ See for example Ackers, H.L. (2007), 'Legislating for Equality: Working Hours and Progression in Science Careers'. *European Law Journal*; See also Buchinger, B., Gödle, D. and Gschwandtner, U. (2002). 'Berufskarrieren von Frauen und Männern an Österreichs Universitäten. Eine sozialwissenschaftliche Studie über die Vereinbarkeit von Beruf und Privatem. Materialien zur Förderung von Frauen in der Wissenschaft'. Wien: Bundesministerium für Bildung, Wissenschaft und Kultur.

'The UK research councils recommend that research organisations treat their PhD students in the same way as they treat employees with respect to maternity leave and pay'.⁶⁹

Whether they actually do so, is a matter for the individual institution. Those institutions popular with our respondents did not provide any general information on their websites about the sort of provisions they would make, although most did confirm the regulations applicable to research council funded students allowing candidates a 6 months fully paid extension of their grant as well as a 6 months unpaid suspension.⁷⁰

Parents, whether employees or students, who have brought their children with them to the UK and are ordinarily resident in the UK are entitled to claim child benefit of £20.30 per week for the first child and £13.40 per week for any other children. In addition parents can claim Child Tax Credits and receive help with child care costs.

All three and four year old children are entitled to 12.5 hours of free early education for 38 weeks of the year. This can take place in nurseries, playgroups, preschools or at their childminders.⁷¹ For any additional child care quite substantial fees may be payable although many universities provide subsidised nurseries or other child care facilities which are available to both staff and students.⁷² They do not always however offer any real benefit as Rada highlights:

We cannot get any benefits because we are out of Europe so we have to support ourselves with scholarships. I asked about child care and if they could help me with the nursery but there is nothing.

Did you not think about using the university nursery then?

Yes but what's the point if the price is the same.

⁶⁹ Times Higher Education (2007) 'Ask the Panel'. 27th August 2007 [online] available at <http://www.timeshighereducation.co.uk/story.asp?storyCode=310269§ioncode=26> [last accessed November 2010].

⁷⁰ See for example Cambridge University in relation to ESRC scholarships <http://www.admin.cam.ac.uk/offices/gradstud/funding/esrc/allowance.html> [last accessed November 2010].

⁷¹ See <http://www.direct.gov.uk> [last accessed November 2010].

⁷² See for example <http://www.admin.cam.ac.uk/offices/hr/staff/benefits/family.html#childcare> , <http://www3.imperial.ac.uk/employment/JOIN/benefits> or <http://www.ed.ac.uk/studying/undergraduate/facilities/childcare> [last accessed November 2010].

More generous provisions in Germany?

The German framework is rather different. Expectant and new mothers must take a total of 14 weeks maternity leave which is split into 6 weeks pre birth and 8 weeks post birth.⁷³ During this time they receive statutory maternity pay from the health insurance provider and employer.⁷⁴ Parental leave may then be taken by either parent for up to 3 years. This leave is unpaid but the parent participating may work part time and their original position must be kept open for them.⁷⁵ Parents can also receive an allowance assessed at 67% of the net income of the mother or father up to a maximum of €1800 per month. This so-called *Elterngeld* is usually paid for a period of up to 14 months.⁷⁶ In addition child benefit is payable for children aged 18 and under at a rate of 184 Euros per child.⁷⁷ The importance of family friendly policies and provisions, at least for some is highlighted by Alexander's comments below. He had secured a move from Germany to the UK but then found himself having to go back on his plans and return to Germany:

'Yet, the major reason (or at least catalyst) for our decision [to return to Germany] was the financial shock that stunned me from the day I set foot in England. Since my wife is expecting a child, we would all have had to rely on my salary for at least the next year. Although we pay as much national insurance and tax as any British person of similar income (in fact more tax, because we are not entitled to any tax credits, such as working tax credit or council tax benefit), we do not have the right to any social benefits, including any form of child support, such as child benefit or child tax credit. On top of that, the prices of nurseries in Oxford are simply obscene, with an average nursery costing around 5-6 times the price of an average nursery in Munich'

⁷³ Mutterschutzgesetz in der Fassung der Bekanntmachung vom 20. Juni 2002 (BGBl. I S. 2318), das zuletzt durch Artikel 14 des Gesetzes vom 17. März 2009 (BGBl. I S. 550) geändert worden ist at paragraphs 3 and 6

⁷⁴ Ibid paragraph 13

⁷⁵ Bundeselterngeld- und Elternzeitgesetz vom 5. Dezember 2006 (BGBl. I S. 2748), das zuletzt durch Artikel 10 des Gesetzes vom 28. März 2009 (BGBl. I S. 634) geändert worden ist part 2

⁷⁶ Ibid part 1

⁷⁷ See Bundesagentur für Arbeit http://www.arbeitsagentur.de/nn_26546/zentraler-Content/A09-Kindergeld/A091-steuerrechtliche-Leistungen/Allgemein/Dauer-und-Hoehe.html

Dual science career couples

Commentators have previously written about the issues concerning dual science career couples and the impact on both family life and career progression.⁷⁸ It is notorious that partnering can be difficult for scientists and the already complex dynamics of such relationships are further complicated if both partners are pursuing a scientific career.⁷⁹ Since mobility is an important and expected part of that career, it is not unusual for partners to move to different destinations and become mobile at different times. Many dual science career couples try to minimise the time spent apart by managing this mobility so that one partner follows the other to a particular destination.⁸⁰

Only in the rarest of cases do both partners move together to positions they have secured initially.⁸¹ More often one partner will move with the partner who has secured a position and will subsequently try to find something once in the host country. More often still, especially at doctoral level, the partner is already in the host country, either a national of that country or through mobility, and the partner trailing joins them in the host country.

There are examples of both women and men moving as tied movers in order to be with their partners. Ivaylo came to the UK to be with his wife Svetlana, who had previously moved to the UK; Krystyna's husband gave up a good job in industry in Poland to be with her:

'I really appreciate my husband decided to follow me because he had good work and he was an important person and a big office and he had his own secretary and he gave up everything'.

After working in a warehouse for over a year Krystyna's husband eventually managed to gain employment in the same company as her. In Irina's case, she came to the UK on her own initially and found it so difficult that she had already decided to return:

'When I started I came here on my own and the first year was very difficult because I didn't have my family here because we didn't have funding. ... And then I decided at the end of the first year to go back to Bulgaria because I

⁷⁸ Ackers, H.L (2004) op cit note 5. McNeil, L. and Sher, M. (1999). 'Dual Science Career Couples: Survey Results'. Available at www.physic.wm.edu [Last Accessed June 2010]; von Ruschkowski, E. (2003). 'Raising Awareness' *Science Careers* 7 March 2003.

⁷⁹ Rusconi, A. and Solga, H. (2002), 'Auswertung der Befragung deutscher Hochschulen zur Verflechtung von beruflichen Karrieren in Akademikerpartnerschaften', *Junge Akademie*

⁸⁰ Wilson (1999) op cit note 5.

⁸¹ See Roseneil, S. (2006). 'On not living with a partner: unpicking coupledness and cohabitation.' *Sociological Research Online* 11(3)

didn't think I could survive. Then my husband decided to come and join me and he is also a programmer and he found a job and then the kids came over too'.

While her partner's move did not trigger her mobility initially, it did cause Irina to stay in the UK and complete her doctorate there.

'When I decided to go back to Bulgaria he decided to try [to come to the UK]. He realised how serious I was. It was very difficult for me. I was here; my son didn't want to talk to me the first year. He wouldn't talk to me on the phone...I was working til 12 or 1 in the night, I would take the women's bus to go back to my residence and then work until exhaustion because I couldn't sleep. Anyway, I'm glad that it all worked but it was very difficult. I didn't think in the end it was justified. I mean I really enjoyed my research and I excelled a lot in my research but nevertheless the family was important and not being able to talk and not being able to see your family because I did not have funding was really very difficult.

Had her husband not been able or willing to join Irina, she would have returned to Bulgaria to be with her family, so her husband's move had an enormous impact on the future of her career and allowed her to stay at the institution following her doctorate. She now has a lectureship at that institution.

In contrast to Krystyna's case above, in which her husband left a good job in Bulgaria to join her and initially struggled to secure work, the data suggests that the tied movers in the partnership may equally be moving to further their own career.⁸² The fact that the partner has moved provides the necessary impetus to make mobility happen or may at least influence the destination. Maria is a case in point. She seems to have used her husband's mobility to the USA as part of his job for a mobile phone company to try and further her career and gain some research experience. When asked about why she had chosen to go to the US, she explained:

⁸² There is therefore no evidence in this thesis of the so called brain waste referred to by some commentators in relation to trailing movers. See for example: Iredale, R. (1999). 'The need to import skilled personnel: factors favouring and hindering its international mobility'. *International Migration* 37 (1), 89 -111. Mahroum, S. (2001) Europe and the Immigration of Highly Skilled Labour', 39(5) *International Migration* pp27-42. Kofman, E. (2002). 'The invisibility of skilled female migrants and gender relations in studies of skilled migration in Europe'. *International Journal of Population Geography* 6 (1), 45-59. Sretenova, N. (2003). 'Scientific Mobility and Brain Drain issues in the higher education sector in Bulgaria'. CSLPE Research Report 2. University of Leeds. Okolski, M. (2006). 'Costs and Benefits of migration for Central European Countries'. CMR Working Paper No 7/65. Warsaw, Poland.

'It was because my husband got work in the USA for 1 year and I didn't want to stay here alone and I was told here by one person that somebody needs a researcher at the university and so I decided I would go'.

Maria conveyed a clear sense that had she not had an opportunity in the USA herself she would not have gone just to accompany her husband. While she makes it clear that she didn't want to stay at home alone, she also made it clear that she went because she found a position as a researcher for that year. Sylwia's case is similar, although she intends to leave Poland partly because her institute requires her to do so after completion of her doctorate. Her specific destination at least seems to be determined by her partner's mobility:

'Well actually I'm sure I will not stay here because I will defend my PhD in October I think and then in November I would like to go to Germany to Berlin and this is a personal decision because my boyfriend has been in Berlin for 3 years now and he's making a PhD there. There is 1 more year for him to finish it so I decided to move but the other reason is I won't have a position for some time here in the institute; I don't know maybe for a year I'll find a place for a post-doc'.

It is interesting that she conceptualises the decision as a personal one although it is clear that she has thought about mobility independently of joining her partner and is very focused on furthering her own career. While his mobility might not be the trigger for her wanting to move from Poland, it does seem to be determining the destination of her next move and might also determine whether she stays in Germany or moves again after that.⁸³ When asked what will happen when her boyfriend finishes his doctorate Sylwia replies

'It depends if I got a position there we will stay so he will be looking for another job, and if nothing interesting will happen then we will go somewhere else, maybe England'.

In the example below Violeta also articulates her decision to leave Bulgaria as being for personal reason rather than as a career move even though her experience indicates that furthering her own career was as much a consideration in moving abroad as being with her husband. She completed her diploma in Bulgaria and worked for a government agency for

⁸³ Haug's analysis of Bulgarian migration potential suggests that family and friends can significantly influence migration intention and destination choices. See Haug, S. (2005). 'Migration and Migration Potential in Bulgaria and Romania'. Paper presented at the International Conference on New Patterns of East-West Migration in Europe, Hamburg, Germany: 18th November.

the environment. Her boyfriend went to Germany to carry out his diploma work as part of a collaboration between a Bulgarian and German institution. After they had spent a year apart Violeta decided to look for a doctoral position abroad and join him while he finished his diploma. She explains:

'the reason coming to Germany was personal because my boyfriend was doing his diploma work here and also because I wanted to have a little bit more experience abroad... for me I wanted this for him, he wanted this and I thought it was also a good possibility for my career to be also I wanted to have some work abroad. I think it was a good choice'.

Violeta's partner then also started his PhD in Germany. At the time of the interview Violeta had just completed hers and was working part time as a postdoc after having her first child. Her partner was in the final stages of his doctorate and Violeta explained that she did not want to look for a full time position quite yet because they wanted to ensure that they could find positions in the same place.

'Now we are in the same position like before because we have finished or nearly our PhD work and we have to choose and look for another job again. But when you are a little bit more qualified it is a little bit more difficult it's not like looking for PhD. You have to look for few places and it's more difficult.... That's also why I don't want to move myself. Maybe we can do it together because he's a Physicists and I'm a chemist so both of us we have to work in science'.

This situation of overlap which is likely to occur in Sylwia's case above and which Violeta describes here is not unusual. Margarita's experience shows how this kind of overlap can influence future mobility and determine destinations of future moves. Margarita is an ambitious postdoc in Germany and met her English husband who is also a scientist at a conference in Turkey. I asked her to tell me about her decision to stay at the institute where she had completed her doctorate for a postdoc:

'Well I was playing with the idea of oh well I can go to Italy, they've been asking me. I could go to Italy or to France as well or try a Marie Curie for England or something like that [...]My professor asked me if I would like to stay here ... so I said this to my husband; [...]. He said okay I will try to do something that I'm going to come closer, so he succeeded to come closer and for us it was [...] of course fantastic because I can do what I want to do, he's doing his stuff as well what he wants to do and we can be together and he much much prefers

working here in Berlin. Not only because of me, he was really very happy to work with our professor and he knew him before that'.

I then asked her what she would do at the end of her current contract: "Physics of course,[...] We were thinking probably even to go to England for some time or go to Italy or go to Canada; I really don't know exactly". What is quite clear though is that it will be a joint move that allows both Margarita and her husband to build a life together. She is confident that they will be able to organise their current work and contracts effectively to allow them to then move at the same time. Their choice of destination will then be shaped by where they are able to secure positions together

Margarita's case is an interesting one because it highlights how important family life and the mobility of a partner are, even to an extremely ambitious and focused young scientist. Throughout the interview she makes it clear that her passion is science and she is always driven to be the best in her field. At the same time she is clearly in tune with the importance of her family life and the need to be close to her partner as well as with the demands placed on them both as a dual science career couple. Her husband's moves also seem to have been made primarily to be with her but at the same time have benefited his career as well. While so far he has been the trailing partner, her mobility and choice of destination are now inextricably linked to his mobility and choice of destination.⁸⁴

Ludwika's situation shows even more clearly this dimension of the overlapping of positions in dual science career couples and the way such overlap can reverse or entangle the roles of lead and tied mover. She met her Dutch husband while doing an MA at the international university in Budapest but then took an opportunity to come to Germany partly, she said, to be nearer to her boyfriend in the Netherlands. He then also came to Germany and they now intend to return to Poland when he has finished his doctorate. She has just completed hers and intends to work at a Polish research institute or consulting company in her field. He will accompany her as a tied mover and she is cautiously optimistic that opportunities for him exist in her home country. In this case, Ludwika's initial move to Germany for her doctorate was partly triggered by her partner's location. His move to Germany was in turn influenced by her being there and his move to Poland will certainly be triggered by

⁸⁴ This example and other in this chapter support the literature which has recognised the importance of family links and has called for further exploration of these issues. See for example: Bailey, A.J. and Boyle, P. (2004), 'Untying and Retying Family Migration in the New Europe', Journal of Ethnic and Migration Studies 30:2, 229-241. Smith, D.P. (2004). 'An 'Untied' Research Agenda for Family Migration: loosening the 'shackles' of the past'. Journal of Ethnic and Migration Studies 30 (2), 263 - 282.

Ludwika's move home as it is unlikely that he would otherwise have moved to Poland. While his mobility was not necessarily set in motion by her being mobile, his current host country was chosen because Ludwika was there and his next destination could well be determined by her return move. However, future mobility on her part is also very much linked to his career and whether or not he will be able to find work in Poland.

'I would prefer to go back to Poland and settle down there but if because also of my husband if we have problems especially if he has problems finding a job then maybe we will consider going to the Netherlands also'.

As Margarita's and Ludwika's circumstances highlight, the dynamics of moving and determining destinations are slightly different when the couples are not only dual career but also dual nationality couples, for example if one is a national of the host country. For example, after finishing her diploma Alina married her Scottish partner and moved to Scotland, where she completed her doctorate. Julita similarly returned to Germany in order to be with her German boyfriend, whom she had previously met during her stay there as part of an Erasmus exchange. While she says she was sure she wanted to go abroad for her PhD, her destination was shaped by her relationship with her German partner. In situations where dual career couples meet in a mutual host country there is a real possibility that a move to either one or the other of the home countries will result in one partner following the other as a tied mover - in Ludwika's case, for example, back to Poland ; in Margarita's possibly from Germany to the UK.

What all the examples given in this section highlight is that the mobility of a partner is a very complex but powerful factor in triggering mobility.⁸⁵ Scientists try to organize their mobility as best they can in order to maintain family life and minimise the time spent working in different countries from their partners. A partner's career opportunities abroad can trigger an accompanying or joining move by the scientist just as the partner's willingness and ability to move from their home country to support a scientist emotionally and socially can have an enormous influence on the scientists' mobility. What is striking in the MOBEX2 data is how the notion that there must be a tied mover who follows their partner from position to position, forsaking a successful career of their own and not progressing as fast as they might have done otherwise (or not at all) fails, at least for the younger generation of scientists, to fit the facts. Instead a picture emerges of support for each other's careers and the fitting of two careers into a joint life. For these dual career

⁸⁵ See Dickmann, M., Doherty, N and Brewster, C. (2006). 'Why do they go? [Paper to the Academy of Management Annual Meeting](#), Atlanta, USA, 11-16 August.

couples in the true sense of the phrase, the first move by one partner might act as a trigger for the other one to become mobile, but following that initial move it is often impossible to disentangle whose next move triggers whose and the mobility of one of the partners can no longer be looked at in isolation but must be examined in the context of the couple's aims and plans and also of their respective opportunities.

Policy has struggled with this concept. As seen at the beginning of the chapter, EU free movement law recognises the importance of family in the context of migration and thus provides for family members to join the primary migrant.⁸⁶ However, while allowing dual career couples to reside and work in another Member State even if one of the partners is a 3rd country national, it hardly helps them to secure positions in the same location or even country. The problem has however been recognised in the scientific community and increasingly institutions are realising that they must address the issue of dual careers if they want to recruit and retain successful scientists. Institutions in the US for example have set up dual career offices to offer support to the partners of those being recruited and some even have policies in place to allow them to offer suitable positions to accompanying partners. Similar initiatives can now also be found in Europe. One example is the Technical University in Munich, which has set up a dual career office which offers advice and support to the partners of the university's (future) employees. The help varies from giving advice on potential employers to more actively matching the accompanying partners with suitable positions at the own institutions or others in the region. Mostly however this sort of service is only available for top-level researchers although '*at places like the University of Konstanz it is also offered to mid-level scientists.*'⁸⁷ This sort of initiative has not yet filtered down to doctoral level, where solutions are still very much left to the individuals concerned.

Conclusions

This chapter has considered some of the family issues raised in relation to doctoral mobility. Firstly we have considered the rights of family members joining doctoral candidates in their chosen host state. The EU law rights are dependent on the status of the doctoral candidates with workers being afforded more extensive rights for their family members than students. In addition those who are employees also have access to more

⁸⁶Thus addressing Cooke's 2001 notion of ubiquitous careers facilitating partnered mobility when legal barriers restrict spousal employment. Cooke, T. J. (2001). 'Trailing Wife or trailing mother? The effect of parental status on the relationship between family migration and the labour market participation of married women'. *Environment and Planning A* 33(3) 419 -430.

⁸⁷ Jenner, J (2009), 'Focus on Research: Dual Career Couples'. *Academics.com* [online] available at http://www.academics.com/science/focus_on_research_dual_career_couples_36593.html [last accessed November 2010].

extensive and generous family rights such as maternity leave and pay and forms of parental leave, whereas students must rely on the provisions put in place by their individual institutions. This may in part be due to a different way of thinking about doctoral research. Where doctoral candidates are seen as making a significant contribution to science and their discipline and the research they are carrying out is valued as genuine work it is not too difficult to argue that they should receive a certain level of employment (or employment type) protection and should be encouraged to combine their professional life with family life. Seeing them as students on the other hand puts them in the same category as undergraduate students and reinforces the view that they are typically relatively footloose and without family or caring responsibility. It is therefore easier to argue that employment style family rights need not apply to them; after all they can easily suspend their studies and return to them at a later date or they can decide to study part time. However, for many doctoral candidates neither of these options is realistic unless their funding includes maternity leave and pay provisions and the institution is supportive of a suspension of studies. Students are also in a much more vulnerable position because they are reliant on current policy and practice and institutions are under no legal obligation to provide family rights.

The situation in relation to family rights and child care may be exacerbated where both parents are scientists but even where there are no children dual science career couples face the problem of fitting two careers, two lives and probably two mobility histories together. Even where legal provisions facilitate the rights of entry and residence for both partners, they do little to help scientists find work in the same region. The dual body problem has received attention from within the science community but the help available is not generally aimed at the junior level and therefore is not usually available to doctoral candidates.

The area of family rights discussed in this chapter suggest that doctoral candidates' experience can vary enormously depending on the national context in which they find themselves. This does not make sense in the context of the ERA or EHEA. In order to encourage mobility and help scientists make the most of their careers, there is a strong argument for providing a floor of rights which all doctoral candidates can access. If doctoral candidates are seen as a distinct group of scientists and are dealt with as such in policy terms, policies across Member States could directly address the questions of family rights including parental rights and other support to care for dependants. In addition, treating doctoral candidates as a distinct group of EU citizens would clarify who can derive rights

from their status as EU citizen. Rather than being seen as EU migrant workers or students, seeing doctoral candidates as EU migrant doctoral candidates, and thus as citizens who should benefit from the most generous rights because of their status as key actors in the EHEA and ERA would avoid the potential confusion over rights in this area.

Chapter 8: Exchange and Mobility Schemes and Networks: The importance of being part of the scientific community

Chapter 3 explored the policy context in which doctoral mobility takes place and highlighted that human resources and their mobility underpin the rationale of both the ERA and EHEA. It also noted that neither policy framework fully addresses the needs of doctoral researchers as a distinct group of mobile scientists and EU citizens. This chapter builds on previous discussions; especially those in Chapter 3, by considering the role played by formal and informal networks and mobility schemes in facilitating and shaping mobility at doctoral level. It acknowledges that specific schemes and programmes in the science sector provide an additional framework, or at least an additional layer within the overall framework, shaping mobility at doctoral level but because of the unique nature of the scientific community, it acts as a sort of ‘bubble’ within which doctoral candidates negotiate the wider mobility and migration issues. Once access to the bubble has been negotiated, it is argued, the legal framework outside the bubble becomes less important. This may go some way to explaining the lack of engagement by our respondents with some of the legal provisions discussed previously.

Increasing mobility is one of the key aims of both the ERA and the EHEA. The EU attempts to facilitate the mobility of scientists at all levels through the Marie Curie Actions under what is now the Seventh Framework Programme as well as through other exchange schemes such as TEMPUS.¹ At national level, the provision of fellowship schemes specifically aimed at facilitating mobility varies enormously. In the UK there are very few such opportunities and almost none at doctoral level whereas in Germany there is a plethora of schemes. This chapter therefore begins by considering such schemes. Having considered these formal networks and the respondents’ experience of them, the chapter moves on to consider less formal networks by firstly looking at collaborations and then more personal scientific networks. The aim here is to assess the extent to which the formal and informal networks are important factors in the mobility of doctoral candidates and how they shape engagement with policy and legal frameworks.

¹ TEMPUS - Trans-European Mobility Programme for University Studies

The DFG Research Training Groups and the International Max Planck Research Schools

In chapter 4 we considered the situation of doctoral candidates moving as EU migrant workers to Germany. We have noted the plethora of opportunities available and examined the EU migrant status doctoral candidates in Germany are likely to have. In this section we initially return to a consideration of the German context by looking at two particular schemes aimed at supporting junior researchers and facilitating international mobility. The first is the DFG's Research Training Group scheme, which is directed at doctoral candidates generally but aims to recruit a significant number of international candidates, and the second scheme is the International Research Schools set up by the Max Planck Society which has a more explicitly international outlook.

The DFG is a central, self-governing research funding organisation in Germany. It promotes research at universities and other publicly financed research institutions. One of its core aims is to support junior researchers and scientists and to that end it introduced *Graduiertenkollegs* (Research Training Groups) (RTGs) in 1990.² The concept of an RTG is straightforward: it is a

'university graduate training programme established at a centre of scientific excellence in a specific field. It is designed for 15-25 PhD students by 8-15 faculty members at a single university or, in a few cases, a small group of neighbouring universities'.³

Doctoral candidates work in a very structured research and study environment and aim to complete their thesis in no more than 3 years. In addition to their standard RTGs, the DFG also funds around 40 International RTGs which provide opportunities for joint doctoral training programmes between German universities and universities abroad, allowing doctoral candidates to complete a six-month research stay at the respective partner institution. We will consider these types of joint doctorates further below. Currently the

² For more information and for specific details on the RTGs see http://www.dfg.de/en/research_funding/programmes/coordinated_programmes/research_training_groups/index.html where a list of all the RTGs is also available. [last accessed June 2010].

³ *ibid*

DFG funds a total of around 270 RTGs with approximately 6000 doctoral candidates of which nearly 30% are from abroad.⁴

Once an RTG has been set up, doctoral candidates recruited to it are governed by the group's own framework and regulations. The RTG is responsible for advertising vacant positions and stipulating their entry requirements and terms and conditions of the position. My respondent Georgi had experience of one of the RTGs and explained how this worked from his perspective:

'At the moment I have a scholarship [...] This is a Graduiertenkolleg scholarship and this is organised by the German Research Foundation the DFG.[...]I'm not really aware how this is organised on the higher level[...].The scholarship has a certain area of research and you apply for the scholarship'

The DFG does stipulate the status of doctoral candidates undertaking their research in RTGs. The RTG guidance document suggests that in most cases doctoral candidates receive a stipend and that this does not constitute an employment contract.⁵ As an example, Marcin told me: *'Yes like a fellowship, I don't know, in German: Deutsche Forschungsgemeinschaft and this was a contract for 2 years and this was for a PhD student'*. The stipend therefore does not count as a taxable wage or salary⁶ and the RTGs are thus not responsible for social security contributions. The stipend is paid tax-free, and so provides additional income compared to a salary, from which deduction would be made.⁷ Candidates are then responsible for their own health insurance, pension and any other social security insurance they consider necessary. The DFG further recommends that supervisors and candidates regulate their relationship through a supervision contract and give comprehensive guidance on what should be included in such an agreement.⁸ The doctoral candidates here are not conceptualised as students; in fact they are referred to as self-employed: *'Recipients of stipends are self-employed as defined in § 18*

⁴ Deutsche Forschungsgemeinschaft (DFG) [German Research Foundation] (2010), 'Jahresberichte' online available at http://www.dfg.de/dfg_profil/jahresbericht/index.html [last accessed December 2010].

⁵ DFG 'Verwendungsrichtlinien Graduiertenkollegs mit Regeln guter wissenschaftlicher Praxis' available at http://www.dfg.de/download/formulare/2_22/2_22.pdf [own translation] [last accessed June 2010].

⁶ *ibid*

⁷ *ibid*

⁸ *ibid*

Einkommensteuergesetz [Income Tax Law].⁹ This potentially introduces a further EU migrant status which we have not previously considered: The doctoral candidate as a self-employed EU citizen established in another EU Member State. However the EU definition of self-employment excludes work which is done in a relationship of subordination for payment and where the risk is not borne by the service provider. This position was noted in Trojani¹⁰

'The freedom of establishment provided for in Articles [49TFEU] to [54TFEU] includes only the right to take up and pursue all types of self-employed activity, to set up and manage undertakings, and to set up agencies, branches or subsidiaries... Paid activities are therefore excluded'¹¹

A doctoral candidate is not a business owner and defining the candidate as offering their services to the particular RTG also stretches the definition somewhat. Doctoral research in this context falls within the category of paid activity. The stipend level is set by the RTG and, as will be seen below, the RTG can also make provisions for benefits relating to maternity and child care. It is therefore best to consider doctoral candidates self-employed for the purpose of German taxation and social security law but acknowledge that for EU migrant purposes they fall within the definition of worker because they are carrying out genuine and effective work under the direction of an 'employer' and are receiving remuneration in return. This approach is consistent with EU law and was explicitly acknowledged in Trojani:

'Moreover, neither the sui generis nature of the employment relationship under national law, nor the level of productivity of the person concerned, the origin of the funds from which the remuneration is paid or the limited amount of the remuneration can have any consequence in regard to whether or not the person is a worker for the purposes of Community law.'¹²

Although German law therefore treats the recipients of DFG scholarships as self-employed for tax and insurance purposes, the EU definition of self-employment does not apply to them and can be disregarded here. This is perhaps another example of how difficult it can be to create a definitional category of doctoral candidates which covers all situations in which doctoral research takes place.

⁹ *ibid*

¹⁰ Case C-456/02 Trojani [2004] ECR I-7573

¹¹ *ibid* at paragraph 27

¹² *ibid* at paragraph 16

The DFG further makes provisions for RTGs to use funds allocated to stipends to offer employment contracts in certain disciplines and under certain circumstances. The guidance notes indicate that RTGs in areas of Engineering, IT, physics, chemistry and mathematics which can prove that they are unable to recruit sufficiently highly qualified doctoral candidates by offering stipends can instead offer employment contracts.¹³ The contractual terms would then be based on the relevant collective agreement in operation at the institution in question¹⁴ and the University supporting the RTG would be the doctoral candidates' employer. This provision is interesting because it suggests that the employment status is more attractive to potential doctoral candidates than the offer of a stipend. It also presumes that doctoral candidates are motivated by status to take particular positions but this is not necessarily the case although as Sylwia, who deliberately chose a university position over a Max Planck fellowship, highlights, it is important for some.¹⁵

'The Max Planck has a policy that they hire foreigners for fellowships which is ok, you do not have to pay taxes. It's theoretically more money, but you don't have any health insurance or retirement benefit or anything. I thought that if I am already working for 3 years and I know that Poland and Germany have an agreement that if I start to work here I can transfer the money for my retirement, it would be better. The university hires people as staff so I get everything but I pay the taxes and have health insurance but at the end it is the same money. This for me is also important'.

In the previous chapter we have noted the importance of family related rights and provisions and the difficulties some doctoral candidates face in relation to family issues. In response to some of these difficulties it seems that the DFG has tried to address family issues, especially those relating to maternity and child care provisions within their framework for the RTGs. The DFG stipulates that doctoral candidates who have at least one child under 12 living with them can increase the maximum duration of the stipend by 12 months. Alternatively the candidates can choose to receive additional monies to pay for child-care costs to allow them to arrange for child care rather than taking on that responsibility themselves. Provisions are also made for maternity leave and pay.

¹³ DFG op cit note 5.

¹⁴ For more detail regarding collective agreements see chapter 5.

¹⁵ Doctoral candidates' motivations for international mobility and choice of host country were considered in greater detail in chapter 1.

The discussions above highlight clearly that in the RTG scheme, doctoral candidates are not thought of as students but rather as researchers making a genuine contribution to science and that they are recognised as a distinct group of researchers whose needs must be addressed as such. Interestingly, in the other scheme to be considered here reference is explicitly made to doctoral **students** in spite of actually providing a framework where the doctoral candidates are less like students than in most other contexts. The International Max Planck Research Schools (IMPRS) are set up by the Max Planck society to allow junior scientists to work towards their doctorate immersed in a scientific context. The society does not have degree awarding powers so doctoral candidates have a choice of registering to submit their thesis and undertake the oral examination either at an institution of higher education in their home country or in Germany. At the MPG the doctoral candidates are junior researchers in their own right. The IMPRS were launched in 1999 to promote junior scientists and focus particularly on international cooperation with the aim of attracting foreign students to Germany to pursue their doctoral research. Professor Blotevogel of the MPG for Marine Biology in Bremen comments 'We see internationality as a key to scientific innovation'¹⁶ and as a result 'a total of about 60 percent of places are assigned to foreign students.'¹⁷ There are currently 43 IMPRS in which 60 % of the approximately 1700 doctoral candidates are from abroad including 278 from Poland.¹⁸

The IMPRS thus have systems in place to ensure that they attract the best candidates for their available positions. They advertise them internationally and are experienced in dealing with the administrative issues candidates face. Bartosz for example explained that the administration and paperwork was all taken care of for him and the process of coming to Germany was made as easy as possible: '*All of the things which are connected with administration it is very good, Max Planck is prepared very well for this*'. Radka and Bozena echoed his sentiments, which are further highlighted in the *academics.com* feature which notes: '*Doctoral candidates are financially secure due to a monthly stipend of up to 1200*

¹⁶ Quoted in Schoenmakers , C, (2009) 'We Are More International Than Other Graduate Schools.' *Academics.com* June 2009 [online] http://www.academics.com/science/we_are_more_international_than_other_graduate_schools_36329.html [last accessed June 2010].

¹⁷ Schoenmakers , C. (2009) *ibid*

¹⁸ Max Planck Gesellschaft (MPG) (2005) 'Facts and Figures - the Max Planck Society' available online at <http://www.mpg.de/english/illustrationsDocumentation/documentation/otherPublications/index.html>

euros, and are helped with, among other things, finding a flat and applying for a visa'.¹⁹ While the legal framework which sets the immigration requirements and necessitates the paperwork that goes with moving from one country to another remains important in this situation, its importance is not felt by the doctoral candidates themselves. They simply fulfil the requirements of the position and react to information and requests from the IMPRS. The institutions thus act as a kind of proxy for dealing with the legal requirements and negotiating the hurdles. Doctoral candidates therefore need only negotiate access to the 'bubble' that is the scientific framework, because the scientific framework is aligned with the legal framework so as to meet the minimum requirements. The scientific framework goes even further and recognises the needs of scientists at doctoral level by providing help with finding accommodation and generally settling in. Respondents thus described the IMPRS as a 'family' which welcomes new researchers and helps them make the most of their stay abroad – at least in scientific terms:

'If you move a lot and if you come from abroad to a new country where you don't know the language and the lifestyle then it's a very positive situation to have the support of an institute. But it is also good for the institute because these people do not have time to integrate in the daily lives so I guess it's strategic. They work a lot.

I spend my whole time here and when I get the weekend I don't go out because I think where should I go and what should I do and I don't know anybody so it's better to go to the institute where I can meet some people. It behaves like a family'.²⁰

It is not, however all positive:

'It's interesting also that once you are in this institute you are part of a family which immediately doesn't count any more if you lose this position or you go out. For me it's false I have to say because everybody wants to support you and everybody behaves like your family but you have to be very competitive so you have to be the best out of everybody so it's difficult to be in a family and be competitive, it is based on illusions'.²¹

¹⁹ Schoenmakers, C. (2009) op cit note 16.

²⁰ Radka

²¹ Radka

The two schemes outlined above are examples of national schemes which have tried to directly address the needs of doctoral candidates generally and have also given some thought to the needs of mobile candidates. They are programmes specifically aimed at doctoral candidates, which recognise their training needs without conceptualising them as students. As such the programmes are flexible enough to accommodate candidates who are at different points in their life course and thus have different needs in relation to family commitments and work-life balance questions. They further recognise that doctoral research does contribute significantly to the scientific discipline and that doctoral scientists are not only the pool for the recruitment of future researchers but that they are already researchers in their own right and should be treated as such. Neither scheme suggests that employment contracts for doctoral candidates are the usual method of engaging scientists at this level and both seem to prefer the fellowship option as the standard option but both, also acknowledge in the way they function that doctoral candidates are more than students.

While the two examples given concern national programmes, albeit with an international outlook, the European Union has its own mobility programme, which is specifically designed to facilitate international mobility of researchers. The Marie Curie Actions under the European Framework Programme (FP) for Research deal with the mobility of human resources under what is now FP7.²² As an EU programme, it is worth considering the actions relevant to doctoral candidates in more detail.

The Marie Curie Actions

The European Union Marie Curie Actions scheme has been successful in promoting the mobility of researchers and according to the Impact Assessment of the FP4 and FP5 framework, the UK, France and Germany are the 3 most popular destination choices of fellows.²³ Given the very large number of scientists who have been able to move abroad under this scheme, its effect cannot be underestimated; in fact 28% of fellows reported that they would not have gone abroad without the fellowship²⁴ and '*many former fellows*

²² For an analysis of a similar EU funded scheme see Ertl, H. and Phillips, D. (2006). 'Standardization in EU Education and Training Policy: Findings from a European Research Network'. *Comparative Education*, 42(1), 77-91.

²³ Van de Sande, D., Ackers, H.L. & Gill, B. (2005), 'Impact Assessment of the Marie Curie Fellowships Under the 4th and 5th Framework Programmes of Research and Technological Development of the EU (1994-2002)' Final Report, Brussels: European Commission.

²⁴ Ibid at page 7

reported continued high levels of mobility...'.²⁵ The Marie Curie programme also has one scheme with a particular focus on junior scientists. The Marie Curie Research Training Networks give young researchers pursuing doctoral studies the opportunity to receive training within high-level groups in their specialised area of research. The fellowships are available to doctoral candidates for a minimum duration of 3 months possibly extending to three academic years. Bartosz attended one such training site in Germany. He had heard about the institute and was looking for a possibility to spend some time there: 'After half a year I received the message that there is possibility because a new scholarship programme is starting and I was applying for this and it's why I am here'.

The Marie Curie scheme specifies the employment status of those taking advantage of the scheme. The regulations state: '*... as a general rule, researchers should be appointed under an employment contract, except in adequately documented cases (such as for short stays) or where national regulation would prohibit this possibility.*' Marie Curie doctoral candidates therefore should be employed by the host institution in both Germany and the UK. In Germany this is fairly uncontroversial given that it is not unusual for doctoral candidates to be employees of the university. In the UK however, it is unusual and as a result more controversial. However, there is nothing to prohibit the possibility in the national legal framework and therefore a doctoral candidate coming to the UK for doctoral research under the scheme can expect to be an employee. For some doctoral candidates this can be of significant importance as is illustrated by the following polish doctoral candidate who was doing her doctorate in the UK as part of a Marie Curie grant. She was able to go on maternity leave because she was given a fixed term employment contract. As a student she would not have been entitled to the leave.

The university doesn't really know what to do with Marie Curie people and that's where you have problems because they're not sure what to do actually about student but not student, staff but not staff - stuck in between.

INT: And did they give you an employment contract then?

Yes. That's, that is where it gave me lots of flexibility that also helped me. I can go for maternity for one year I mean in the UK normally but with payment it's of course a bit less - some weeks when they are not paid.

²⁵ *ibid* at page 10

INT: So if you had been set up as a PhD student as opposed to an employee you might have decided not to have a baby?

It would be much more difficult because I definitely I would like to have baby and family and I know that putting it later and later is never really proper moment for that.

Shorter Stays: A way to mitigate not having access to full rights?

So far the discussion has centred on doctoral candidates who move to another country to register for a doctorate and carry out their entire research abroad. However, there are many more doctoral candidates who move abroad for much shorter periods during their doctorate. The Marie Curie scheme encourages these short mobility episodes and also recognises that short term employment contracts of, says three months, may not be in anyone's best interest. There is therefore an exception to the usual rule of providing an employment contract. Fixed amount fellowships can be given instead. The regulations state: *'Fixed amount fellowships with minimum social security coverage are not employment contracts. [...] The beneficiary must ensure that minimum social security coverage has been provided to the researcher...'*²⁶ In a similar way to the fellowships provided at Max Planck Institutes for example, the fixed amount fellowship suggested here is not likely to invalidate the EU worker status of the fellowship holder. In fact where a doctoral candidate moves for a short duration on any sort of fellowship or scholarship, they are likely to be classed as workers rather than students because they are not enrolling on a course of study but are instead moving to carry out specific research.

The Marie Curie Scheme guidelines further note that

'As to maternity benefits it has to be noted that, even if such a category does not fall within the minimum required social security coverage requested, the Commission / the Research Executive Agency (REA) can decide, on request by

²⁶ ftp://ftp.cordis.europa.eu/pub/mariecurie-actions/docs/financial-guidelines-mc-v01--201006_en.pdf [last accessed June 2010]. The minimum social security coverage required for researchers recruited under a fixed-amount fellowship shall include some of the categories provided for in Council Regulation (EEC) No 1408/71 of 14 June 1971, which are: benefits in respect of accidents at work and occupational diseases and invalidity benefits.

the beneficiary, to augment the sum of the financial contribution of the Union as a consequence.²⁷

The Scheme therefore engages with the reality of doctoral scientists' situations by acknowledging that maternity rights can be important for them and by providing a minimum in social security.

The Marie Curie Scheme is not the only mobility scheme encouraging international mobility at doctoral level. Mobility schemes such as ERASMUS and TEMPUS also clearly play a part in getting students and researchers moving within Europe.²⁸ Schemes such as TEMPUS allowed a number of our respondents to spend time abroad during their career. Irina first came to the UK on a TEMPUS grant for 3 months and, after seeing the conditions of work and facilities, decided to apply for funding to complete her doctorate in the UK even though she had already started in Bulgaria:

'I managed to get in touch with somebody who was quite active internationally and I managed to start my PhD with her. She was involved in a TEMPUS project. The coordinator of this TEMPUS project was a professor from [UK institution], he's still there, and he realised that he needed to give chance to people from other universities not just Sofia [...] and he sort of picked some people and invited them to come to [UK institution]'.

For Irina TEMPUS was the sole instigator for her move to the UK. She had positioned herself in such a way as to be able to conduct research in Bulgaria and had decided to stay there. The TEMPUS grant changed that and she has remained in the UK since completing her doctorate a number of years ago. Irina had no clear mobility strategy but simply took the opportunity offered and let her career develop from there. We cannot know if Irina would have come to the UK without the TEMPUS grant and we do not know if she would have preferred to go elsewhere had she had more than one opportunity available to her. However, her initial TEMPUS grant gave her the necessary insight into conditions in the UK to make her want to return. This pattern of mobility leading to further mobility is common

²⁷ ftp://ftp.cordis.europa.eu/pub/mariecurie-actions/docs/financial-guidelines-mc-v01--201006_en.pdf [last accessed June 2010].

²⁸ They also have an impact on national higher education policies although according to Huisman and colleagues that impact is not significant across the board and certainly not as important in shaping national policies as the Bologna Process is. See Huisman, J. et al (2005). 'Explaining Domestic Responses to European Policies: The Impact of the Erasmus Programme on National Higher Education Policies' in Tight, M. *International Relations*. London: Elsevier

and something which has not been sufficiently recognised in the policy debate. We will return to this issue in the context of undergraduate mobility as a precursor to doctoral mobility below.

In the shorter term mobility facilitated through these programmes the legal issues discussed in the previous chapters are often less important.²⁹ The distinction between worker and student status is less important because other than the right of entry and short term residence the doctoral candidates are less likely to need to rely on their EU law rights. In addition questions of access to programmes, recognition of qualifications and family rights are unlikely to arise. A similar argument can be made in relation to joint doctoral programmes discussed below.

Joint Programmes

There has been increased activity in the EU as well as through the Bologna process to maximise co-operation in HE across Europe in recent years.³⁰ As part of this increased co-operation the number of joint international doctoral programmes has increased dramatically.³¹ Typically these joint degrees require the candidate to spend a specified amount of time at each of the awarding institutions. They allow the candidates to go abroad in a very structured and safe way much as they would at undergraduate level.³² Mobility in this sense relies on established co-operation between institutions and utilises existing mobility channels following a tried and tested path, or at least laying the foundations for such a path if the programme is in its infancy. The doctoral candidates also benefit from receiving an international qualification awarded by two (or possibly more) institutions in different countries. Joint programmes take care of the legal issues and help doctoral candidates on the programme with any immigration issues. There is however also something reminiscent of undergraduate studies in the organization of doctoral programmes. They are conceptualised in a similar way to undergraduate exchange programmes.

²⁹ This is perhaps counter intuitive and issues arising in this context have been explored in detail by Oxana Golyner in the context of partial migration in the EU: Golyner, O. (2006) *Ubiquitous Citizens of Europe: The Paradigm of Partial Migration*. Intersentia

³⁰ See also the websites of the European Universities' Association www.eua.be and the Bologna Process Secretariat at <http://www.dfes.gov.uk/bologna/>

³¹ Rauhvargers, A. (2002) Joint Degree Study, in Tauch, C. and Rauhvargers, A. Survey on Masters Degrees and Joint Degrees in Europe. Brussels: European University Association. Reichert and Tauch (2005), 'Trends IV: European Universities Implementing Bologna' Brussels: EUA. European Universities Association (2005), 'Doctoral Programmes for the European Knowledge Society', Brussels: EUA

³² The importance of undergraduate mobility as a trigger for later career related mobility is discussed further below

In addition to the joint doctoral programmes there is of course a host of international projects in all areas of science.³³ Many of these projects have linked doctoral positions and it is not unusual for those candidates to be given the opportunity to spend some time abroad in the partner institution. This type of mobility is slightly less predictable than that of a joint degree programme but also provides a relatively safe and risk-free way of spending time abroad. Doctoral candidates here are however seen more as part of the research team contributing to the project overall rather than as students taking part in a joint training programme. The joint doctoral degrees or doctoral positions on international projects can be specifically targeted by doctoral candidates who want to go abroad. Alternatively, candidates who opted for the particular programme or research group for other reasons can find themselves spending time abroad without ever having considered becoming mobile before.

Our data suggest that collaborations and joint programmes play an important part in shaping the mobility of scientists even at doctoral level and even where the candidate initially has had no intention of becoming mobile. Bronislaw, a senior scientist in Poland, has recognised the importance of mobility and of enabling young scientists to move. He is the co-ordinator of a Marie Curie Network in his field and has links with the UK, Sweden and Germany. Bronislaw is nearing retirement and now prefers to send younger members of his team abroad. At the other end of the career ladder, Krzysztof did a joint doctoral degree in Poland and France as he explains: *“Yes [it was] a joint programme so I had half time in Poland and half time in France”*. The joint programme was built on existing collaboration between his Polish supervisor and the French lab. It allowed Krzysztof to go to France and gain experience there without having to worry about losing his position in Poland. For Krzysztof moving abroad as part of the joint doctorate was the trigger for future mobility too, as he was later able to utilise contacts he had made there. His French supervisor passed him a business card of a research contact and while his initial attempt at securing a Marie Curie postdoctoral position was not successful, he did eventually secure funding to work with that contact in the UK. However, even as part of a joint degree where mobility and periods abroad are well defined and contained within the parameters of the doctorate, things do not always go to plan. While Krzysztof conveys a sense of purpose in his choice of a joint doctorate with France and the way in which he manages subsequent

³³ For example the annual reports of research institutes and funding bodies indicate the high level of international co-operation in both Germany and the UK.

mobility, Janina's story illustrates how events can take over and throw scientists' careers onto a path they had not previously considered. Janina had wanted to do a PhD in the lab where she had completed her diploma work and her supervisor was keen for her to do so but unfortunately all new PhD positions were cut and she could not offer Janina a place. Instead she recommended another lab in Poland and put her in touch with the Professor there. Janina was accepted to begin her PhD in that lab and described what happened just two weeks before she was due to start:

'then my supervisor calls me and he said 'Now we are going to have some kind of co-operation with this university [in Germany]', with the professor who is my supervisor here [...]. He said it would be good if you could go there. [...] I said okay why not but I cannot speak any German but within 2 weeks I was here'.

So Janina began working on her doctorate in Germany and when I asked her to explain more about how the collaboration and joint degree worked she told me how events had again taken over:

'I have got no connections in Poland now, I have a normal contract here [...] The point is that he [the Polish professor] died, he got cancer and he died so somehow I had the problem of should I go to Poland or not because I had got no contract there'.

Janina decided to stay in Germany where she was in the final stages of her doctorate had made plans to stay in Germany for a postdoc position. Janina's situation is perhaps rather extreme but it does illustrate that collaboration or a joint doctoral programme can trigger a move abroad for someone who was expecting to stay in their home country for their doctorate.

There are many examples throughout the data indicating that collaborations play an important role in shaping mobility. Moves to collaborators are also not unusual at doctoral or even lower level, as Tomasz' and Magdalena's experiences confirm. Tomasz, for example, was able to take advantage of a colleague's collaboration and visit the UK during his doctoral degree:

'Basically this was a colleague of mine right now is already not a physicist but a computer scientist and was a co-ordinator of the TEMPUS project and he had incredible knowledge. He was able to invite people from Germany, from France

and from the UK, actually 4 countries participated and he was a co-ordinator so it's quite prestigious'.

While Tomasz's mobility seems to have been left rather more to chance and is something which he was interested in but not actively pursuing, Magdalena explains how she was able to strategically pick a diploma thesis supervisor who would be able to offer her the opportunity to go abroad.

'I got to know people from the Bulgarian Academy of Sciences who came and presented topics to students so I picked one of those people [...] who was from the Bulgarian Academy of Sciences and [...] she became my Masters supervisor and she had this joint project with Germany funded by the Volkswagen Foundation. Using the money from that project I visited [a German] University [...]'.

Magdalena used her Masters work to her best advantage presenting her work at a conference where she met a Bulgarian PhD candidate who was based in the UK and who gave her details of a PhD scholarship for which she successfully applied. There are many such instances of mobility early on triggering a move at a later stage.

The formal collaborations discussed above often start out quite informally as contacts between individual scientists. These sorts of links can benefit doctoral scientists immensely. It seems that the environment in which a student or doctoral candidate works and the attitude to mobility in the immediate environment has an influence on how that scientists view mobility and what advantages and disadvantages they assign to it. Scientists who are immersed in an international environment or at least see their supervisors and more experienced colleagues go abroad for experiments, conference and research stays are more likely to themselves see the benefits and value of mobility. The supervisor plays a part in conveying a sense that mobility is simply a normal part of a scientific career and explaining to the young scientists what can be gained by spending time abroad. In slightly more concrete terms the supervisor can of course also actively direct his or her students abroad through joint degree programmes or joint projects as discussed above. He or she might also utilise existing contacts to enable doctoral candidates to go abroad for experiments and mobility channels may then develop.

In cases where this active facilitation is not possible, supervisors can nonetheless provide help with applications and information on good institutions, mobility and fellowship

schemes, other projects and life in other countries in so far as they have experience in these matters. Enabling doctoral candidates to go to conferences or short stays abroad also increases their chances of building up their own networks, which can turn into a valuable source of information about job or fellowship opportunities, application procedures and systems as well as life abroad generally. The early career scientists' own networks can also inspire confidence especially when they hear of other scientists at similar level moving abroad and can invoke an 'I can do it too' factor.

In some cases supervisors have no choice but to try to find places abroad for their doctoral candidates to conduct experiments as Yulian does

'Our system usually the student spends the 3 years here. Maybe you know at this moment scientific equipment is old. We have no possibilities to make science on a higher level and we use our contacts abroad for our PhD students spending some months or years abroad to make experiments. The problem is for example if my student goes to Germany it is difficult for him to work on my project, they want him to work on theirs. I must have strong and friendly contact to be able to phone and say I want my student to work in this area. But we have a possibility because at this moment the system is open'.

Yulian highlights how he can use his contacts to enable his doctoral candidates to spend some time in Germany to allow them to advance their work and learn techniques. In his case this is a necessity because the equipment and resources are not available at his institution. However, even where the equipment is better than that and labs are better resourced, this kind of mobility facilitated directly by a supervisor is not unusual. Our data suggests that at doctoral level as well as throughout the career trajectory, research stays for experiments or to learn new techniques are not uncommon and often facilitated by more senior scientists such as group leaders or supervisors.

Yulian also touches upon a problem in sending doctoral candidates abroad in deciding what project the candidate should work on during his or her time at the host institution. This issue is avoided in the joint projects or degree programmes previously discussed. Another way of avoiding this issue is for doctoral candidates to go abroad for the entire doctorate and either carry out all the work there and write and submit the thesis at home or to register for the doctorate in the host country. The sort of situation described by Agata and Alicja is fairly common.³⁴ Their supervisors at undergraduate level had links with an

³⁴ Their experience is considered in a little more detail below in relation to undergraduate mobility

institution in Germany. While the collaboration that established that link might be finished, the contact remains and allows the professor in the home country to send undergraduate students to the host country where many of them then choose to remain for doctoral research. Drawing on these sorts of contacts is typical and plays an important part in scientific mobility. In Agata and Alicja's case a well established channel existed and it seems the undergraduate students who wanted to stay for doctorates could do so almost automatically. None of the doctoral candidates in that situation reported having to compete for their positions and it seems there were enough places for everyone who wanted to stay. It is of course not always as uncomplicated as that and supervisors do not always have ready-made positions for their doctoral candidates. Stanislaw suggested how a link allowing an early career scientist to spend time abroad might work and why networks play an important role here:

'if you write to someone who knows you and say I have a very good student, he's really good I guarantee and then he would believe in me because he knows me and it means more'.

As well as telling his doctoral candidates about positions his friends or colleagues might have available, Stanislaw can also support them by providing references and giving recommendations for them. He might not always have a solution ready for every candidate and there are perhaps fewer channels in the sense of a steady flow in his situation, but he does seem to be in a strong position to hear about opportunities and make recommendations to doctoral candidates and potential employers alike.

The benefits of having a well connected supervisor are often not as direct as the supervisor being able to match the doctoral candidate with available positions, as becomes clear when considering Lucjan and Margarita's stories. We asked Lucjan where he heard about his position in the UK

'It was my former supervisor who started in England in '89 or '90; it was '90 1 year before I graduated so basically in '91 to '95 I was still in touch with him. We collaborated in '92/'93 on two occasions, I came to Cambridge for holidays twice'.

He goes on to explain that, although there was a link, getting a position was still not easy

"No he didn't offer me a position, because obviously nobody has got the money but after the two visits I presented some work and basically I was told to apply for grant. I did quite a lot of research on grant giving bodies, I think

applied for 30-40 institutions and finally one of them gave me funding, which was a local Cambridge Overseas Trust? and in '95, I think in July, I learned that I should start in October.'

Lucjan had what seems to be a strong relationship with his supervisor and seems to have decided early on that he would like to spend some time working with that supervisor in the UK. While his initial desire to move is likely to have at least been influenced if not instigated by his supervisor, the link did more than that. Lucjan moved to the UK because his supervisor was there so the supervisor not only triggered his mobility but also determined the destination.

Margarita's story is similar, in that she had to apply for funding in order to take advantage of the opportunity to come to Germany. Although we have already heard some of her reasoning for coming to Germany, her experience highlights aptly the complexity and chance nature of networking and contacts as mobility triggers:

'The other reason was that there was a really excellent woman professor which became my supervisor [...] And then this lady which used to come in here all the time she actually knew my professor because they both were friends in Dubna; so she said that here [in Germany] they are looking for PhD students [...] and she said to my professor 'Since you have a good student probably it would be good for her to try'. This was a DAAD stipend so I had to apply of course; we have this opportunity to apply from Bulgaria. There are certain numbers of scholarships they give which there again is something like 15 or 20 places and at least 10 people for a place'.

While Margarita's supervisor had no direct link with the lab in Germany, her contact did and in turn suggested that she should apply for a fellowship to go there. Margarita later also explains that she was happy to go to this particular place in Germany because her Professor assured her it was a well known lab and that she had also heard of the work which was being done there. Margarita says that the friend of her Professor suggested that because she is a good student she should apply. This notion of putting forward the best candidates and the strong link between the quality of the doctoral candidate and the supervisor's reputation is highlighted by Stanislaw's comments above.

Our data suggest that in some cases the existing links between established scientists lead to requests for PhD candidates. In Michal's case his supervisor at undergraduate level had

links with a UK university and suggested that Michal should do his doctorate there. He explains

'my supervisor had spent some time in [the UK] and sent him an email to see if he had any students interested in applying to do the course but my supervisor had spent some time there and so they met when he worked in [the UK] for quite a few years in the 1980s'.

Similarly Roman was recruited for a doctorate at another UK institution with which his old supervisor had a link:

'Actually Professor X [from the UK] came to my University and asked for one person, my university chose me. I had an interview with Prof X and he decided to give me this PhD. [...] My old supervisor told me about the UK opportunity so I had an interview with Prof X'.

Roman was then asked if he had previously thought about doing a doctorate abroad and he said: *"Actually I wanted to be a computer scientist after completing my masters degree so I didn't think about going abroad even about studying PhD in Poland".* And what changed his mind? *"This offer. He asked me to come here and it's very good opportunity".* Roman is a very good example of supervisor networks triggering mobility where there was previously no intention to be mobile. In his case Roman was not even planning to do a PhD either at home or abroad but his supervisor's link with a UK institution resulted in an offer which Roman felt was so good that he decided to take it and leave his home country to pursue an altogether different career than he had first imagined.

The importance of supervisors in shaping the mobility of their supervisees is apparent from the discussion above. In spite of an increasing focus on transparency and quality control in doctoral supervision, partly at least brought about by the developments in the Bologna Process, supervisors remain crucial. Where they are internationally active and well connected, they are also likely to facilitate the mobility of doctoral candidates working with them. Where they are not, mobility is also much more difficult for the doctoral candidate. Even where the supervisor is not internationally mobile, their support and encouragement is an important factor and where they are unsupportive, doctoral candidates are far less likely to become mobile themselves. So while it is important to understand the importance of formal schemes and networks, the impact of individual personalities on mobility at this level should not be underestimated. Furthermore, in this context, which is focused mainly on shorter moves during the doctorate, it seems to make little difference whether the

doctoral candidate is a student or a worker. If the supervisor can offer or help facilitate opportunities for research abroad, the status of the candidate taking up the opportunities is less important because their mobility is transient and often very short term. They are thus far less likely to have to engage with some of the legal issues discussed previously. They are not accessing doctoral positions in a host country and are not likely to stay for long enough for family related issues to become an issue. They can be seen to be moving within the science community without needing to engage fully with the host state other than through the host institution.

Doctoral candidates' own networks

It is not always the case that mobility is precipitated by a supervisor or his or her networks. There are already some examples in earlier parts of this chapter of early career scientists beginning to build up their own networks and utilising their own contacts. Sometimes this boundary is blurred as independently made contacts later become supervisors such as in those cases where doctoral positions were gained through attendance at summer schools. Alternatively, contacts initially made through a supervisor may become part of the scientist's own network. We have already heard how Krystof went to France on a joint degree programme and there was given the business card of his supervisor's research contact in the UK. While that initial contact was facilitated by the supervisor in France, Krystof later maintained links with that contact and eventually successfully applied for funding to work with her. His situation is not unusual.

Apart from the benefit of hearing about opportunities or even receiving job offers through contacts, for many having contacts who either are abroad at the same time or have been there previously provides a kind of safety net. The idea that someone else is there with them or at least had successfully done the same thing before them can boost confidence and trigger the 'I can do it too factor' which sometimes is necessary to actually make a move happen. This seems to be the situation in cases such as Alicja's, discussed above, where established channels and flows exist. However, Hanna came to Germany for three months practical training under different circumstances. She started her doctorate in Poland while her friend Julita came to Germany. During conversations with Julita, Hanna began to realise how much more she would be able to achieve in Germany. Her Polish supervisor was not supportive of her going abroad so she sought to arrange a stay with Julita during her summer break. I asked Hanna why she came to Germany:

'Yes because of Julita. In fact she called me and I was complaining about my work and my professor and it is so hard to work with him and Julita said you can come here and it is a very nice group and I sent an email to the group leader and to try and come here. [...] I said I don't have enough money to pay for my stay because I only earn like 250 euro a month so it's not much. He proposed to pay for my stay'.

Hanna had firm plans to stay in Poland for her doctorate, and she said that she did not want to leave her home country and felt very attached to her home environment. Nonetheless the poor working conditions and difficult relationship with her own supervisor led her to start thinking about possibilities abroad. The fact that her friend had gone to Germany provided the necessary motivation for her to make the short stay happen. Hanna was lucky in that the German professor was able to fund her stay in Germany for three months as she would not otherwise have been able to afford the expense. In Hanna's case Julita's presence in Germany provided a safety net because she knew she would not be alone and that her friend would help her for the duration of her stay. Julita also gave Hanna the contact which triggered her move and which is now likely to trigger a more long term move to Germany. Hanna has decided to look for opportunities in Germany and the contact with the professor as well as with Julita seemed likely to bring her back to the same location.

In highly skilled migration, professional networks often play a greater role than family or cultural networks.³⁵ However, Rada's case is a clear example of scientists using personal networks to help their mobility experience. Rada came to the UK during her undergraduate degree and as I mentioned above, she applied for a PhD while here. However, her mother worked at the same institution in the UK and recommended the place to her. As well as Rada, her husband, cousin and her cousin's husband also moved to the UK and Rada's mother had also encouraged a number of other scientists to move there. Although she was not in a position to offer positions or even provide information about positions, she could provide social support, which was enough to trigger the mobility of Rada, her cousin's family as well as other friends from Bulgaria. As Rada says: *'Yes they expected that my mum will help them so they came'*. Interestingly of course in this case family and scientific

³⁵ Ackers, H.L. (2004), 'Managing relationships in peripatetic careers: scientific mobility in the European Union.', 27(3) *Women's Studies International Forum* 188-201. Ackers, H.L. (2004b), 'Citizenship, Migration and the Valuation of Care in the European Union', 30 (2) *Journal of Ethnic and Migration Studies*, Special Issue on Family and Migration in the New Europe. 373 – 396. Ackers, H.L. and Gill, B. (2008) 'Moving People and Knowledge' Cheltenham: Edward Elgar.

networks seem to overlap. There were no examples where mobility was facilitated by purely personal networks which had no link to scientific networks so as Boyd noted as long ago as 1989, in highly skilled migration family networks often 'fail to emerge'.³⁶

While these networks are less formalised and mobility therefore still requires more of an engagement with legal and administrative processes than for example moving to an RTG, having contacts in the host country makes that engagement easier and less daunting. Previous experience of mobility also increases confidence to become mobile again. Undergraduate mobility as a precursor to doctoral mobility is therefore discussed next.

The role of Undergraduate mobility in triggering later moves: demonstrating the real link

Increased student mobility within Europe and worldwide is commonly regarded as an important feature of the internationalisation of higher education.³⁷ Hadler points out that '*studies show that the experience of having had previous moves increases the chance of having additional moves in the future*'.³⁸ Ackers found that a high proportion of mobile scientists have some experience of mobility at undergraduate level³⁹ and King and Ruiz-Gelices found a higher propensity to move in the future amongst those students who had spent some time abroad previously.⁴⁰ According to Sussex Centre for Migration Research

'One distinctive factor with the mobile group, compared with the non-movers, is that there are many more who said they would like to travel after graduation, and perhaps settle abroad in the future. Many stressed the fact that their university mobility had been influential in this decision'.

Rarely though does undergraduate mobility form part of a wider plan to pursue a career or part of one abroad. Undergraduate mobility is something that is just part of a degree

³⁶ Boyd, M. (1989). 'Family and personal networks in international migration: recent developments and new agendas'. *International Migration Review* 23(3), 638-670 at page 655

³⁷ Brooks, R. and Waters, J. (2011) 'Student Mobilities, Migration and the Internationalization of Higher Education'. Basingstoke: Palgrave Macmillan;

³⁸ Hadler, M. (2006), 'Intentions to Migrate Within the European Union: a Challenge for Simple Economic Macro-Level Explanations', 8 (1) *European Societies* 111-140. At page 116)

³⁹ Ackers, H.L. (2001) 'The participation of women researchers in the TMR programme of the European Commission: An Evaluation', Brussels: European Commission (DG Research).

⁴⁰ King, R and Ruiz-Gelices, E. (2003), 'International Student Migration and the European 'Year Abroad': Effects on European Identity and Subsequent Migration Behaviour'. 9 *International Journal of Population Geography* 223 – 252

programme and which is offered to and taken up by an increasing number of students⁴¹. Undergraduate exchange programmes are a safe and structured way to spend some time abroad with all the benefits of mobility and international experience but without the risk of losing a position or missing opportunities at home. As such, undergraduate mobility is one example of the structured mobility programmes which can have a significant impact on mobility at PhD level.

Undergraduate mobility can precipitate later mobility in a number of ways and our data suggests that it plays an important role in doing so. Mobility at undergraduate level provides the student with at least a rudimentary insight into what scientific work abroad might be like. It offers an insight into the working conditions, work ethos and life generally in the host country. It also allows the student to learn about the science landscape, including scholarship opportunities and application procedures at first hand while immersed in that context. Students also benefit from improving their language skills both in English and in the language spoken in the host country. Additionally a move at undergraduate level can set the foundations for building networks and can provide the contacts which might be helpful to the student in the future. These benefits, together with the experience of being able to live in a foreign country, are likely to inspire the confidence that future career related mobility is a viable and desirable option. This is especially the case where existing mobility channels can be utilised and the student can stay at or return to the same institution for doctoral research.

At undergraduate level however, scientists may take up opportunities to study abroad simply because that is what is offered to them. They often do not make enquiries about additional opportunities or alternatives; rather undergraduate mobility is seen as a part of the undergraduate programme which is followed without much questioning of the possible alternatives. There is therefore an element of chance in determining whether science students will study at an institution which allows them the opportunity to go abroad and it is even more of a lottery as to where the undergraduate might move to. Therefore students who do spend time abroad during their undergraduate degree, have a practice run for scientific mobility in a country which they have not necessarily actively chosen or thought much about. Their experience during their time abroad can however strongly influence

⁴¹ The number of Erasmus students for example has increased dramatically from 3244 in 1987/88 to 135586 students going abroad in 2003/4 (See Erasmus Statistics at <http://europa.eu.int/comm/education/programmes/socrates/erasmus/stat.en.html>). See also Brooks, R. and Waters, J. (2011) 'Student Mobilities, Migration and the Internationalization of Higher Education'. Basingstoke: Palgrave Macmillan

their mobility throughout their later career. King and Ruiz-Gelices showed in their survey that *'more than half of those who applied for employment abroad, looked for a job in their YA [year abroad] country'*.⁴² Other studies confirm that studying abroad increases the likelihood of later also working abroad in the same country. For example, *'by 2000–03, 74% of foreign doctoral recipients in S&E fields with known plans intended to stay in the United States and 51% had firm offers to do so'*.⁴³

For undergraduate students considering staying in the EU for a doctorate, the case of *Bidar* is of significance. Following the case, a real link with the UK which entitles doctoral candidates to equal treatment with the host state nationals in relation to student maintenance, can be established through 3 years residence in the UK. A student having completed the whole of their undergraduate studies in the UK has thus established a real link and would be entitled to apply for both tuition fee and maintenance funding for a doctorate

There is therefore a potential pool of future doctoral candidates who can establish a real link with the host state which would entitle them to access support for doctoral studies on the same basis as nationals and this pool of undergraduate students is growing in both host countries studied. Undergraduate mobility from Eastern Europe is not a new phenomenon but the destination countries have changed over time. As was mentioned above, traditionally scientists in Eastern Europe often went to Russia to carry out part of their research for their diploma or PhD theses. This was also the case for Bogdan:

'Yes in fact I studied here [in Bulgaria] for 5 years and then when I started thinking about diploma thesis, so the former head of this department, he offered me to go to that institute [in Russia] and to prepare there diploma thesis so I prepared there and then so defended here and went back for PhD because I made relations there and they like me and invited me to work for the PhD and this lasts 5 or 6 years'.

This sort of transition from undergraduate studies to doctorate is not only widespread for those respondents who went to Russia. It is not at all uncommon for potential doctoral candidates in Germany to continue at or return to the same institution they had been to at

⁴² King, R and Ruiz-Gelices, E. (2003) op cit note 40.

⁴³ National Science Foundation (2006), 'Science and Engineering Indicators', Arlington, VA: National Science Foundation at pages 2-27.

undergraduate level. Both Agata and Alicja spent time in Germany as part of their undergraduate degrees. Alicja explains how the opportunity arose:

'The last year of my studies there was a possibility to go for a Socrates for this half year stipend abroad somewhere [...]. He [polish Professor] has contacts with professors at the university and so I came here with some friends as well from Poland; there were four of us decided to stay here for a PhD afterwards'.

Agata, however, was initially not at all impressed about having to spend time in Germany; she would have preferred to have gone elsewhere with her friends rather than follow the established and expected mobility channel.

'Most of the students they go abroad for half a year or more because we have this Socrates/Erasmus exchange which is very nice but I wanted to go to Holland with my friends and he [her professor] said no you go to Germany [...] and I didn't want to go because I thought it would be a really old institute and crap. So I was miserable when I first came here but then I thought wow. It's not at all old, it's quite new and it's quite good'.

Agata enjoyed her undergraduate experience so much and was so successful in her work that she decided to stay for a doctorate after all. Both Alicja and Agata talk of an almost seamless transition from undergraduate work to doctoral research at the same institution and their undergraduate move clearly shaped their later mobility. We do not know if they would also have moved had they not experienced mobility at undergraduate level but it does seem very clear that their experience as undergraduates had a major impact on whether and where they would do their doctorates abroad.

For Rada the transition was not as seamless as this but she used the time she spent as an undergraduate in England to apply for a PhD at the same institution. It was more uncertain whether or not she would be able to return to the institution for her PhD. Rada was in fact successful but things are not always as straightforward as the last three examples suggest. Teresa's and also Fryderyk's experiences illustrate that clearly. Teresa came to the UK on a TEMPUS programme. During that time, her UK supervisor arranged for her to spend time in the US over the summer and Teresa then returned to England to do her doctorate at a different institution to the one she had previously been at. Fryderyk's mobility history is even more complex. He spent 6 months in the UK as part of TEMPUS and extended his stay with paid research work. He then went to France on a TEMPUS grant and also utilised the

contacts he had made to work in the UK for 2 months before applying for various PhD positions. He eventually took up a scholarship at a UK institution. While their mobility was less straightforward or direct, the initial move was triggered by an undergraduate programme and subsequent moves were facilitated and made possible by their supervisors' contacts and the relationships Teresa and Fredyryk managed to maintain with them; or by what Williams and colleagues has called ad hoc networks.⁴⁴

For these contacts to start to act as triggers to career related mobility, there is no need to spend significant amounts of time abroad at undergraduate level. In the German context especially there are several examples of students being offered PhD positions through attending summer schools. Martyna, Ivan, Jan and Marcin all got their doctoral position following attendance at a summer school. Martyna explains how:

'It was a funny story; I was here for 3 months on an exchange programme. There was a summer course here which was organised by [a German university] and they invited people from Poland and Lithuania to visit the university... This was after my Masters and I decided to make my PhD in Poland and after that I went to this course and I enjoyed working here and after that I decided to come back here and I had the possibility to come back...'

Similarly Elena attended a summer school and, whilst there, made the contacts she needed to be able to complete most of the work towards her doctorate, for which she is registered in Bulgaria, at a RI in Germany. At 3 months Martyna's summer school was relatively long but there are other examples of scientists spending just two or three weeks abroad and nonetheless securing a doctoral position during that time. Clearly then, attendance at summer schools is extremely influential in triggering mobility and shaping destination decisions. Martyna had in fact already applied and been accepted for a doctoral position in Poland but the summer school changed her mind. Marcin however already knew he wanted to move and used the summer school as an opportunity to achieve this end.

Our data clearly indicates that networks and contacts are being built and utilised at this early career stage. However, students who remain at home and do not go abroad even for a short period during their undergraduate degrees are also making contacts, especially

⁴⁴ Williams, A. M., et al. (2004), 'International labour mobility and uneven regional development in Europe: human capital, knowledge and entrepreneurship', 11(1) European Urban and Regional Studies 27

during their diploma research which many do in industry or at the Academies of Science. There is something more about undergraduate mobility than just getting to know people abroad which facilitates later moves. Bozena articulates this well:

'I'd been there 8 months I think and it was a very good experience for me and already before actually I knew that I wanted to go abroad after graduating from the university, however this stay in England kind of made me...I was convinced that I could live abroad for a longer time and I could adapt to new conditions. Actually I've seen like more concrete things like the conditions and possibilities of doing science abroad are much better and wider comparing to Poland because I was working in comparable labs doing comparable things but the possibilities like the speed of doing science and the availability of the facilities and so on was much better. At the end [the Erasmus programme] for me personally it was like checking out whether I am simply able to be away from my family and without my friends and so on'.

I also asked her if she thought mobility was important for her career and she replied:

'Yes I think so absolutely; I mean I was not maybe that aware about it but the fact that I was away doing my studies for the scholarship I find it was very positive for my boss when she was interviewing me and she said okay it seems that you are not afraid of things, you like a challenge and you are kind of flexible'.

Bozena's case highlights a number of issues. She mentioned working conditions and opportunities for doing science. Many respondents reported that it is the experimental part of their work especially that is more difficult, slower or almost impossible in their home country and that time abroad at undergraduate level clarifies to them how much they would be able to achieve abroad. Georgi, who spent time in the Netherlands on a TEMPUS grant during his undergraduate studies, agreed. I asked him when he had decided to go abroad for his doctorate:

'When I was back from The Netherlands. This was a striking difference, for these 5 months you could really see how much work you can do in a lab and you have the possibility because you have the money for supplies in the lab and to buy basic things. Then I went back to Bulgaria to this institute [...]. There I could see that things which we do for one week more or less or for several days

you do for one afternoon in Holland and this had a lot of impact which you see what is different’.

This kind of response is typical but our data further suggests that as well as the obvious benefit of being able to do science much more effectively, less tangible issues related to personal development and learning about different approaches and cultures also played a part in triggering the desire to move abroad at a later stage. Bozena touched on this when she explained how her ERASMUS time was a trial run for living away from home. Similarly, Margarita explained that going to Germany for her doctorate was not such a big decision as she already had experience of mobility to Russia during her undergraduate degree; she was not worried about being able to live abroad. She went on to explain why mobility at an early stage in her career was so important to her:

‘I’m going to see something completely different from home and from Russia as well because Russia is more close to home than Germany. It’s a completely different world at that time for me it was a really different world so this was one of the reasons’.

I later asked her how important mobility was for career advancement in her field

‘It’s very very important because if you get stuck in one thing you don’t have such a big future definitely so that’s very important. It’s exchanging a way of thinking even, exchanging even the culture and it gives you many new ideas and this is all you need and this you cannot get if you work on the same place all the time. [...] You learn a lot, not only professional and personal’.

Margarita articulated both the personal development aspect of mobility and also the scientific benefit of moving and working in an international environment. Clearly, the exchange of cultures and ideas was vital to her both professionally and socially. Experience of this at undergraduate level puts potential doctoral candidates in a strong position because it increases confidence and belief in their own abilities. Margarita also picked up an issue which Bozena briefly touched upon in the quote above. Both indicated that mobility at undergraduate level shows a degree of independence, flexibility and the ability to work with different people, which are highly valued by those employing doctoral candidates or allocating scholarships. It seems that a stint abroad at undergraduate level indicates a certain degree of employability which supervisors look for in their doctoral

candidates and which continues to be an asset throughout the career trajectory. In the words of Roman: *"Studying abroad is very prestigious"*.

Conclusions: Networks, exchange programmes and fellowships and EU

Law and Policy

When moving through networks to access doctoral positions in host countries, the legal issues discussed in previous chapters still apply in the same way although some of the formalities may be made easier as indicated by some of the respondents above. Access to positions may also sometimes be easier if mobility takes place through established networks. However this sort of mobility places legal issues including rights and entitlements firmly in the background. When moving through established mobility channels there is even less need to be concerned with exactly what entitlements the doctoral candidate might have access to in certain contexts. The formalities of moving are taken care of by others and little thought is given to them. This is exacerbated in relation to shorter stays. Doctoral candidates moving for shorter periods of say 3 months to a year on fellowship schemes tended to focus on the formalities necessary for the fellowship or exchange scheme application and providing paperwork in relation to that, which may of course need to be provided to deal with some of the legal issues discussed previously (such as recognition of qualifications for example). Consideration of legal status and the implications slips further into the background in these circumstances. Arguably this does not matter in relation to shorter stays as much as it does in relation to stays for full doctorates. This is for two reasons. Firstly, as noted previously, status is likely only to become an issue if the doctoral candidate's circumstances change significantly over the course of the doctorate and this is less likely to happen during the course of a short stay. Secondly, when taking advantage of fellowships, doctoral candidates are moving as a holder of a particular fellowship which will stipulate its own terms and conditions and thus be less dependent on the doctoral candidate establishing a particular status in EU law to derive such rights and entitlements. Mobility schemes which recognise doctoral candidates as a distinct group of EU citizens and scientists are likely to offer terms and conditions which specifically address the needs of scientists at this level, as the Marie Curie training site scheme does. On the other hand, where doctoral candidates secure other funding from mobility schemes not specifically aimed at doctoral candidates, they might well be able to show that for the duration of their mobility period they are in fact moving as workers even

if they are classed as students in their home country because they are actually not seeking a qualification in the host country but are there to carry out some specific work.

The mobility schemes specific to doctoral candidates show that treating doctoral candidates as a distinct group of scientists and EU citizens can work to secure basic rights for doctoral candidates and encourage mobility. The schemes, as discussed above, set their own terms and conditions including how family rights should be dealt with in the context of such a programme and it is argued that the same is possible on a larger scale. For example, access to minimum maternity leave and pay rights could be guaranteed by EU law giving access to the minimum provisions available in the host country, leaving it open to individual Member States or institutions to provide more generous rights for doctoral candidates if they wish. While it may be desirable longer term to ensure that provisions are similar across Member States in order to encourage mobility, the more important issue is that doctoral candidates who are not nationals of the host state should not be worse off than doctoral candidates who are nationals of that state simply by virtue of their nationality.

Chapter 9: Evaluating Law and Policy

This thesis has examined a number of aspects of doctoral mobility focusing mainly on the status of doctoral candidates in EU Law and the impact that status may have on their rights and entitlements as well as on shaping mobility at this level. This chapter aims to pull those earlier discussions together and begins by outlining the key findings of the research. It then makes the case for a category of EU migrant doctoral candidate before turning to a re-examination of doctoral candidates' treatment in the policy frameworks. Finally this chapter considers outstanding research questions which would, if addressed, provide a more complete picture of doctoral mobility in the EU.

The key issues arising from the research

This research has shown that law and policy at European level does not yet sufficiently address the situation of doctoral candidates in the EU. In particular, it fails to recognise them as a distinct group of scientists and EU citizens engaging with them as either students of the 3rd cycle of higher education or as junior researchers. Both conceptualisations risk doctoral candidate's needs not being met. At policy level therefore a recognition of doctoral researcher as a separate category of scientists is important so that policy can specifically address their needs. Doctoral candidates will have training needs as they learn to be independent researchers in their own right, they will also face issues in relation to supervision of their work, integration into research teams and other aspects of their day to day work. More broadly, policy needs to address the overall attractiveness of research careers including the funding of doctoral research as a separate issue of science funding. As outlined in chapter 3 mobility remains at the heart of science policy but the facilitation and encouragement of mobility at doctoral level has rarely been addressed specifically. Policy must engage with the motivations for and barriers to doctoral mobility directly rather than assuming that the issues will be the same as for students or more senior researchers.

In legal terms, doctoral candidates do not exist as a definitional category. As chapter 4 has shown in many cases a strong argument can be made that they should be treated as workers in EU law and thus have access to all the rights associated with that status. However, chapter 4 also highlighted that doctoral candidates are vulnerable to national interpretations of their status in EU law and therefore many are likely to be classed as students and therefore do not benefit from the most generous free movement rights. Chapters 5 and 6 provided case studies of Germany and the UK as useful case studies

highlighting the differences between candidates in a context where their research is often classed as work and one where it is classed as studies. What the research highlights is that both models are successful and have much to commend them. However, the case studies also show that where doctoral candidates can access rights related to worker status such as equal access to positions and access to social advantages, their needs can more easily be met. It is not therefore the employment status in the national context which is of crucial importance but the associated rights. In an ERA and EHEA it makes sense that doctoral candidates compete for suitable positions on a level playing field rather than being able to compete for all positions in some Member States and only elements of some in others as might be the case for a UK research council grant.

Mobility and grant schemes discussed in chapter 8 show that it is workable to provide for minimum rights to be afforded to doctoral candidates and that these can include issues such as family rights. Setting EU wide policy which takes those elements from the successful mobility schemes would do much to safeguard the position of doctoral candidates across the ERA and EHEA. Chapter 8 also addressed the question of networks and their importance in science mobility at this level. The research shows clearly that doctoral candidates value networks and that they are crucial in shaping mobility. Policy has yet to recognise this in the context of doctoral mobility. The importance of scientific networks does however suggest that doctoral candidates are more likely to show 'real links' with their scientific discipline and the scientific context within which they work rather than with any particular Member State. This may make it difficult for them to show the necessary bond with a Member State in order to claim social advantages where they do not have worker status to do so as of right. Re-thinking the real link test might in such cases offer some solutions. We return to this line of argument below.

While the importance of professional and scientific networks cannot be underestimated, family and personal links also play a key role in shaping scientific mobility at doctoral level. Chapter 7 considered the importance of EU law status for doctoral candidates who wish to take their families with them to a host country. The importance of family has been underestimated in policy terms and the prevalence of dual science career couples, even at this early stage in scientific careers, has also not been adequately addressed. Furthering our understanding in this area will help us to better understand the complexities underlying doctoral mobility and the decision making underpinning it.

Overall, the key message from the research is, in the author's view, as follows: Doctoral candidates should be treated as a distinct group of actors within the ERA and EHEA as well as as a distinct group of EU citizens at EU law level. This will allow law and policy to address their needs, which are different to those of students or more senior researchers, more directly. There is however still work to be done to understand fully exactly what form policy and legal provisions in this area should take.

Making the case for EU Migrant Doctoral candidates

Having summarised the key issues arising from the research above, this section now draws the discussions of the thesis together and beings by making the case for the status of EU migrant doctoral candidates. The case for treating doctoral candidates as a distinct group of scientists rather than as either students or independent researchers has been highlighted in the discussions throughout this thesis. However, as we have seen the status of doctoral candidates as either migrant students or migrant workers in EU law depends on the national context into which the doctoral candidate is moving. However, chapter 4 considered whether EU citizenship might be a helpful concept to extend the rights of doctoral candidates in EU law. Three arguments can be put forward. Firstly, it could be argued that in free movement of persons law the focus should shift from the EU citizen's activity to their status as EU citizen. In other words, economic activity should be irrelevant and all EU citizens should have free movement and associated rights.

However, while EU citizenship has clearly been instrumental in widening the scope of EU law to include those not economically active in certain circumstances, the idea that all EU citizens have access to social advantages, social security and other rights in the host state regardless of whether they are contributing to the host society in any way remains controversial and practically unworkable. Chapter 4 outlined the real link test which operates to reduce the burden on host states which might be imposed disproportionately on Member States which prove to be popular host countries. The real link thus only requires rights to be afforded to those EU citizens who can show that they have some kind of bond with the host state. Case law suggests that time spent in a country established such a bond. Discussions throughout the thesis but in particular in chapter 8 suggest that this view of a 'real link' does not capture scientists' situations. Scientists talk of a scientific community within which they work and rather than showing a bond or affinity with particular countries, doctoral candidates make choices based on links within their scientific community. A reconceptualization of the idea of real link is one option which might allow

the extension of rights to doctoral candidates. If a bond or link with a supra-national scientific community which operates across national borders can be established, it could be argued that such a scientific community should be supported across the EU and thus support should be given to doctoral candidates. There are however some remaining issues with this approach. Firstly doctoral candidates would have to establish that there is indeed an international scientific community into which their work fits; secondly they would have to establish a real link with that community and finally it is not clear whether every Member State should support doctoral candidates linked to every international scientific community or would a doctoral candidate also have to establish that there is a link between the community and the host country in order to qualify for access to social advantages? While this approach certainly merits further investigation, it does not, it seems, provide solutions to the questions under consideration in this thesis. Doctoral candidates would still have to satisfy conditions to qualify for rights rather than qualifying for rights because of their status as doctoral candidates.

The second option is to redefine the category of economically active citizens and widen the scope of that definition. A wider scope of economic activity may include doctoral candidates by recognising their work as making a contribution to the host state's economy and/or science community. This would allow the provision of the most generous free movement rights to them while also allowing countries such as the UK to continue conceptualising doctoral candidates as students and countries such as Germany could continue to have a variety of options including employment contracts, fellowships or scholarships.

This reconceptualisation is however not unproblematic either. Extending the definition of economic activity may widen the scope to the point where, for example, undergraduate students are also included. Citizenship provisions have already been used in conjunction with Article 18 TFEU to extend students' rights and it seems unlikely that Member States would allow further extension given the financial burden this is likely to place on those States which host a significant number of migrant students. Any extension to the scope of economic activity is therefore likely to be worded restrictively by the ECJ and may therefore exclude some doctoral candidates who cannot show that they are making a direct contribution to a larger project with some sort of commercial or economic impact.

While doctoral candidates in the natural sciences are usually able to show their contribution to a larger project or indeed the wider impact of their work, candidates in the

social sciences may find it more difficult to do so. There is therefore a risk that simply extending the scope of what is considered economic activity will draw distinctions between different types of doctoral candidates. This would of course run counter to the intentions of such a reconceptualization. The goal is to afford doctoral candidates the same floor of rights regardless of where they study and affording those rights only to natural scientists does not appear to make sense in the light of that goal.

The third possible solution is the creation of a separate category of EU citizen which seems to avoid many of the pitfalls outlined above. The ECJ has in the past been willing to reserve the power to define important concepts to itself. Therefore the Member States cannot decide who is and who is not a worker for example. The ECJ could define doctoral candidates as a separate category of migrants. It could set a definition which covers the variety of doctoral research across the EU and brings any doctoral candidates seeking to undertake their research in another country within that definition. Once the category is established, the rights they are entitled to can be clarified. As EU migrant doctoral candidates, they should be entitled to application of the equal treatment provisions allowing equal access to any available doctoral positions including the terms and conditions offered. Furthermore, minimum rights in relation to family rights, including rights to be accompanied or joined by family members; maternity provisions and access to social advantages can be set out ensuring that doctoral candidates do not put themselves in a vulnerable position simply by virtue of their mobility.

This approach offers the significant advantage of removing the impact of national context on the rights of doctoral candidates. While Member States would still be free to conceptualise doctoral candidates as they wish, it would level the playing field for those seeking access to funded positions. It would not prohibit the UK, for example, from charging tuition fees for doctoral research as long as the fees were the same for UK and EU nationals (as they are now) and doctoral researchers were entitled to social advantages including for example maternity leave and pay provision. The traditional cultural and historical context of individual countries and institutions can be preserved at the same time as allowing doctoral candidates to become mobile safe in the knowledge that they are protected should their circumstances change.

While this approach offers much to commend it, it is also not without problems. The most obvious potential pitfall is that it may give rise to reverse discrimination and put nationals of the home state at a disadvantage as compared to mobile doctoral candidates who

benefit from the protection of EU law and thus have access to social advantages. They may therefore gain access to entitlements not available to home doctoral candidates. This situation is not ideal and runs counter to the rationale for creating a category of migrant doctoral candidates in the first place. The purpose was not to create different rights for doctoral candidates but to make sure that mobility did not place doctoral candidates in a vulnerable position. Other than forcing Member States to provide minimum rights to doctoral candidates, a course of action the EU is not likely to want to take given the longstanding traditions of Member State Universities and Higher Education, the law cannot solve the issues arising here. However, the policies of the ERA and EHEA may be able to move us towards a solution.¹ The next section therefore re-examines the situation of doctoral candidates in the EHEA and ERA to consider how those policy frameworks might engage with an EU category of EU migrant doctoral candidate.

Rethinking doctoral candidates in the EHEA and ERA

Just as the Commission noted the lack of a coherent European strategy for research in xxx, there cannot be said to be a coherent strategy in relation to doctoral research in the ERA or EHEA today.² There are many different paths that lead to a doctorate and with those different paths come different types of doctoral positions with different types of rights and entitlement which all have their advantages and disadvantages. The Commission's concerns regarding the precarious social security situation of doctoral candidates³ appears to be borne out by this research and in spite of efforts to address that problem, nothing much seems to have changed in the last few years.

If the position of doctoral candidates is to be clarified, ERA and EHEA policy must stop sitting on the fence. It must address doctoral candidate as a distinct group of scientists who are neither students nor fully fledged independent researchers. Comments indicating that doctoral candidates are both researchers and students,⁴ while perhaps trying to capture

¹ See for example Huisman, J. et al (2005). 'Explaining Domestic Responses to European Policies: The Impact of the Erasmus Programme on National Higher Education Policies' in Tight, M. International Relations. London: Elsevier

² Arguably there is no coherent education strategy in the EHEA or ERA overall. See Pechar, H. (2007). "The Bologna Process" A European Response to the Global Competition in Higher Education'. Canadian Journal of Higher Education, 37(3), 109-125.

³ European Commission (2003b), 'Communication from the Commission to the Council and the European Parliament. Researchers in the European Research Area: One Profession, Multiple Careers'. COM (2003) 436 final at page 16.

⁴ Berlin Communiqué (2003), 'Realising the European Higher education Area' Communiqué of the Conference of European Ministers Responsible for Higher Education, Berlin, 19-September 2003 available at http://www.ehea.info/Uploads/Declarations/Berlin_Communique1.pdf

the situation across Europe, are not helpful when trying to create a policy framework for doctoral research. Member States and signatories to the Bologna declaration are keen not to eliminate the culture, tradition and history of higher education in their countries and are working on creating compatibility between systems rather than harmonisation and the argument here is not for the same treatment of doctoral candidates in all countries. However, the policy framework should make clear that doctoral candidates make a genuine contribution to their discipline and should be seen as a distinct group of scientists who cannot be conceptualised in the same way as undergraduate students. The framework should also clarify the minimum social security provisions that should be afforded to doctoral candidates. For example, provisions relating to maternity/paternity rights and sick leave and pay should be available to all doctoral candidates regardless of their status. Competition for funding should take place on a level playing field allowing all EU doctoral candidates to compete for opportunities in the territory of the EU.

If the ERA and EHEA policy is clear about what it is to be a doctoral candidate while acknowledging national differences and minimum rights can be implemented across the region, it is likely to enhance the attractiveness of science careers overall and thus help achieve the Commission's objectives of increasing the human resources in R&D. However, clarifying the status of doctoral candidates and setting minimum rights and entitlements is likely to be of even greater importance to doctoral candidates who become mobile. Minimum rights can, in theory at least be set without dictating what EU law status doctoral candidates should have. Policy can determine rights in the form of soft law measures and intergovernmental cooperation. If this is achieved, the legal status of student or worker is less important because the definitional categories become irrelevant for doctoral candidates – they will be a distinct group in their own right in policy terms and as such can easily be defined as a distinct category of citizen at EU level.

So far however the frameworks of the ERA and EHEA have not engaged in any meaningful way with EU law, the free movement of persons or EU citizenship. The next section considers how these areas could be brought together to create a coherent framework for doctoral mobility across the EU.

Creating a coherent mobility framework

Above the argument has been made for thinking about doctoral candidates as a distinct group of scientists within the EHEA and ERA who straddle the two frameworks and have the potential to bring them together and provide a link between areas focused on education and one focused on research. In addition it has been suggested above that the EU should consider the creation of a new definitional category of EU migrant doctoral candidate or at least consider a wider interpretation of economic activity as well as a shift towards a focus on citizenship status instead of the citizen's activity to help ensure that doctoral candidates do not fall in the gaps left where the legal and policy frameworks do not address their needs directly. This section brings the legal and policy frameworks together to consider how they could better interact and engage with each other to provide consistent minimum rights for (mobile) doctoral candidates.

It is arguably a little odd that the policy frameworks discussed in detail in chapter 3 does not refer to EU free movement provisions. It is after all those provisions which form the basis of the rights doctoral candidates will have to exercise when taking advantage of the policy initiatives. Without the legal framework to enable free movement, policy initiatives will fail. Policy is meaningless without the legal rights to allow doctoral candidates to take up opportunities the policies are trying to promote. In other words, law in this context acts as a launch pad. It is the foundation of any policy relating to science mobility.

The lack of engagement with the legal framework in the policy documents may be explained by the fact that policy makers presume that the legal framework is generally unproblematic and workable. Policy is there to make people take advantage of rights and entitlements which they may not be aware of or which require a little more encouragement to 'sell them to people'. Policy in this context is not formulated on the basis of controversial or problematic legal provisions. The issue with that in the context of this thesis is that the legal framework is not unproblematic. While concepts such as 'worker' and even 'student' are well established in EU law as was outlines in Chapter 4, doctoral candidates do not exist as a definitional category. There is no such thing as an EU migrant doctoral candidate. As a result doctoral candidates are vulnerable to national interpretations in relation to their status and rights. This results in doctoral candidates in different countries being conceptualised differently as either students or researchers or somewhere in between. This in itself is not problematic and may even be desirable as a way of maintaining cultural and historical context and diversity in higher education.

However, problems arise when these different conceptualisations give rise to very different rights and the problem is exacerbated in the context of mobility. Creating a definitional category of doctoral candidate in EU law and assigning minimum rights to that category would avoid some of the issues currently faced by mobile doctoral candidates.

However, it is also accepted that this affects only a small, albeit important, group of EU nationals and EU migrants. Is it therefore worth creating a new legal category of EU migrants or does the reconceptualisation of economic activity provide sufficient protection? While widening the scope of what is considered to be genuine and effective 'economic activity' may provide greater protection for EU migrants who are involved in activities that perhaps do not fit our traditional understanding of work, it is still open to Member States to argue that the work of doctoral candidates falls outside of that definition. This may be especially the case in social science or humanities settings where there is less obvious 'impact' or commercialisation of research results and doctoral candidates are more likely to work in isolation rather than as part of a team on a larger project. It therefore provides only a partial solution as argued above.

Policy may thus play a vital role in shaping the framework of rights for doctoral candidates. Both the ERA and the EHEA are in a position to clarify the status of doctoral candidates and conceptualise them as either students or researchers. Even if they continue to consider them as both of those things, the policy framework can stipulate a minimum level of rights for doctoral candidates in the ERA and EHEA. Although not binding, the impact of soft law measures and intergovernmental initiatives such as the Bologna Process should not be underestimated. In fact the success of the Bologna Process has already been noted in chapter 3 and it suggests that clear guidelines as to what minimum rights should be guaranteed to doctoral candidates would filter through to signatory states and would improve the situation for those concerned. Furthermore policy initiatives can help doctoral candidates make the most of free movement rights by providing safe and relatively risk free mobility channels as outlined in chapter 8. The mobility schemes discussed in that chapter show that the approach of treating doctoral candidates as a distinct group can work because that is what those schemes do, albeit on a smaller scale. Creating an EU wide legal and policy framework which addresses doctoral candidates specifically is likely to enhance the attractiveness of doctoral research and encourage the mobility of doctoral candidates.

That is not to say that the ERA and EHEA policies should be re-written. They provide useful frameworks for researchers on the one hand and students on the other. There is no reason why doctoral candidates' issues cannot be addressed in part by both policies. However what is required is a more specific engagement with doctoral research from both camps which makes explicit how the policies apply to doctoral research. For example, the code of conduct for researchers is ambiguous at best in its application to doctoral candidates and the application of ECTS credits to doctoral research is, though perhaps counter intuitive, not controversial on a strict reading of EHEA documentation.

What is needed is a legal framework which is based on a category of doctoral candidates as a distinct and recognised group of scientists who straddle the EHEA and ERA and in order for that to be developed there must be further engagement between law and policy in this area. However, before such a coherent framework can be fully developed, there are questions which remain to be answered. The next section outlines some of these questions by outlining what the author considers to be the most pressing research issues in this area.

Mapping the research agenda

Although doctoral mobility has featured as a topic for study in its own rights or has been included in studies concerned with mobility and migration more generally, there are still significant gaps in our understanding which would need addressing before concrete and detailed policy recommendations or suggestions for law reform can be made. This section therefore outlines how the research outlined here could be developed and taken forward in order to provide a more complete picture of doctoral mobility in the EU.

Although one project which provided data analysed for this thesis was focused on social science doctoral candidates, most of the empirical work related to natural scientists. The differences between doctorates in the natural and social sciences as well as arts and humanities are not sufficiently understood to be able to conclude with certainty that the issues identified will impact in the same way on social science doctoral candidates. Research suggests that social science doctoral candidates may have different mobility motivations and may choose their host countries and institutions based on different factors than their natural science counterparts.⁵ In order to fully understand this, further work in

⁵ Compare for example the results of NORFACE study with those of MOBEX 2. See also Golub, B. (2002). 'Motivational Factors in Departure of young scientists from Croatian Science'. *Scientometrics* 54(3) 429-445. Cörvers, F. et al (2007). 'What do highly able graduates from the Netherlands decide

relation to social science doctoral candidates and their mobility is necessary. Policy can only adequately address doctoral research and mobility if it is based on a complete understanding of the similarities and differences of the variety of contexts doctoral scientists work in.

This thesis examined the national contexts in Germany and the UK in detail. Moreover the focus of the research data underpinning the thesis relied heavily on interviews with scientists from Poland and Bulgaria. The examination of doctoral mobility presented in this thesis is therefore context specific. While the case study countries provide useful examples of different frameworks for doctoral research and different ways of dealing with doctoral mobility, they do not capture the extensive variety of doctoral programmes and modes of doctoral research in the EU. The mobility motivations and factors influencing choices about destinations may vary from country to country as well as from discipline to discipline. The legal and policy frameworks governing doctoral research, including the funding of it, vary enormously and any EU wide law and policy must be based on a full understanding of the national, supra-national as well as disciplinary contexts in order to fully appreciate the impact of any legal or policy change.

The research required to build a fuller picture of doctoral mobility in the EU necessitates a genuinely interdisciplinary approach which combines an understanding of the legal and policy frameworks with in-depth exploration of mobility motivations, decisions and experiences across a variety of national contexts. As such it is an enormous undertaking. It is therefore more likely that research will continue incrementally by considering specific national contexts and/or specific disciplines in one or more national contexts. For that reason one of the most important research activities to be undertaken by those wishing to drive forward law and policy in this area may be to map the research already undertaken across the EU and the key messages to be taken from that research. This is in itself an undertaking not to be underestimated given the linguistic challenges associated with mapping research across the EU. What is important however is that in the future the law and policy underpinning the development of the ERA and EHEA is based on a detailed understanding of the situations of all the actors involved and it is hoped that this research takes us one step in that direction.

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APPENDIX 1: RESPONDENT INFORMATION

MOBEX2 Respondent information

ID	Pseudonym	Home Country	Host Country	Experience	Scientific Field
P01	Pawel	Poland	N/A	Senior	agriculture
P02	Ewa	Poland	N/A	intermediate	Biology
P03	Joanna	Poland	N/A	PhD	Biology
P04	Dorota	Poland	N/A	Senior	Astronomy
P05	Marta	Poland	N/A	intermediate	physics
P06	Stanisław	Poland	N/A	Senior	Microbiology
P07	Tomasz	Poland	N/A	intermediate	Physics
P08	Maria	Poland	N/A	PhD	Biology
P09	Elzbieta	Poland	N/A	intermediate	Biology
P10	Bronisław	Poland	N/A	Senior	Physics
P11	Jacek	Poland	N/A	intermediate	Genetics
P12	Zofia	Poland	N/A	Senior	Immunology
P13	Agnieszka	Poland	N/A	Senior	Physics
P14	Barbara	Poland	N/A	intermediate	Botany (PAS)
B01	Pepka	Bulgaria	N/A	intermediate	Photoprocesses
B02	Todorka	Bulgaria	N/A	senior	Plant physiology
B03	Vanya	Bulgaria	N/A	junior	Plant physiology
B04	Boris	Bulgaria	N/A	senior	Bio-physics
B05	Dessislava	Bulgaria	N/A	intermediate	Chemistry
B06	Valentina	Bulgaria	N/A	junior	Physical Chemistry
B07	Roumen	Bulgaria	N/A	senior	Physical Chemistry
B08	Dimitar	Bulgaria	N/A	junior	Energy design
B09	Bogdan	Bulgaria	N/A	senior	Atomic physics
B10	Yulian	Bulgaria	N/A	senior	Photochemistry
B11	Elena	Bulgaria	N/A	intermediate	Photoprocesses
M01UK	Rada	Bulgaria	UK	Post-doc	Bio-chemistry
M02UK	Jerzy	Poland	UK	Post-doc	Physics
M03UK	Teresa	Poland	UK	Teaching fellow	Chemical engineering
M04UK	Tzonka	Bulgaria	UK	IT/ PhD	IT technician
M05UK	Kiril	Bulgaria	UK	Lecturer	Biology
M06UK	Svetlana	Bulgaria	UK	Group Leader	Biology
M07UK	Andrey	Bulgaria	UK	Lecturer	Bio-chemistry
M08UK	Ivanka	Bulgaria	UK	intermediate	Physics
M09UK	Fryderyk	Poland	UK	Post-doc	Mechanical engineering
M10UK	Krzysztof	Poland	UK	Post-doc	Biology/Maths
M11UK	Lucjan	Poland	UK	Post-doc	Biomedical science
M12UK	Eugenia	Bulgaria	UK	Research fellow	Computer scientist
M13UK	Magdalena	Bulgaria	UK	intermediate	Steel Research
M14UK	Boyko	Bulgaria	UK	intermediate	Materials science
M15UK	Rumiana	Bulgaria	UK	Post-doc	Materials science
M16UK	Vladimir	Bulgaria	UK	Senior research associate	Geography, Optical Radiometry
M17UK	Ivaylo	Bulgaria	UK	Post-doc	Physics
M18UK	Michal	Poland	UK	Senior research	Biology

				fellow	
M19UK	Marek	Poland	UK	Lecturer	Maths
M20UK	Renata	Poland	UK	Electron Microscopist	Materials science
M21UK	Justyna	Poland	UK	Senior	Astrophysics
M22UK	Krystyna	Poland	UK	PhD	Engineering
M23UK	Monika	Poland	UK	PhD	Engineering
M24UK	Ania	Poland	UK	Post-doc	Biology
M25UK	Alina	Poland	UK	Senior	Chemistry
M26UK	Stefan	Bulgaria	UK	intermediate	Computer Science
M27UK	Irina	Bulgaria	UK		
M28UK	Andrzej	Poland	UK		
M29UK	Roman	Poland	UK		
M30UK	Piotr	Poland	UK	Post-doc	Bio-chemistry
M31UK	Jaroslaw	Poland	UK		
M01D	Kalina	Bulgaria	Germany	PhD	Physics
M02D	Georgi	Bulgaria	Germany	PhD	Biology
M03D	Martyna	Poland	Germany	PhD	Physics
M04D	Janina	Poland	Germany	PhD	Biology
M05D	Beata	Poland	Germany	PhD	Biology
M06D	Lech	Poland	Germany	post doc	Biology
M07D	Vasil	Bulgaria	Germany	senior	Physics
M08D	Nikolina	Bulgaria	Germany	senior	Physics
M09D	Margarita	Bulgaria	Germany	post doc	Physics
M10D	Stanislav	Bulgaria	Germany	post doc	Physics
M11D	Agata	Poland	Germany	PhD	Biology
M12D	Alicja	Poland	Germany	PhD	Biology
M13D	Ivan	Bulgaria	Germany	PhD	Physics
M14D	Jan	Poland	Germany	PhD	Physics
MD15	Alexander	Bulgarian	Germany	post doc	Biology
MD16	Radka	Bulgarian	Germany	PhD	Biology
MD17	Bożena	Poland	Germany	PhD	Biology
MD18	Mariusz	Poland	Germany	senior	Biology
MD19	Violeta	Bulgaria	Germany	post doc	Biology
MD20	Radoslava	Bulgaria	Germany	post doc	Biology
MD21	Todor	Bulgaria	Germany	senior	Physics
MD22	Leszek	Poland	Germany	PhD	Physics
MD23	Maciej	Poland	Germany	senior	Physics
MD24	Viktor	Bulgaria	Germany	post doc	Physics
MD25	Ludwika	Poland	Germany	PhD	Biology
MD26	Wanda	Poland	Germany	PhD	Physics
MD27	Adam	Poland	Germany	PhD	Biology
MD28	Antoni	Poland	Germany	senior	Physics
MD29	Marcin	Poland	Germany	PhD	Physics
MD30	Jaroslaw	Poland	Germany	post doc	Physics
MD31	Bartosz	Poland	Germany	PhD	Physics
MD32	Sylwia	Poland	Germany	PhD	Biology
MD33	Hanna	Poland	Germany	PhD	Biology

APPENDIX 2: KEY INFORMANT INFORMATION

MOBEX2 Key Informants

Interview	Surname	Forename	Organisation
K1D	Klein	Volker	German Embassy
K2D	Jessen	Hermann	Hamburg Ministry for Science and Research
K3D	Tursich	Marianne	Hamburg Ministry for Science and Research
K4D	Schulze	Michaela	DAAD Bonn (Bulgaria)
K4D	Golombek	Hans	DAAD Bonn (Poland)
K5D	Griesbach		HIS
K5D	Fuchs	Martin	HIS
K6D	Schaller	Roland	University of Hamburg
K7D	Rajewski	Alice	DFG (Eastern Europe)
K8D	Mugabushaka	Alexis-Michel	DFG (Statistics)
K9D	Scholz	Beate	DFG (Bulgaria and RTGs)
K1UK	Scott	Ian	Wellcome Trust
	Moes	Johannes	co-author of Mit Persepektive Promovieren

APPENDIX 3: MOBEX2 QUESTIONNAIRES



Questionnaire for Scientists based in the UK or Germany

We are looking for scientists from Poland or Bulgaria based in the UK or Germany for three months or more. To be eligible you must be working in academia, higher education or research institutions or industry at postgraduate level or above.

If you do not fit these criteria but you know other colleagues who do please forward them details of the project.

We would now like to invite you to complete the following brief questionnaire. It should take about 10minutes to complete. The information you provide us with will be used in aggregate form, no names will be used to identify respondents and details will not be passed onto any third parties.

A summary of the findings will be posted on the project website. We will endeavour to let all participants know of published results from the project.

TO REPLY:

ONLINE: Complete the questionnaire online at www.law.leeds.ac.uk/mobex

BY EMAIL: Complete this Word version of the questionnaire, save and email to: mobex@leeds.ac.uk

If possible, please try and return this questionnaire within two weeks of the date of receipt (final deadline 11th February, 2005)

If you have any questions about the questionnaire or the project please do not hesitate to contact the Project Director (Professor Louise Ackers) at H.L.Ackers@leeds.ac.uk or by phone on 00 44 (0) 113 3437040

Thank you for your assistance in this research,

Louise Ackers

Centre for the Study of Law and Policy in Europe

If you would like to add anything to your answer or comment further there is additional space at then end of the questionnaire.

For each answer select one category only.

Discipline

1. Could you assign yourself, in terms of your training and experience, to one of the broad discipline areas below:

- Physical Sciences
- Biological Sciences

Current Position

Sector

2. In which sector is your *main* research position currently based?

- Higher Education Sector (University)
- Research Institute
- Industry (including spin-off companies)
- Other (please specify)

3. What is your main *job title* (please specify)

4. We would like to get an impression of seniority for sampling purposes. Can you say which of the following **best** describes the 'level' of your current research position. Industrial scientists please select your equivalent level:

Junior

[Doctoral candidate; research assistant]

Intermediate

[post-doc/research fellow; lecturer; assistant professor]

Senior

[Senior researcher/lecturer; senior scientist; group leader; Associate professor Professor]

5. Is your current *main* position?

- Unpaid work
- Temporary (less than 12months)
- Temporary (13-36months)
- Temporary (more than 37month)
- Permanent

Career and Mobility

6. How important is mobility (working abroad) to making research contacts and networks in your field?

Not Very Important

Very Important

1

2

3

4

5

7. In chronological order, starting with your undergraduate degree, please indicate on the following table any periods of 3 months or more you have spent researching abroad

Start Year	Number of months	Please describe the type of position/scheme <i>(e.g. mobility scheme / fellowship scheme/ employment type)</i>	Country

8a. Do you have an intention or plan to move abroad again in the future?

Unsure

No

Yes, intention

Yes, firm plans arranged

8b. Please explain your answer

9. If you answered 'yes' to 8a above please state your preferred country/location

10. Do you currently hold a contractual or honorary position in Poland/Bulgaria?

No

Yes

11. Do you intend to work again in Poland/ Bulgaria (whichever country you came from)?

Unsure

No

Yes, intention

Yes, firm plans arranged

12a. Overall, what impact, if any, do you think scientific mobility has had or will have on scientific research in (Please select one):

Poland

Bulgaria

	Very Negative				Very Positive
	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

12b. Please explain your answer

13. Please use this space for further comments:

Personal details

14. Current Country

15. Current City

16. Nationality

Polish

Bulgarian

Other Please specify

17. Gender

Male

Female

18. Year of birth

19a. Do you have a partner (boyfriend/girlfriend/husband/wife)?

No Yes

19b. If yes, please state your partner's nationality?

20. Do you have any children?

No Yes

21. Title

22. First name

23. Family name/Surname

24. Work Email

25. Personal email

26. Correspondence Address:

27. Contact Tel (including country code):

28. Please let us know if you would be happy to be contacted in the future about this study.

Yes

No

Thank you very much for your contribution to this research.



Umfrage für Naturwissenschaftler im Vereinigten Königreich und Deutschland

Wir suchen Naturwissenschaftler aus Polen und Bulgarien die in Deutschland oder dem Vereinigten Königreich arbeiten.

Sie sind teilnahmeberechtigt wenn:

- **In der akademischen Welt, an einer Hochschule, in einem Forschungsinstitut oder in Industrie tätig sind**
- **Sie mindestens promovieren oder erfahrener sind**
- **Sie für mindestens drei Monate in Deutschland oder dem Vereinigten Königreich sind und arbeiten**

Falls Sie nicht teilnahmeberechtigt sind, aber jemanden kennen der es ist, geben Sie bitte diese Informationen weiter.

Wir möchten Sie jetzt bitten einen kurzen Fragebogen auszufüllen. Das sollte etwa 10 Minuten dauern Ihr Beitrag wird nur als Gesamtsumme verwendet, es werden keine Namen benutzt um Sie mit ihren Antworten zu verbinden oder Sie zu identifizieren und Ihre Personalien werden an keine weiteren Personen weitergegeben.

Eine Zusammenfassung der Ergebnisse dieser Studie wird auf unserer Internetseite erscheinen. Wir werden versuchen alle Teilnehmer über Publikationen von diesem Projekt zu informieren

Um teilzunehmen:

ONLINE: Füllen Sie den Fragebogen unter www.law.leeds.ac.uk/mobex_au

PER EMAIL: Füllen Sie diese Wordversion aus und emailen Sie die an: mobex@leeds.ac.uk

Bitte versuchen Sie den Fragebogen innerhalb von zwei Wochen aber spätestens bis 11 February 2005 zu beantworten

Wenn Sie noch Fragen zu dem Fragebogen oder der Studie haben wenden Sie sich bitte an die Projekt Leitung (Professor Louise Ackers) email: H.L.Ackers@leeds.ac.uk

Vielen Dank für Ihre Hilfe mit dieser Studie,

Louise Ackers

Centre for Study of Law and Policy in Europe

Wenn Sie Kommentare oder Anregungen haben oder ihre Antworten ergänzen möchten, haben Sie unten am Ende der Umfrage noch Platz.

Bitte kreuzen Sie für jede Frage nur eine Antwort an.

Fachbereich

1. Ist Ihre Ausbildung und Erfahrung eher in

Physik

Biologie

Jetzige Stellung

Bereich

2. In welchem dieser Bereiche ist ihre hauptsächliche Forschungsstelle?

Hochschule

Forschungsinstitution

Industrie

Sonstiges (bitte angeben)

3. Was ist die Bezeichnung Ihrer hauptsächlichen Forschungsstelle (bitte angeben)

4. Welcher dieser Ausdrücke bezeichnet am Besten Ihre jetzige hauptsächliche Forschungsstelle.

Nachwuchs Wissenschaftler

[Promovenden; Wissenschaftliche Mitarbeiter]

Wissenschaftlicher Mittelstand

[post-doc/ research fellow; Assistent, Hochschullehrer]

Erfahrener Wissenschaftler

[Erfahrener Wissenschaftler; Gruppenleiter; Professor]

5. Ist Ihre jetzige hauptsächliche Stellung?

Unbezahlt

Befristet (weniger als 12 Monate)

Befristet (13-36 Monate)

Befristet (mehr als 37 Monate)

Unbefristet

Karriere Und Mobilität

6. Wie wichtig ist Mobilität (in einem anderen Land arbeiten) um Forschungskontakte, Netzwerke und Wissenschaftlichen Austausch aufzubauen?

Nicht sehr

**Sehr
Wichtig**

Wichtig

1

2

3

4

5

7. In chronologischer Reihenfolge, seit Ihrem ersten Studiengang, geben Sie bitte alle, mindestens drei monatige, Auslandsaufenthalte an.

Anfangs- jahr	Dauer (in Monaten)	Stipendium/Stelle /Position (z.B;Name des Mobilitätsprogramms/ Stipendiums oderArt der Arbeitsstelle)	Land

8a. Haben Sie die Absicht oder konkrete Pläne wieder ins Ausland zu ziehen?

Weiss ich nicht

Nein

Ja, ich habe die Absicht

Ja, ich habe schon konkrete Pläne

8b. Bitte begründen Sie Ihre Antwort

9. Wenn Sie zu 8a 'ja' geantwortet haben, geben Sie bitte Ihr bevorzugtes Land an

10. Haben sie zur Zeit noch eine vertragliche oder ehrenamtliche Stelle in Polen/Bulgarien (ihrem Heimatland)?

Nein

Ja

11. Haben Sie die Absicht wieder in Polen/Bulgarien (ihrem Heimatland) zu arbeiten?

Weiss ich nicht

Nein

Ja, ich habe die Absicht

Ja, ich habe schon konkrete Pläne

12a. Was für Auswirkungen hat wissenschaftliche Mobilität auf wissenschaftliche Forschung (oder wird sie haben) in (Bitte angeben):

Polen

Bulgarien

	Sehr Negativ				Sehr Positiv
	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

12b. Bitte begründen Sie Ihre Antwort

13. Sonstige Anmerkungen (Kommentare, Fragen oder Anregungen):

Ihre Personalien

14. Jetziges Aufenthaltsland

15. Jetziger Aufenthaltsort/ jetzige Stadt

16. Staatsangehörigkeit

Polnisch

Bulgarisch

Sonstiges (Bitte angeben)

17. Sind Sie

männlich

weiblich

18. Geburtsjahr

19a. Haben Sie einen (Ehe)Partner (Freund/Freundin/Ehefrau/Ehemann)?

Nein **Ja**

19b. Wenn ja, bitte Staatsangehörigkeit angeben?

20. Haben Sie Kinder?

Nein **Ja**

21. Titel

22. Vorname

23. Nachname

24. Email (geschäftlich)

25. Email (privat)

26. Adresse:

27. Telefon (mit Landesvorwahl):

28. Sind Sie damit einverstanden, dass wir uns im Rahmen dieser Studie eventuell mit Ihnen in Verbindung setzen

Ja

Nein

Vieln Dank für Ihren Beitrag zu dieser Studie.



Questionnaire for Scientists based in Bulgaria or Poland

We are looking for scientists in Poland and Bulgaria working in academia, higher education or research institutions or industry at postgraduate level or above. To be eligible you must:

- **Be considering leaving Poland or Bulgaria to go to the UK or Germany for three months or more**
- **Or have returned from researching in the UK or Germany**

If you do not fit these criteria but you know other colleagues who do please forward them details of the project.

We would now like to invite you to complete the following short questionnaire. It should take about 10minutes to complete. The information you provide us with will be used in aggregate form, no names will be used to identify respondents and details will not be passed onto any third parties.

A summary of the findings will be posted on the project website, we will endeavour to let all participants know of published results from the project.

TO REPLY:

ONLINE: Complete the questionnaire online at www.law.leeds.ac.uk/mobex

BY EMAIL: Complete this Word version of the questionnaire, save and email to: mobex@leeds.ac.uk

If possible, please try and return this questionnaire within two weeks of the date of receipt (final deadline 11th February, 2005)

A summary of the findings will be posted on the project website. We will endeavour to let all participants know of published results from the project.

If you have any questions about the questionnaire or the project please do not hesitate to contact the Project Director (Professor Louise Ackers) at H.L.Ackers@leeds.ac.uk or by phone on 00 44 (0) 113 3437040

Thank you for your assistance in this research,

Louise Ackers

Centre for the Study of Law and Policy in Europe

If you would like to add anything to your answer or comment further there is additional space at the end of the questionnaire.

For each answer select one category only

Discipline

1. Could you assign yourself, in terms of your training and experience, to one of the broad discipline areas below:

- Physical Sciences
- Biological Sciences

Current Position

Sector

2. In which sector is your *main* research position currently based?

- Higher Education Sector (University)
- Research Institute
- Industry (including spin-off companies)
- Other (please specify)

3. What is your main *job title* (please specify)

4. We would like to get an impression of seniority for sampling purposes. Can you say which of the following **best** describes the 'level' of your current research position (for industrial scientists please select your equivalent level):

Junior

[*In Poland:* Doctoral candidate; assistant; senior assistant; research assistant]

[*In Bulgaria:* Doctoral candidate, Assistant Professor (3 categories), Researcher (3 categories)]

Intermediate

[*In Poland:* post-doctoral /research fellow; assistant professor; adjunct]

[*In Bulgaria:* PhD holder, Associate professor (Docent), Senior Researcher Category II]

Senior

[*In Poland:* senior researcher; group leader; Associate professor (DOCENT); Professor]

[*In Bulgaria:* DSc., Professor and Senior Researcher Category I]

5. Is your current *main* position?

- Unpaid work
- Temporary (less than 12months)
- Temporary (13-36months)

- Temporary (over 37months)
- Permanent

Career and Mobility

6. How important is mobility (working abroad) to making research contacts and networks in your field?

Not Very Important

Very Important

1

2

3

4

5

7. In chronological order, starting with your undergraduate degree, please indicate on the following table **any periods of 3 months or more you have spent researching abroad**

Start Year	Number of months	Please describe the type of position/scheme <i>(e.g. mobility scheme / fellowship scheme/ employment type)</i>	Country

8. How long have you been back in **Bulgaria/Poland** following a period of research abroad?

- Not applicable have not worked or studied abroad
- Up to 3 months
- 4-6months
- 7-11month
- 12 months
- Between 13 and 24 months
- Between 25 and 36 months
- Over 3 years

9 a. Do you have an intention or plan to live and work abroad in the future?

- Unsure
- No
- Yes, intention
- Yes, firm plans arranged

9b. Please explain your answer

9c. If you answered 'yes' to 9a above please state your preferred country/location

10a. Would you consider working in the UK in the future?

- No
- Yes
- Unsure

10b. Please explain your answer

11 a. Would you consider working in Germany in the future?

- No
- Yes
- Unsure

11b. Please explain your answer

12a. Overall, what impact, if any, do you think scientific mobility has had or will have on scientific research in (Please select one):

- Poland**
- Bulgaria**

**Very
Negative**

**Very
Positive**

1

2

3

4

5

12b. Please explain your answer

13. Please use this space for further comments:

Personal details

14. Current Country

15. Current City

16. Nationality

Polish

Bulgarian

Other Please specify

17. Gender

Male

Female

18. Year of birth

19a. Do you have a partner (boyfriend/girlfriend/husband/wife)?

No Yes

19b. If yes, please state your partner's nationality?

20. Do you have any children?

No Yes

21. Title

22. First name

23. Family name/Surname

24. Work Email

25. Personal email

26. Correspondence Address:

27. Contact Tel (including country code):

28. Please let us know if you would be happy to be contacted in the future about this study.

Yes

No

Thank you very much for your contribution to this research.



Fragebogen für Naturwissenschaftler in Polen und Bulgarien

Wir suchen Naturwissenschaftler in Polen und Bulgarien die in der akademischen Welt, an einer Hochschule, in einem Forschungsinstitut oder in Industrie tätig sind und mindestens promovieren oder erfahrener sind

Sie sind teilnahmeberechtigt wenn:

- **Sie entweder die Absicht haben Polen oder Bulgarien zu verlassen um für mindestens drei Monate in Deutschland oder dem Vereinigten Königreich zu arbeiten**
- **Oder Sie nach einem Arbeitsaufenthalt in Deutschland oder dem Vereinigten Königreich wieder nach Polen oder Bulgarien zurückgekehrt sind**

Falls Sie nicht teilnahmeberechtigt sind, aber jemanden kennen der es ist, geben Sie bitte diese Informationen weiter.

Wir möchten Sie jetzt bitten einen kurzen Fragebogen auszufüllen. Das sollte etwa 10 Minuten dauern. Ihr Beitrag wird nur als Gesamtsumme verwendet, es werden keine Namen benutzt um Sie mit ihren Antworten zu verbinden oder Sie zu identifizieren und Ihre Personalien werden an keine weiteren Personen weitergegeben.

Eine Zusammenfassung der Ergebnisse dieser Studie wird auf unserer Internetseite erscheinen. Wir werden versuchen alle Teilnehmer über Publikationen von diesem Projekt zu informieren

Um teilzunehmen:

ONLINE: Füllen Sie den Fragebogen unter www.law.leeds.ac.uk/mobex aus

PER EMAIL: Füllen Sie diese Wordversion aus und emailen Sie die an: mobex@leeds.ac.uk

Bitte versuchen Sie den Fragebogen innerhalb von zwei Wochen aber spätestens bis 11 February 2005 zu beantworten

Wenn Sie noch Fragen zu dem Fragebogen oder der Studie haben wenden Sie sich bitte an die Projekt Leitung (Professor Louise Ackers) email: H.L.Ackers@leeds.ac.uk

Vielen Dank für Ihre Hilfe mit dieser Studie,

Louise Ackers

Centre for the Study of Law and Policy in Europe

Wenn Sie kommentare oder Anregungen haben oder ihre Antworten ergänzen möchten, haben Sie unten bei Frage 13 noch Platz.

Bitte kreuzen Sie für jede Frage nur eine Antwort an.

Fachbereich

1. Ist Ihre Ausbildung und Erfahrung eher in

Physik

Biologie

Jetzige Stellung

Bereich

2. In welchem dieser Bereiche ist ihre hauptsächlich Forschungsstelle?

Hochschule

Forschungsinstitution

Industrie

Sonstiges (bitte angeben)

3. Was ist die Bezeichnung Ihrer hauptsächlich Forschungsstelle (bitte angeben)

4. Welcher dieser Ausdrücke bezeichnet am Besten Ihre jetzige hauptsächlich Forschungsstelle.

Nachwuchs Wissenschaftler

[In Polen: Promovenden; Wissenschaftliche Mitarbeiter; Forschungsassistent]

[In Bulgarien: Promovenden; Assistent (Kategorie 3); Forscher (Kategorie 3)]

Wissenschaftlicher Mittelstand

[In Polen: post-doctoral; Assistent; Adjunkt]

[In Bulgarien: PhD, Dozent; Forscher Kategorie II.]

Erfahrener Wissenschaftler

[In Polen: Erfahrener Wissenschaftler; Gruppenleiter; Professor, Dozent]

[In Bulgarien: Dsc.; Professor; Erfahrener Wissenschaftler Kategorie I;]

5. Ist Ihre jetzige hauptsächlich Stellung?

Unbezahlt

Befristet (weniger als 12 Monate)

Befristet (13-36 Monate)

Befristet (mehr als 37 Monate)

Unbefristet

Karriere Und Mobilität

6. Wie wichtig ist Mobilität (in einem anderen Land arbeiten) um Forschungskontakte, Netzwerke und Wissenschaftlichen Austausch aufzubauen?

Nicht sehr

Sehr
Wichtig

Wichtig

1

2

3

4

5

7. In chronologischer Reihenfolge, seit Ihrem ersten Studiengang, geben Sie bitte alle, mindestens drei monatige, Auslandsaufenthalte an.

Anfangs-jahr	Dauer (in Monaten)	Stipendium/Stelle /Position (z.B;Name des Mobilitätsprogramms/ Stipendiums oder Art der Arbeitsstelle)	Land

8. Seit Ihrem Auslandsaufenthalt, wie lange sind sie wieder in Polen/Bulgarien?

Nicht zutreffend, ich war nicht im Ausland

bis zu 3 Monaten

4-6 Monate

7-11 Monate

12 Monate

13 -24 Monate

25 - 36 Monate

Über 3 Jahre

9 a. Haben Sie die Absicht in der Zukunft im Ausland zu leben und arbeiten? ?

Weiss ich nicht

Nein

Ja, ich habe die Absicht

Ja, ich habe schon konkrete Pläne

9b. Bitte begründen Sie Ihre Antwort

9c. Wenn Sie zu 9a 'ja' geantwortet haben, geben Sie bitte Ihr bevorzugtes Land an

10a. Würden Sie in der Zukunft im Vereinigten Königreich arbeiten wollen?

Nein

Ja

Weiss ich nicht

10b. Bitte begründen Sie Ihre Antwort

11 a. Würden Sie in der Zukunft in Deutschland arbeiten wollen?

Nein

Ja

Weiss ich nicht

11b. Bitte begründen Sie Ihre Antwort

12a. Was für Auswirkungen hat wissenschaftliche Mobilität auf wissenschaftliche Forschung (oder wird sie haben) in (Bitte angeben):

Polen

Bulgarien

					Sehr
	Sehr				Positiv
	Negativ				
	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

12b. Bitte begründen Sie Ihre Antwort

13. Sonstige Anmerkungen (Kommentare, Fragen oder Anregungen):

Ihre Personalien

14. Jetziges Aufenthaltsland

15. Jetziger Aufenthaltsort/ jetzige Stadt

16. Staatsangehörigkeit

- Polnisch
 Bulgarisch
 Sonstiges (Bitte angeben)

17. Sind Sie

- männlich
 weiblich

18. Geburtsjahr

19a. Haben Sie einen (Ehe)Partner (Freund/Freundin/Ehefrau/Ehemann)?

- Nein Ja

19b. Wenn ja, bitte Staatsangehörigkeit angeben?

20. Haben Sie Kinder?

- Nein Ja

21. Titel

22. Vorname

23. Nachname

24. Email (geschäftlich)

25. Email (Privat)

26. Adresse:

27. Telefon (mit Landesvorwahl):

28. Sind Sie damit einverstanden, dass wir uns im Rahmen dieser Studie eventuell mit Ihnen in Verbindung setzen

- Ja
 Nein

Vielen Dank für Ihren Beitrag zu dieser Studie.

**APPENDIX 4: ENHANCED STIPENDS PROJECT
QUESTIONNAIRE**



AIRR

Assessing the Impact of the Roberts' Review on Salaries and Stipends



Dear doctoral researcher,

The Centre for the Study of Law and Policy in Europe, University of Leeds has been contracted by RCUK to undertake a study concerned with remuneration levels of research council funded doctoral and contract researchers.

If you are a research council funded doctoral candidate (with a maintenance award) please complete the short questionnaire overleaf about your views on salaries and stipends. It should take no more than ten minutes of your time.

Evidence from this survey will be presented to the Research Councils and Government – it may influence future policy and expenditure so please find the time to send us your views. The consultation is open until 1st November 2005.

The data from this survey will be held anonymously and securely by the research team. Individual's responses will not be made identifiable to Research Councils or institutions.

Many Thanks,

Professor Louise Ackers

Centre for the Study of Law and Policy in Europe

School of Law

University of Leeds

LS2 9JT

Project website: www.law.leeds.ac.uk/airr

Doctoral research

1 .When did you register for your PhD?

Month Year

2. Are you now registered?

Full Time

Part Time

3. Which research council(s) funds your stipend?

AHRC BBSRC ESRC Don't know

EPSRC PPARC MRC

NERC CCLR Joint funding

4. What is your research field?

5. Which main area is your research field in? Discipline

6. Which institution are you doing your PhD at?

7. Why did you decide to do a PhD?

8. How important was the level of stipend in your decision about when, and where, to do a PhD?

9. What was your main occupation prior to your PhD (select one option)?

Full time Education

Part-Time Education

Employed in research

Employed outside research

Unpaid research

Career break

Other please explain

If you were employed, which sector did you work in?

University

Research Institute

Large Industry

Industry - Small -Medium enterprise

Non-governmental organisation

Other – please specify

10. Did you approach the institution to submit a PhD proposal or did you respond to an advertised position?

I approached the institution

I responded to an advertised position

11. Do you have a CASE / Knowledge transfer studentship?

Yes

No

Don't know

12. What is your stipend level for this year?

£

13. Does this include London allowance?

Yes

No

14. How competitive is your PhD stipend with alternative employment options available to you?

Stipend more

Stipend equivalent

Stipend less

Unsure

Please explain

15. How satisfied are you with the amount of your stipend?

Very dissatisfied

Very satisfied

1 2 3 4 5

Please explain

If you are dissatisfied with your stipend level – please explain how much would make a difference to you?

16. Do you have any other regular forms of income?

If yes, Please explain

17. Are you aware of the money available following the Roberts Review to enhance Research Council stipends in priority areas? (*This refers to a supplement on top of the general stipend increases*)

Yes

No

D/K

If yes, are you in receipt of a Roberts priority area enhanced stipend?

Yes

No

D/K

18. How satisfied are you with your doctoral position generally?

	Very dissatisfied				Very satisfied
No. of working hours	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Flexible working	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Workload	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Work environment	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Supervision	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Job prospects	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
Opportunities for training	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

19. Do you think that academic research careers in the UK are attractive in your field?

Very Unattractive Very attractive

Please explain your answer

20. What do you plan to do after your PhD?

21. How old are you?

Years

22. Gender:

Male

Female

23. Nationality:

24. What classification did you get in your first degree? Classification

25. Do you have a Masters degree?

Yes

No

26. Do you have any further comments related to pay, recruitment or retention in your field?

Thank you for your time

APPENDIX 5: INTERVIEW SCHEDULES

*MOBEX2 Interview Schedule
For use with scientists in the UK and Germany*

Please check responses against questionnaire responses

Education and Employment History

(check response to Qs2-5 and Q10)

Trajectory

Current position

Do you continue to hold a position (honorary or otherwise in the sending country?)

Prompts: type of school (language skills); where educated/problems with mutual recognition; experiences re discrimination etc. (nationality/gender)

Do you find the work culture different abroad?

Mobility and Migration History

Education – impact of length / language / quality on location. Fees.

The importance of mobility to career progression (check response to Q6)

Why did you decide to move abroad?

Migration Motivations (primary factor?)

(prompt: getting a job at all; doing good science; living standards; pay; family; language issues)

Do similar motivations shape return decisions?

Periods spent abroad – other migration episodes

(including return (since childhood)

(check response to Q7)

Any problems in relation to mobility?

(prompt: legal; tax; pensions; childcare, healthcare etc)

Length of stay

How long do you plan to stay working abroad?

Do you think the length of stay will impact on your ability to return?

How happy are you here?

Location Decisions

(prompt: proximity; language; centres of excellence)

Name:

Educated outside home country at undergrad?

Educated outside home country for 3 months or more

Not educated outside home country for 3 months abroad

Whole University Qualification awarded outside home country?

Yes No

If yes:

Undergrad country _____

Masters country _____

PhD country _____

Other country _____

Level at first mobility (of 3 months or longer)

School

UG

Post-grad/PhD

Post-doc - Intermediate career

Senior career

No. of International Moves for research (including return – including PhD not before)

0 prospective leaver

1 international move

2 international moves

3 international moves

4 international moves

5 or more international moves

Number of countries WORKED in - including 'home' country (incl PhD)

Never worked in home country (including PhD)

1 2 3 4 5+

Experience out of EU

None

Mobility outside EU during education

Mobility outside EU during employment

TOTAL Length of time abroad (altogether)

(Confirm tally with q're)

0 months prospective leaver

1-6 months

7-12 months

13-24 months

Between 2-5 years

More than 5 years

Future Plans

(check response to Q 8 and 11)

For career and mobility?

Collaborations, Networks and Connections

(importance to current migration episode – and previous and to career progression; retention of networks after moves etc.)

Any contacts with home country – how does this work? (Probe for instigating visits to host country?)

Co-authorship at home? Disseminate / publish at home?

Professional visits abroad in last year?

Conferences/research visits/labs – who instigates, where and for what purpose?

(value to networks and career progression)

Home country – what did you do? If not why not?

Impact of European integration on these processes – EU policies etc?

EU Enlargement on quality/quantity of science migrants?

Is it attractive to stay in Europe or go elsewhere? (any impact national policies?)

Views about the impact of scientific migration on:

Receiving

(prompt – ability to use the skills they had – nature of any training they've had and usefulness of it)

Sending countries

(check response to Q12)

(prompt – ability to use the skills they have developed on return?)

Demography - Gendered dimensions

Recruitment practices in sending / receiving regions?

Personal/Family Situation

(cross check with Q 17-20)

Family's whereabouts and occupation, mobility as (impact of family on the ability to move etc and on staying?)

Partnering – impact of mobility and of dual careers?

Parenting? Influence location and impact on career?

Financial Issues

Remittances (amount, frequency ad hoc or regular and purpose) **Pay brackets**

Poland only – this visit

- Moved pre-accession
- moved post-accession

Length of time abroad this visit

- N/A Leaver or returnee
- 1-6months
- 7-12months
- 13-24months
- Between 2-5years
- More than 5years

Time left to run on current contract

- Permanent / open-ended
- 0-6months
- 7-12months
- 13-24months
- Between 2-5years
- More than 5years

Return status

- Returnee
- Returned but left again - no plan to return
- Returned but left again - with plan to return
- No return so far - none planned
- No return so far - return planned
- N/A Prospective leaver

Home country in professional networks

- home country in professional network
- home country not in professional network

Family migration history

- Moved as child
- No mobility as child
- No data

Partnering CURRENT status -

- Dual career couple
- Dual science career couple
- Couple - single career only
- Single

Partner's whereabouts

- Living in same country
- Living in other country
- N/A Single

Location of children

- N/A no children
- Living in same country
- Living in other country
- Living in different countries (e.g children separate)



Interview Schedule - PhDs

Please check responses against questionnaire responses

Background

Where are you from?
How long here (if abroad)?

Current research

How long have you been doing your PhD?
How long will it take?
How does the PhD work – is it part of a team, is it linked to a project?
Does the PhD have a comparative component? ((i.e. a focus on more than one country?)
What sort of institution (RI, HE)
Who is it funded by? (any additional funds?)
Nationality of supervisor and of fellow PhD students
Which language do you work in / will you submit your thesis in?
Do you think mobility / international experience is relevant to your specific doctoral project?

Education and Employment History

Prompts: type of school (language skills including none); where educated/problems with mutual recognition; experiences re discrimination etc. (nationality/gender)
Employment? Before PhD, during studies/PhD

Mobility and Migration History

Any migration episodes before PhD (since childhood?)

Been abroad during PhD?

If Immobile:

If not why not?[No opportunities/need/alternatives?] Any other study related travel?

If mobile:

Where, when for how long, what purpose?
How did you fund going abroad?
Why did you decide to study abroad?
How did you decide on your location/s?

Migration and return Motivations (primary factor?)

(prompt: getting a job at all; doing good science; living standards; pay; family; language issues)

Any problems in relation to mobility?

(prompt: legal; tax; pensions; childcare, healthcare etc)

How happy are you here?

Do you find the work culture different abroad?

How common is mobility in their field? (did this limit where they went or give more options?)

Personal/Family Situation

Impact of family on the ability to move or not? (Partnering / Parenting/ Other caring responsibilities?)

Length of stay and returns

How long do you plan to stay working abroad? Have you extended your stay?

Collaborations, Networks and Connections

How far have professional contacts influenced your decisions about the PhD (and mobility)?

Do you feel you have an international network of professional contacts?

How important was the idea of building networks to your plans for going abroad?

Any contacts with home country – how does this work? (Probe for instigating visits to host country? Co-authorship at home? Disseminate / publish at home?)

Future Plans

Do you intend to go abroad in future? (*other alternatives?*)

Where, and why? When and how long for?

If not, why not?

Plan to stay in academic / publicly funded research?

Is it attractive to stay in Europe or go elsewhere? (*any impact national policies?*)

General issues

Do you think international experience is important for your future career or not? If so how?

Do you think there are any significant barriers to international mobility in your discipline? (*what are they and did you personally experience them?*)

Do you have any suggestions for improving opportunities for international experience / mobility in the social sciences?

AIRR Project - Draft Interview Schedule – Doctoral Candidates

Education

When did you start your PhD?

Did you do a masters before? (funded?)

(Roberts money only came in Jan 04 so was the doctorate applied for / started after this?)

Did you consider alternatives to a PhD or other career routes?

why/why not?

Who is funding you?

What was the process of doing this PhD?

How important was the stipend level to you when deciding whether and where to do a doctorate?

How much do you receive/ when?

Is your doctorate f/t or p/t?

Do you know how competitive UK research council stipends are with under funders? Did that influence doctorates you would apply for?

Internationally/ with other sectors/ careers / research funders e.g. charities/?

Employment

Please give a summary of your employment history?

Positions/where/ contract length / funders

Were any of these full-time occupations? How did their pay compare to your PhD stipend?

What do you hope to do following your PhD?

Sector / type of position / contract /location

Which factors are important for you in selecting a job?

How important will pay be in determining this?

What level of salary will you be looking for?

If you plan to leave research why?

Roberts' money for enhanced salaries and stipends

Do you know whether your field is classed by the UK research councils as an area facing skills shortages/ problems in recruitment?

Why do you think this is?

Have you heard of the Roberts' review money that is available to enhance stipends and salaries?

If so how / where/ when?

Do you know whether your stipend has been enhanced in your PhD position?

If yes – when/ what level how much for and who made the case? Success?

If not why not?

How much money makes a difference to a doctoral position? Why?

Do you think enhanced stipends would improve the recruitment of doctoral candidates in your field?

AIRR Project - Draft Interview Schedule – Director of Postgraduate Research

Background

Do you know whether there are departments in your institution that are experiencing difficulties in recruiting good quality doctoral candidates?

If yes – where? Why do you think this is?

Do you have strategies in place to try and deal with this?

If no – why not

Is student debt an factor?

Where do you recruit most doctoral candidates from?

UK/EU/overseas?

What proportion are funded by UK research councils?

Do you recruit part-time doctoral students?

Do you know the destinations of your doctoral candidates?

Do people go into University research careers? Any problem areas you know of?

Roberts' money for enhanced salaries and stipends

Have you heard of the Roberts' review money that is available to enhance stipends and salaries?

If so how / where/when?

Did you notify people in your institution about this funding?

Why / why not?

Who targeted? How? When?

What was the response?

Do you know whether your institution applied to the research councils for any enhanced stipends for doctoral candidates?

Which disciplines?

The process of this – who made the case?

Success rates?

Were there any problems with this?

If not why not?

Do you know of any plans in your institution to apply for enhanced stipends or salaries in the future under this scheme?

Why? Why not? How much makes a difference?

Are there any difficulties institutionally in introducing enhanced stipends and salaries into specific fields?

How does it fit with University policy / strategies? How does it fit with pay spine

Do you think the level of research council stipends influence other funding schemes?

How so examples?

Structuring Effect – Impact on other stipends etc? Consequences