

Institution: The University of Edinburgh
Unit of Assessment: 23 Sociology
<p>a. Overview</p> <p>The Sociology Unit of Assessment (UoA) includes two parts of Edinburgh's School of Social and Political Science (SSPS): (i) the Sociology Subject Area and (ii) Science, Technology and Innovation Studies (STIS), a new multidisciplinary subject area created in 2008 in recognition of the success of Edinburgh work in science and technology studies. Also in the UoA are: the members of the School's Centre of African Studies whose work is closest to Sociology and/or STIS; and two other scholars who also work closely with us: Aitken (Centre for Population Health Sciences) and Bomberg (Politics Subject Area). The component parts of the UoA collaborate intensively via joint PhD supervisions, joint research grants and a shared overall research strategy.</p>
<p>b. Research strategy</p> <p>Our goal is the growth and deepening of an already large and vibrant community of scholars, active across a wide range of specialisms in sociology, STIS and African studies. We aim to be intellectually innovative, flexible, inclusive, enabling and capacity-building. We foster intellectual diversity rather than impose homogeneity: eg STIS research now goes well beyond its roots in the sociology of science and technology to encompass directly policy-relevant studies of innovation.</p> <p>A major characteristic of Edinburgh sociology, from the time of Tom Burns onwards, is theoretically-informed empirical work. We specialise in helping to pioneer and then continuing to foster new areas of sociological research. Examples of such areas – from the now well-established to the still nascent – include the sociology of scientific knowledge (where a critical role was played by David Bloor's 'strong programme' and by the 'Edinburgh school' he co-founded); the sociology of intimacy (Lynn Jamieson); the sociology of auto/biography (Liz Stanley); the sociology of finance (Donald MacKenzie); and the sociology of energy (Jan Webb and colleagues).</p> <p>Our RAE 2008 strategy had a similar emphasis on innovation, flexibility and capacity building. The entirety of this submission is the evidence for its success, but highlights include:</p> <ul style="list-style-type: none"> • Research income that now averages £1.93 million per year, from a growing range of sources (in the previous assessment period the annual average was £1.42 million). • Eight externally-funded fellowships won by researchers close to the start of their careers: five highly competitive postdoctoral fellowships, which brought us strong ECRs (early-career researchers: Aitken, Fanelli [two fellowships], Haig, Joseph); two knowledge transfer fellowships won by Bruce; and Mastroeni's prestigious Diefenbaker Policy Fellowship. • Nine further externally-funded research fellowships or equivalent, four large (£415k to €2.18 million), won by mid-career (Crozier, Haddow, Hearn, Sturdy) as well as senior staff: P. Jeffery (two), R. Jeffery, MacKenzie, Stanley. • 70 other new research grants, again well spread across early/mid-career and senior staff, including big UoA-led grants such as Webb's £925k 'Heat and the City' (RC-UK) and participation in large consortia such as PISCES (£4.61 million: see Bioenergy Impact Case). • 12.5 FTE net new core-funded positions (10 departures/retirements; 22.5 FTE new posts), made possible by much increased research income and overall income. • Achievement, via this new recruitment and the career development of existing early- and mid-career staff, of the necessary generational renewal of the Sociology UoA. Eg 32% of the members of the UoA are within six or fewer years of completion of their PhDs; half of the UoA within eleven years or fewer. • Growth of the UoA to 58.14 FTE, an increase of 26% from RAE2008 and two and a half times the size of our RAE2001 submission. • Leading in the creation of the largest of the ESRC Doctoral Training Centres (the Scottish DTC, directed by UoA member Crow and physically based in our School), and in the consortium that won £1.98 million from the Scottish Funding Council to create around it the Scottish Graduate School of Social Science (also directed by Crow), covering 16 HEIs and all the social sciences. • 72% increase in PhD awards per year relative to the previous assessment period. • 45 Edinburgh PhDs successfully launched in academic careers in 38 HEIs/research institutes since 2008: 23 in UK universities and 22 in HEIs/institutes in Australia, Canada, China,

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Colombia, Finland, Germany, Hong Kong, India, Ireland, Korea, Luxembourg, Taiwan and US.

b.1 Research clusters

All our areas of research have been strengthened considerably since 2008, by the achievements of existing staff and by recruitment, and we have added two new specialisms: the sociology of energy and quantitative methods.

The goal of our work on **national identity** is to understand the complex matrices of its negotiation, attribution and mobilisation. See the relevant publications in REF2 by Bond, Gorringer, Hearn, Kennedy, McCrone and Rosie: for example, Kennedy's *Liberal Nationalisms* (McGill-Queen's University Press, 2013), a comparative study of Scotland and Québec which disentangles the shaping of nationalism by empire, state and civil society. The crucial new recruit to this cluster is Riga, with, for instance, her landmark historical-sociology demonstration of how the 'universalist', class-oriented Bolshevik party was actually rooted in the complex ethnic politics of the Russian empire (in 2009, Riga's REF2 reserve item won an Honorable Mention for Best Article in Comparative Historical Sociology from the American Sociological Association).

The closely linked research on the **sociology of culture and narrative/(auto)biography** includes: Bancroft's pioneering sociology of intoxication; Orton-Johnson's research on digital culture; Stanley's £690k Schreiner Letters project and her new ESRC Professorial Fellowship on 'whites writing whiteness'; Darmon's mobilisation of Weber's writings on the Western harmonic system, almost entirely neglected in the Anglophone literature; and the growing recognition of Prior's work in the sociology of music, evidenced by multiple recent invitations to speak on it in, for example, Australia, Austria, France and Taiwan.

Strengthening what was in 2008 our small cluster of researchers on the **sociology of relationships** has been a particular strategic priority. To our existing researchers (Jamieson, who has been focusing since 2008 on solo living, men's role in fertility decisions, and on how family practices relevant to sustainable lifestyles are transmitted; and MacInnes, who is analysing the huge consequences of demographic change) we have added three new recruits: Brownlie and Holmes, who share interests in 'emotions culture', reflexive practices, relationships and the socio-cultural and historical contexts in which these unfold (see, for example, Brownlie's REF2 item 4, with its pioneering examination of the reflexive methodological aspects of investigating emotional lives); and Crow, with his influential work on families, communities and relevant research methods.

Edinburgh's leading position in the **sociology of finance** has been strengthened by a €2.175 million European Research Council Advanced Investigator Grant to MacKenzie, the largest ever in this field worldwide. MacKenzie's REF2 item 3 won the American Sociological Association's inaugural Granovetter Award, for the best article in economic sociology in the last two years. Hearn too is developing work in this field, subverting the notion of 'salvage ethnography' by applying it to the Scottish finance sector.

Kemp's work on **social theory and philosophy of the social sciences** is becoming increasingly influential: his REF2 item 3 (which develops a critical, evaluative approach to actors' 'interests', which identifies problems and limitations in actors' understandings of those interests without a *priori* invoking 'real' or 'objective' interests) was joint winner, with Michael Burawoy, of the 2013 SAGE prize for the best article in *Sociology*. Many other UoA members also contribute here: see, for example, Hearn's rethinking of the conceptualisation of power and of legitimacy, and his new work, funded by a year's Fellowship from the Independent Social Research Foundation, on the formation of modernity and liberal societies. Adding to our strength in social theory is now Darmon: see eg her Weberian critique of the influential work of Boltanski and Chiapello (REF2 item 2).

The excellence of the in-depth ethnographic work of our scholars in **South Asian studies** has led, for example, to major funding successes: Gorringer's £220k ESRC grant on Dalit politics and democratisation in Tamil Nadu; a series of large grants won by R. Jeffery (see section c.i and section d); the creation of the Edinburgh India Institute, directed by R. Jeffery; and the two Fellowships (Leverhulme and British Academy/Leverhulme) won by P. Jeffery. The crucial new recruit here is Govinda, with a background in intensive ethnographic work on social movements, who is developing exciting new research on the gender politics of development in 'urban villages' (rural villages swallowed up by expanding metropolises such as Delhi).

The **Centre of African Studies** has grown particularly fast since 2008, with its core-funded academic staff expanding from 1.5 to 7.5 FTE. It is represented here by five very promising early-career researchers (ECRs) – Chinigo, Haig, Joseph, Kingsley and Taylor – and by a 2008 ECR, Molony, who has done pioneering work both on the huge changes being brought about in Africa by mobile telephony and on biofuels (REF3b Bioenergy Impact Study).

STIS's mid-career generation is now rising to prominence, for example with Hadow's £289k Wellcome Trust Ethics and Society University Award (which at the end of its five years becomes an open-ended academic position at Edinburgh), and Sturdy's £822k Wellcome Trust Senior Investigator Award. STIS's early-career researchers already have striking successes. For instance, Frow's first publication in the field is in the very prominent *Social Studies of Science*, and she has been elected to the Royal Society of Edinburgh's Young Academy of Scotland, which brings together the 'most able and innovative young academics' and other professionals in the country. STIS's most senior scholars also remain hugely active intellectually. See, eg: Williams's co-authored *Software and Organisations* (Routledge, 2009), which articulates what is becoming the highly influential 'biography of artefacts' approach; and Bloor's *The Enigma of the Aerofoil* (Chicago, 2011), an extended historical sociology of aerodynamics, which both exemplifies and extends the 'strong programme' approach to the sociology of scientific knowledge. Yearley led ESRC's largest knowledge-exchange venture, the Edinburgh-based Genomics Forum (£5.46 million), which has greatly enhanced our knowledge-exchange work by providing a platform for much experimentation with diverse means of achieving impact: see REF3a for details.

As noted above, an important strategic decision we have taken in respect to STIS is to develop its multidisciplinary policy-oriented aspects, already ably pursued (mainly within the £7.2 million ESRC Innogen Centre, set up by Tait and now led by Castle) by current or RAE2008 ECRs such as Bruce, Knight, Mastroeni, Mittra, Parry and Rosiello. This has involved both senior recruitment (of Castle, a leading North American specialist in life-science innovation) and the development of an entirely new focus of research, on the sociology of fire safety, led by Spinardi, for which £400k has already been secured from the Ove Arup Foundation and Royal Academy of Engineering.

Our most important new and developing initiatives are two new clusters of research. The cluster on **the sociology of energy** was a RAE2008 plan for research on energy and the environment, which we have implemented by: reorientation of the work of existing staff members (in Sociology, Webb; in STIS, Bruce, Parry & Spinardi; in African Studies, Molony); the recruitment of new staff already working in the area (Bolton, Haggett); and collaboration with staff outside of Sociology/STIS (Aitken, Bomberg, and others reported to other UoAs). Substantial grant income for this research has been won with, for example, Molony's £4.61 million PISCES consortium; Webb et al.'s £925k ESRC and £2 million EPSRC grants on district heating and on domestic energy use; Parry's £252k share of a £1.5 million grant from ESRC, Defra and the Scottish Government to the Sustainable Practices Research Group; and the £241k ESRC 'Greening Air Travel' grant to Spinardi. This research is now starting to feed through into publication (see the relevant outputs in REF2), and over the next five years we expect it to have a growing focus on the sociology of energy markets, broadly similar in nature to our successful existing work on the sociology of financial markets.

The second new cluster is **quantitative methods**, the development of which has been headed by ESRC quantitative methods 'champion' MacInnes. It has involved the recruitment of three new members of staff (Gayle, Spijker, Viry) with high-level quantitative skills, and deep involvement in the ESRC/Scottish Funding Council Applied Quantitative Methods Network (AQMeN). Our School has been selected by ESRC and Nuffield as one of the 15 Q-Step UK centres of excellence in quantitative methods training. Funding of £1.46m to Edinburgh will permit appointment in 2014 of a new quantitative-methods lecturer in Sociology and three other new lectureships in our School.

b.2 Monitoring success and development of institutional underpinnings of research

We monitor the success of our research strategy via metrics such as quantity of research income and via mutual accountability: annual cumulative lists of publications by all teaching and research staff are circulated to all members of the UoA, making visible the most concrete indicator of whether goals are being achieved. Even with much more stringent evaluation criteria applied to those publications than in RAE 2008, all eligible members of the UoA are once again being put forward here for assessment (an outcome that we value greatly because of our strong commitment to a deep and inclusive research culture). Staff regularly discuss research progress in staff

meetings and more specific ad hoc groups, and across the UoA at least seven days annually are set aside for collective discussion of research, involving not just staff but also doctoral researchers. (We view our postgraduates as the earliest-career of our researchers, not simply as 'students'.) Annual review meetings with individual members of staff – which are collegial and constructive, rather than 'appraisals' – focus strongly on research, publications, academic leadership and impact. We are committed to open access: from January 2014 we will be making the full text of effectively all research outputs accessible free of charge to the general public, via the new Edinburgh Research Explorer system.

We have four **priority development areas** in terms of the institutional underpinnings of our research. First, and most important, is **postgraduate research training**. We will strengthen it:

- intellectually, for example by further building provision for advanced quantitative training, such as in Bayesian statistics and in the management and analysis of 'big data' (mass transactional data), and by introducing Knowledge Exchange 'masterclasses' to strengthen the focus on impact.
- technologically, developing the online learning resources we already provide and widening the range of ways in which they can be accessed and used in training. The overall goal, on which we are collaborating with the Open University, is a dynamic virtual learning environment for postgraduate methods training.
- organisationally, revising our research training framework around a much more open and flexible model across the life of the PhD. We are revising the standard generic methods courses to take advantage of blended learning so that they can be taken as smaller units, with greater appeal to research students from other HEIs (eg Orton-Johnson's Analysing Qualitative Data unit and Haddow's Data Collection unit), and developing new specialist research training workshops on topics such as action research, elite interviewing and social network analysis. Along with the further development of online resources, modularisation allows part-time students more easily to combine coursework with career and other commitments and attracts researchers outside academia (eg from the Scottish Government and private and charity sectors) through CPD accreditation. We have also begun holding annual summer schools to bring the benefits of the Scottish Graduate School to the widest possible constituency. The inaugural summer school, held here in 2012, attracted over 200 students from across Scotland; the 2013 summer school attracted more than 250.

Our second priority development area is **broadening our research funding streams**: see section d for details. Our third priority is **administrative support**: in 2013, we created a fully-fledged Research Office, headed by our Deputy Director of Professional Services. This office has 6.8 FTE staff, including a full-time knowledge exchange and impact officer, a half-time events organiser and ring-fenced time of our School's specialist finance officer. It provides to all staff, even those working on the smallest research project, professional support of the quality that is possible in research centres such as Innogen (for which see section d). A fourth priority is **facilities**. In 2008, our School relocated to a superb building, the Chrystal MacMillan Building, specifically designed to enhance interaction among staff and doctoral researchers, but our growth means that we need more space. Our plan (already begun with expansion into nearby Georgian townhouses) is, as we grow, to expand into the buildings close to Chrystal MacMillan in Edinburgh's George Square.

c. People, including:

i. Staffing strategy and staff development

Our staffing policy is crucial to our overall goal of the growth and deepening of our community of scholars. The policy focuses on developing research capability, on providing the best possible environment for research, and on ensuring staff have the autonomy, the security, the time, the skills, and the encouragement to pursue their changing intellectual interests and to respond to emerging user needs. We seek to make all these aspects of our research environment available to all, via a strong focus on equality of opportunity.

c.i.1 Recruitment objectives and generational renewal

We have four recruitment objectives. First, we seek to recruit promising researchers at the start of their academic careers: such recruits since 2008 include Bolton, Campagnolo, Darmon, Dritsas,

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Frow, Garcia-Sancho, Govinda, Haggett, Mazanderani, Viry and Woodman. Second, in the context of what would otherwise be a dramatic switch of our 'demography' to early-career staff, we have also recruited senior staff with exceptional qualities of academic leadership: two new chairs of Sociology (Crow, Gayle), two further new senior posts in Sociology (Brownlie, Holmes) and a new chair in STIS (Castle). Third, we make open-ended appointments wherever possible. We employ fixed-term lecturers only when absolutely necessary (for example, when the funder of a Fellowship provides money that has to be spent on replacement teaching): currently, there is only one fixed-term lecturer in the UoA. We similarly minimise use of teaching fellows – again, only one at present – and when we do employ them, we ensure that they have sufficient research time successfully to pursue their careers.

Fourth, we have been completing the process of generational renewal. The generation of scholars who built sociology and science and technology studies at the University of Edinburgh have now almost all retired: we anticipate only three further retirements in the next five years. Nine open-ended teaching posts and one open-ended research post have been vacated since 2008: six staff (Bloor, Faulkner, P. Jeffery, McCrone, Raffel and Tait) have retired; we have suffered a death in service (Russell); Bharadwaj and Preda have been promoted to chairs in Geneva and London; Crozier will shortly leave for a position in Australia. Bloor, P. Jeffery, McCrone and Tait remain employed in post-retirement re-engagement; all other retired staff are very active intellectually and we provide them with offices and all normal academic facilities.

The above ten departures and three anticipated retirements have been replaced by 22.5 FTE core-funded positions:

- i. **20 full-time positions:** 11 new entry-level appointees listed above; five senior posts listed above; Riga; open-ended posts for three STIS or African Studies research fellows (Haddow, Molony and Spinardi).
- ii. **5 half-time 'lynchpin' positions,** designed to give a stable core-funded base, not dependent on success in raising external grant funding, for others in our very experienced cadre of research fellows: Bruce, Lyall, Mittra, Rosiello and Stewart.

c.i.2 Equality of opportunity

UoA member Hearn has been leading our School's Athena Swan/Equality Challenge Unit efforts. When the Equality Charter Mark is launched in October 2014, our School will be one of five that Edinburgh University is submitting for an ECU Bronze Award. One dimension of equality to which we have been paying special attention (because of a long-standing gender imbalance in the Sociology UoA at Edinburgh) is gender. Steps the Sociology Subject Area have taken to address this include increasing the weight given in our recruitment to quantifiable factors such as research outputs and grant income. Since 2008, the subject area has recruited to ten open-ended or tenure-track positions, and seven have been won by women, which is encouraging. (Overall, the percentage of women in the UoA has increased from 35% in RAE2008 to 40% now.)

Sociology staff meetings, for example, look and feel different now that there is a gender balance in them. Four of the ten research clusters listed above are led by women professors, and women doctoral researchers have been leading crucial initiatives such as a new series of work-in-progress seminars, the Sociology Society and a workshop on mediation and conflict resolution for students who face research situations involving confrontation and disagreement. The UoA respondents to a 2013 School-wide anonymous staff survey on equality issues gave generally encouraging assessments of our workplace culture. All of them described it as 'welcoming' or 'more welcoming than unwelcoming' and as 'non-sexist' or 'more non-sexist than sexist'. All but one respondent agreed or strongly agreed with the statement that 'staff are treated on their merits irrespective of their gender (e.g. both women and men are actively encouraged to apply for promotion...)'.

Challenges remain, nevertheless, in respect to gender, such as recruitment to new chairs (all three such recruits in the UoA since 2008 are men) and subfields (such as some areas of Science and Technology Studies) in which the recruitment pool remains largely male. Although international staff recruitment has been strong, the Global South and ethnic minorities in the UK are significantly underrepresented among our staff. Support for staff with disabilities/health problems that impinge on their work has, however, been good: eg a staff member with a chronic spinal problem is provided with several hours a day secretarial support to allow him to remain fully productive. Our

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recent recruitment includes several members of staff with non-standard career patterns: eg Darmon, bringing extensive experience of European contract research; Woodman (extensive NGO experience in China); and Mazanderani (management consultancy in South Africa).

We seek to ensure that **part-time** staff have the same opportunities for career development (eg promotion) as full-timers: Lyall, Bruce and Haddow are examples of part-time staff promoted from the entry-level research grade to a professorship and to the research-grade equivalents of lecturer and reader. We encourage flexible working: staff move in both directions between part-time and full-time as family and other individual circumstances change. Bruce and Lyall are examples of research staff who began part-time and have gradually moved closer to full-time. Haggett and R. Jeffery are examples of full-time teaching staff who have become part-time; since then, Jeffery has successfully led four research bids as PI since 2010, ranging from £26k to €3 million (see d).

Our School, SSPS, operates a **transparent workload model**, fully public to those involved, that eg helps control the load on early-career staff by giving 50% extra weight to new teaching. Sociology, STIS and African Studies have a policy of a maximum of 45 class-contact hours for early-career lecturers in their first year, and no more than 55 per year in their second and third years.

c.i.3 Competitive fellowships

As noted in section b, 17 externally-funded competitive fellowships involving payment by the awarding body of the fellow's salary costs or the costs of replacement teaching have been won during the assessment period by members of the UoA, from the earliest-career to the most senior. In addition, because we believe that institutions in a healthy financial situation have a responsibility to counter the deteriorating opportunities for early-career researchers caused, for example, by the closure of ESRC's postdoctoral fellowships scheme, we have launched two fellowship schemes of our own. The first scheme is our internally-funded one-year Chrystal Macmillan Fellowships, currently held by Davidson, Tarim and Tsilipakos (even these one-year fellowships attracted a strong international field). The second is the University of Edinburgh's Chancellor's Fellowships. This internationally advertised University-wide scheme has been exceptionally competitive because it is tenure-track, but the quality of Sociology's candidates has been such that awards have been made to four new tenure-track Fellows (Garcia-Sancho, Mazanderani, Viry and Woodman) within the UoA. We are confident that in the scheme's third round in 2014 we will be able to appoint at least two further tenure-track Chancellor's Fellows.

The sources of externally-funded fellowships include: ESRC Professorial Fellowship Scheme (Stanley), NERC, European Research Council, British Academy, Leverhulme, Wellcome Trust, Defra, Australian Research Council and the Johnson-Shoyama Graduate School of Public Policy (Saskatchewan/Regina). These fellowships have contributed to the development of the UoA in multiple ways, but most importantly by permitting the recruitment of further promising early-career researchers. For example, the awards to MacKenzie in sociology of finance and Sturdy in history of genomic medicine will permit the recruitment of five new research staff.

c.i.4 Research staff policy

We strongly encourage new research staff to become fully independent researchers as soon as possible, for example by taking full responsibility (from research design through to publication) for specific areas of research projects, and by writing their own grant applications. Extensive coaching is provided for the latter, and we provide a Research Leaders Programme (currently led by Lyall), specifically designed for new PIs, including teaching staff as well as research staff. Nearly all our most experienced research staff (for example, Bruce, Haddow, Lyall, Rosiello, Spinardi, Stewart) began their careers with us in this way. Creating core-funded 'lynchpin' posts for long-standing research staff such as these – a policy begun before the Concordat on research careers was signed in June 2008 – indicates that the Concordat's goals have long been our priority (Edinburgh University gained the 'HR Excellence in Research Award' from the European Commission in September 2010 and retained the award after its two-year review in January 2013). Our leading role in this respect in the College of Humanities and Social Science has been recognised by the appointment of UoA member Lyall as College Associate Dean for Research Careers.

Career development for research staff is provided via training courses and one-to-one mentoring for all newly appointed staff, including the opportunity to be mentored by a more experienced researcher who is not their line manager. Edinburgh's Institute for Academic Development also

provides one-on-one career coaching for all staff. Other measures to enhance the careers of research staff include: bridging funds; financial support for attendance at relevant conferences and courses (on the same terms as members of teaching staff); and 'seed-corn' research development funds, available to all staff via a simple and rapid application procedure. (An example of successful use of these funds is that an internal seed-corn grant of £7,455 to Spinardi led to his £241k ESRC grant on greening air travel.) The School has a Postdoctoral and Research Fellows Society, which for instance is represented on the School's Research Committee. All members of research staff are, for example, eligible to supervise doctoral students. A regular promotions procedure for research staff has long been in place: all of our current research staff appointed before 2008 have now been promoted from the entry grade to the grades equivalent to lecturer or higher. Two research staff (Lyll and Tait) are professors.

c.i.5 Research leave

SSPS has adopted our long-standing policy of ensuring that during semesters all teaching staff have a day a week entirely clear for research. In 2004, SSPS introduced an accelerated 'local' research leave scheme for teaching staff (one semester every three years, or one year in six; entitlement accrues during, for example, maternity or sick leave as well as when teaching) that is more generous than the University's. Initially, this enhanced provision created a 'backlog' in the Sociology Subject Area of untaken research leave, which we began to address systematically in 2007 by reorganising teaching and administrative tasks so as to permit up to four subject-area staff to take research leave simultaneously. Since 2007, all teaching staff in the Sociology Subject Area (except those appointed in 2010 or later) have had at least a year's research leave, with the exception of Stanley, heavily bought out by her £690k Schreiner letters project and ESRC Professorial Fellowship. In addressing the leave backlog, we prioritised early-career and mid-career staff: all such staff received their leave prior to any of the professors except Webb, who had just stood down from the demanding role of directing our Graduate School in Social and Political Science. In African Studies and STIS, the research time of most staff has come primarily from either employment on a research grant or heavy FEC funding by such a grant (for example, an average of over 50% for Williams and Molony, and 100% for Yearley and Sturdy for most of the period), but all teaching staff not in this situation have also had at least a year free of teaching since 2007 (again with the exception of those appointed in 2010 or later).

c.i.6 Ethics and authorship policies

Our **ethics policy** (available at www.sps.ed.ac.uk/research/ethics) is a three-level procedure, updated as new issues (for example, those raised by novel forms of web-based research) arise. The procedure is designed to minimise burden and delay for ethically unproblematic projects while ensuring detailed scrutiny of more problematic 'level-three' cases. The latter are rare in this UoA: none of the research reported here was classed level-three. Our **authorship policy** is that of the BSA, modified slightly to accommodate publications (such as Castle's outputs 3&4) in fields in which the convention is that the lead author's name appears last.

ii. Research students

Doctoral researchers are crucial members of our research community. We have awarded an average of 11.9 PhDs per year over the assessment period, an increase of 72% on the equivalent figure for RAE 2008. Studentships have come not just from ESRC but also from AHRC, Commonwealth Scholarship Commission, the Foreign and Commonwealth Office Marshall Scholarship scheme, and international funding sources such as the Open Society Foundations, the National Council on Science and Technology of Mexico and the German Business Foundation. This diversity results in a thriving, cosmopolitan community of doctoral researchers, whose skills are developed via: workshops that focus on *doing* sociological research and demystify the thinking and problem-solving involved; writing workshops in which students learn to bring reflexivity to the craft of writing, share its ups and downs, and learn how to move on to publication; participation in our seminars and conferences (see section e.4); and organising or helping organise such events.

When early-career staff (either research or teaching) supervise, we team them with experienced supervisors, and they attend seminars on best practice in supervision (we also insist that even the most experienced supervisors attend regular updating sessions). All doctoral researchers have at least two supervisors; their progression to doctoral status is judged on the basis of a full proposal by a board with four staff members, including two who are not their supervisors. All doctoral

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researchers are encouraged to present papers at professional conferences; all (including self-funded) can get help with the costs of this from the School conference fund; and all gain experience of presentation at our annual two-day postgraduate conference. Via Edinburgh's Institute of Academic Development, all doctoral researchers (and all staff) have access to a wide range of courses that enhance employability (such as courses on communication, IT skills, and business and enterprise) as well as courses on research planning and professional development. A new student-led special project fund supports initiatives such as PG-led conferences and workshops: in 2012-13, this fund supported three UoA PG-led events with total grants of £2500.

The main vehicles of our postgraduate research training are the Scottish Graduate School of Social Science (as noted, the SGS includes ESRC's Doctoral Training Centre in Scotland) and our own School's long-established, cross-disciplinary Graduate School in Social and Political Science, which is central to the SGS. These arrangements foster a postgraduate community that goes beyond subject-area and HEI boundaries. We provide advanced training to students from HEIs across Scotland through the training workshops we have been running (for example, in ethics, visual methods, augmented reality) and make a major contribution to the SGS Summer Schools, particularly around advanced quantitative training. We are increasing the integration between research training and our evolving suite of substantive Masters courses on nationalism, digital cultures, families, and global social change. As noted above, we have also been restructuring our research training courses so as to make them more flexible. Members of the UoA are heavily involved in the provision of this training, which now includes substantial e-learning content produced by a team including Bond and Orton-Johnson. The latter's e-learning work (based on her research on the topic) was commended 'as an innovating use of e-learning providing flexibility in methods teaching for postgraduates' in the 2009 C-SAP Awards. Growth in the numbers of our doctoral researchers and the rapid pace of change in respect to the delivery media of our research training has meant that even though we moved in to our current building only five years ago, expansion and reorganisation of space has been necessary: see section d.

Edinburgh Sociology, STIS and African Studies PhDs have over the current assessment period won 13 competitive postdoctoral fellowships. Our former doctoral researchers are to be found in a wide range of policy posts and similar positions in the UK, Canada, China, etc, and 45 have been launched in academic teaching and/or research careers since 2008: in the UK at Aberdeen University (S. MacLennan), Bath (S. Pervez), Bristol (M. Snellgrove), Cambridge (A. Salter), Central Lancashire (A. Kaniadakis), City (S. Friedman), Edinburgh (A. Chandler, J. Eichhorn, I. Fletcher, E. King, E. Tarim), Glasgow (C. Purcell), Goldsmiths (S. Milyaeva), Heriot-Watt (D. Leung and F. Sosenko), Lancaster (N. Markusson), Leicester (J. Fleetwood), LSE (J.P. Pardo-Guerra), London School of Hygiene and Tropical Medicine (R. Lewis), Oxford (S. Sariola), Southampton (G. Rees), Sussex (J. Chang), and York (S. Benyon-Jones); at the Max Planck Institute for the History of Science in Berlin (J. Rangel de Almeida); and at universities in Australia (Swinburne University: L. Nicholas), Canada (Toronto: D. Allman, also J. Petrunic; Concordia: M. Harsh), China (Sun Yat-Sen: X. Fang), Colombia (Rosario: C.M. Garcia), Finland (Lahti: J. Loipponen), Germany (Bayreuth: A. Urbano; Berlin School of Economics and Law: G. Frommholz; Kiel: V. Arponen), Hong Kong (Lingnan: L. Siu), India (Tata Institute: S. Wagmore), Ireland (Trinity: F. Smyth), Korea (Hanyang: S-H Kim), Luxembourg (G. Schnuer, also L. Matsau), Taiwan (National Tsing-Hua: T-D Lin; National Open: M. Huang; Chinese Culture Univ: S. Chiang) and the United States (CalState Bakersfield: I. Kasselstrand; Washington: D. Stearns).

d. Income, infrastructure and facilities

Research on the scale conducted in this UoA requires extensive external funding, currently averaging £1.93 million/year, an increase of 36% on the equivalent figure for RAE 2008. As noted above, the research work reported here was underpinned by 17 externally-funded fellowships and 70 other new external research grants. Our largest grants were from ESRC to the Innogen Centre (Directors: Tait, David Wield [Open University] and now Castle; £7.2 million from ESRC from 2002 to 2013) and to the ESRC Genomics Forum (Director: Yearley; Deputy Director: Sturdy, then Lyall; £5.46 million across its lifespan from 2004 to 2013). As well as the grants listed in previous sections, other noteworthy grants include: Calvert's *Synthetic Aesthetics* grant (US National Science Foundation and EPSRC, £335k); *Imagine* (ESRC *Connected Communities*, £2.22 million; PI: Crow); and the series of grants won by teams led by R. Jeffery, such as *Biomedical and Health*

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Experimentation in South Asia (ESRC, £400k) and *Access to Medicines in Africa and South Asia* (EU FP7, €2.996 million). Campagnolo and Williams have helped secure a £4 million award from AHRC, EPSRC and ESRC for a multi-university research centre on copyright law and innovative business models in creative industries. A very recent success is helping win a £8 million ESRC 'Big Data' research centre based in Edinburgh; Gayle, its Deputy Director, will lead its workstream on parental mental health and filial educational outcomes, and direct its training programme.

The mainstay of our research income has been, and remains, ESRC. However, a priority development area for us is to **diversify our sources of funding**. As shown in the previous paragraph and earlier sections, our recent grant successes are indeed diverse in their sources, and include European bodies, US funding (National Science Foundation) and a wide range of UK sources. (The time lag between winning grants and then incurring substantial expenditure means that the effects of these successes have yet to feed through fully into REF4b.) Natural-science funders such as EPSRC are becoming an important source of support, as our researchers on bioscience innovation replace the ESRC funding of Innogen and the Genomics Forum by mainstreaming social science in 'big science' projects. Calvert and Frow, for example, are part of consortia that have won nearly £10 million from EPSRC and the EC for work on synthetic biology: they are researching not traditional 'add on' topics such as 'ethical implications', but the cognitively-central processes of standardisation and infrastructure development in this area. Tait and Haddow are part of a consortium that has won £5.2 million from EPSRC to develop implantable microsystems that will enable anti-cancer therapy (eg for prostate cancer) to be delivered at exactly the correct sites and in exactly the most appropriate doses. Tait and Haddow's role is to help ensure early adoption into medical practice: Haddow is researching the acceptability to patients of such devices, and Tait is using the ALSIS methodology she co-developed (see REF3b Life-Science Innovation Case Study) to help the team in strategic planning.

In winning research funding we draw heavily on the skills of Edinburgh Research and Innovation (ERI). ERI provides the same kind of service as its equivalents at other universities (costing proposals, highlighting relevant funding opportunities, advising on funder terms and conditions, and curating an extensive 'bank' of successful proposals), but in our experience does so more efficiently than its counterparts in many other institutions: for example, the turn-around time to cost proposals is normally no more than four hours. Through its Knowledge Exchange office, ERI offers advice on impact, knowledge exchange, and commercialisation issues such as consultancy. We also run our own 'in-house' seminars on grant-getting, publication, etc. Our new Research Office employs a staff member devoted to supporting grant applications, and because European sources help to diversify funding, also a 0.8 FTE European-grant administrator, who advises both on applications and on the very specific reporting requirements of European projects. Senior academic staff regard providing feedback on draft publications and grant applications as part of their responsibilities and eg their contribution to ESRC demand management. We encourage all applicants for grants to get detailed feedback from at least two such staff before submitting applications. An indicator of the success of these measures is that 86% of the staff in this submission (with its substantial proportion of ECRs) have won external peer-reviewed grants.

Our **infrastructure and facilities** are excellent. In 2008, the Sociology Subject Area, along with most of the School of Social and Political Science, moved into the Chrystal Macmillan Building, entirely restructured and refurbished for the School at a cost of £14.3 million, of which £10.6 million came from SRIF as a result of research performance. The building was redesigned to our specification, with a particular focus on architectural aspects intended to promote interaction amongst staff and doctoral researchers: generous public spaces with tables and chairs, break-out rooms, and an electronically-bookable meeting 'pod' on each floor. Simultaneously, the component parts of STIS were brought together in Edinburgh's historic High School Yards, ten minutes' walk away. Facilities for doctoral researchers include a common room, reading room, computer room, computer-user support and multi-function photocopier/printers. Doctoral researchers are loaned laptops which connect to Edinburgh's extensive wi-fi system, enabling them to tap into electronic resources throughout the campus. To accommodate the increase in numbers of our doctoral researchers, we have created a new hot-desking area in an adjacent (and internally connected) building for use by 1st years. From their 2nd to 4th years, doctoral researchers in residence have access to a desk and laptop in a shared office, and in practice have exclusive use of a specific desk. Our six meeting 'pods' with large interactive SMART Boards to facilitate group work are

available for booking by doctoral researchers, and we plan to create a further four such pods.

Since RAE 2008, Edinburgh University has made heavy investments in administrative and information-technology support in our School. The three senior administrators in 2008 have now become seven, one of whom works exclusively on research administration, and another of whom devotes 60% of her time to it (including heading our newly-created research office). Overall, the 36.1 FTE administrative staff in 2008 have now become 42.3 FTE. The four computer support staff in the School in 2008 are now a team of 11.3 FTE IT and web-development specialists. We are also able to draw (eg in the new ESRC Big Data centre) upon the University's strengths in informatics: eg Edinburgh's Data Library and EDINA, a UK national academic data centre, designated by JISC on behalf of the UK HE funding bodies and Research Councils, which delivers access to a wide range of online data services ranging from census statistics to the Digimap.

Within a five-minute walk of the Chrystal Macmillan Building are two world-class research libraries: Edinburgh University Library and the National Library of Scotland. The former, an A-listed modernist building, designed by Basil Spence, which has just been remodelled for the 21st century at a cost of £58 million, holds over 3.5 million printed items and around 0.5 million e-books, and subscribes to around 20,000 serials, mostly received as e-journals. The National Library is one of the UK's six Legal Deposit Libraries, and runs the legal deposit scheme. Founded in 1689 as the Library of the Faculty of Advocates, it has had legal deposit status since the 1710 Copyright Act, permitting the accumulation of an almost unrivalled collection of 15 million printed items.

e. Collaboration or contribution to the discipline or research base

e.1 Interdisciplinary research

Sociology-led interdisciplinary research is central to our activities, both intellectually and as a way of opening up pools of research funding larger than normally available to social scientists (see section d). It is fostered by Edinburgh University's research strengths in the wider social sciences and humanities and in STIS-related areas such as biomedicine and computer science, our links to which are crucial to fund-raising success. As well as many close collaborations with the four other subject areas in the School of Social and Political Science (Anthropology, Politics, Social Policy and Social Work), we have ties of co-authorship and/or joint grants in 2008-13 with 14 of the University of Edinburgh's 21 other Schools. These include particularly extensive, multi-person collaborations with Engineering, Health in Social Science, GeoSciences, Informatics and Law.

Arrangements to support interdisciplinary research include an interdisciplinary network, ISSTI (the Institute for the Study of Science, Technology and Innovation) and six interdisciplinary research units: the Centre for Research on Families and Relationships, the Institute of Governance, the Science Studies Unit, Innogen, African Studies and South Asian Studies. ISSTI and the first four of the units are currently directed or co-directed by members of this UoA: Williams, Jamieson, Rosie, Henry and Castle. At earlier stages we promote interdisciplinarity via less formal research networks, for example the informal Digital Economy network that formed the basis of the £4 million award on copyright and business models in the creative industries (see section d).

e.2 Research collaborations with private, public and NGO sectors

These are discussed in detail in REF3a and the impact case studies. Our approach to 'impact' is as two-way knowledge exchange: we seek to enrich practitioners' understandings, and their input enriches our research. Two indicative examples are: (i) Rosie and Gorrings' involvement in Public Order Training with Lothian and Borders Police and Strathclyde Police, which has provided both research data and access for research; (ii) Webb's involvement with the District Energy Vanguard Local Authority Network, which has been invaluable for understanding local authority processes of developing district energy, contributing crucial data to her *Heat and the City* project.

e.3 National and international research collaborations

International collaborations are crucial to our research: many of the 'users' of our research are overseas (see eg REF3b Bioenergy and South Asia studies); our funding sources are increasingly international (see section d); and it is of course vital for us to maintain close links with overseas research leaders in our specialisms. Seven members of the UoA have held a total of 15 international visiting positions since 2008. Such positions and other forms of collaboration (involving one or more of: formal memoranda of understanding; extended visits; exchange of staff;

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joint research and/or funding applications; co-authorship) link the UoA to 43 UK universities, 17 overseas research institutes and learned societies, and 60 overseas universities: Aachen, Adelaide, Antioquia, ANU, Arizona State, Autònoma Barcelona, Ben Gurion, Bocconi, UC Berkeley, Cologne, Columbia, Dar es Salaam, Duke, Flinders, Geneva, Ghent, Griffith, Harvard, Hebrew Univ. of Jerusalem, Heidelberg, Helsinki, Jawaharlal Nehru, Johannesburg, Leiden, Makerere, Mbarara Univ. of Science & Technology, Melbourne, Nairobi, National Taiwan Normal, Neuchâtel, Norwegian Univ. of Science & Technology, Oklahoma State, Oslo, Paris Est Créteil Val de Marne, Pisa, Pretoria, Queensland, Radboud Univ. of Nijmegen, Santiago de Compostela, Seoul National, Sharif Univ. of Technology, Siena, Simon-Fraser, Singapore, Stanford, Stockholm, Sydney, Tallinn, Tata Institute of Social Sciences, Technical Univ. of Berlin, Texas, Trento, Tsinghua, Turin, Vienna, Univ. of the Basque Country, Western Cape South Africa, Wisconsin, Wollongong, York Univ. Canada.

Examples of particularly successful international collaborations include Calvert's *Synthetic Aesthetics* grant (collaboration with Stanford Univ.); R. Jeffery's *Access to Medicines in Africa and South Asia* grant (partners include Basel, Ghent, Makerere, Mbarara and Western Cape Universities); Castle's, Sturdy's and Yearley's membership of the LISTEN Network for Life Sciences, Innovation and Society (partners include Radboud Univ. of Nijmegen and Univ. of Vienna), whose successes include securing ESF conference series funding for 2012-13; and Williams's leadership of the *China-Europe IT Standards Research Partnership*. This partnership includes Aachen, Berlin, Oslo, Tsinghua and the Chinese Academy of Sciences, and it is one aspect of now extensive links between STIS, Tsinghua and the Academy. In 2012, a team including Edinburgh (R. Jeffery), Heidelberg, Jawaharlal Nehru Univ., the Achutha Menon Centre and the Sree Chitra Thirunal Institute won substantial funding (£192k to Edinburgh) from the Indian Council of Social Science Research and its counterparts in the UK, Germany, France and the Netherlands to research globally accessible medicine. The collaborative scheme under which this grant was awarded is the first official multilateral social science research funding collaboration into which India has entered as it transitions from being a 'research site' for social scientists to becoming an important funder of social science.

e.4 Seminars, conferences, CPD, journal editorial boards

We organise a continuously-revised portfolio of research events, which now goes far beyond our traditional fortnightly Sociology 'departmental' seminar, although the latter remains at the heart of our week: it is held, alternating with staff meetings, at 11 AM on Wednesdays, a long-standing slot chosen to facilitate attendance by staff, doctoral researchers and undergraduates with childcare commitments. These Sociology seminars, specialist seminars held by research groups (eg the group in social studies of finance), and the seminar series in STIS and African Studies, mean that almost no week in any semester passes without at least one seminar in the UoA. Other events range from the annual Goffman Lecture, the Centre for South Asian Studies Seminar, the Digital Cultures and Education seminar series, the Understanding Technology lectures (co-organised with the National Museum of Scotland) and the international conferences organised or co-organised annually by the Centre for African Studies, Innogen and the Genomics Forum. Such events have attracted leading academics such as Michael Burawoy, Georgina Born, Randall Collins, Grace Davie, Martha Feldman, Gary Alan Fine, John Hall, Karin Knorr-Cetina, Daniel Miller, Barbara Misztal, Tia de Nora, Arie Rip, Mike Savage, John Scott and Nigel Thrift, as well as others earlier in their careers, who are often at least equally rich sources of new ideas and collaborations. More ad-hoc events include the 2012 conference, *The Credit Crisis Five Years On*, the keynote speaker at which was Andrew Haldane, Director, Financial Stability, Bank of England. Such events (eg the 2011 *Researching Feminist Futures* conference) often are initiated by doctoral researchers.

CPD contributions include eg: Lyall's highly respected interdisciplinary training sessions and workshops (REF3a); Tait's training of users of ALSIS (see REF3b, Life-Science Innovation Case Study); and R. Jeffery's workshops in India, South Africa and Nepal providing training in qualitative social research methods including the use of CAQDAS Atlas.ti.

26 memberships of conference organising/scientific committees have been held since 2008 by 18 people. These include, eg, European Conf. on South Asian Studies (R. Jeffery) and co-organisation of the Theory Stream for the BSA Annual Conferences 2010-2013 (Kemp). **48 journal and book series editorial roles (editor, editorial board member, etc)** have likewise been held

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by 23 people in the UoA. These include, eg, *Feminist Theory* (Stanley), *Journal of Political Power* (Hearn), *New Genetics and Society* (Parry), *Social Studies of Science* (MacKenzie, Yearley), *Sociologie et sociétés* (Darmon), *Sociology* (Brownlie), Palgrave MacMillan Studies in Family and Intimate Life (Jamieson), Bloomsbury Academic 'What is?' research methods book series (Crow).

e.5 Other contributions to the professional associations and the wider social sciences

MacInnes's role as ESRC quantitative methods champion has been particularly prominent, involving multiple contributions, including an in-person briefing of Michael Gove. 13 members of staff have held 16 **BSA etc roles**: Crow (Academy of Social Sciences publications committee), Darmon (BSA Max Weber Study Group), Hearn (Association for the Study of Ethnicity and Nationalism, BSA study group on Historical and Comparative Sociology), Henry (Council Member of the British Society for the History of Science), Jamieson (BSA Trustee until 2012; HAPS Chair), P. Jeffery (Council of British Association for South Asian Studies and British Academy South Asia Panel), R. Jeffery (President, European Association for South Asian Studies), Kemp (BSA: see e.4 above), Kennedy (Scientific Council, National Movements and Intermediary Structures in Europe), MacInnes (Royal Society Advisory Council on Maths Education and Royal Statistical Society), Tait (Royal Society of Edinburgh), Williams (convenor, UK Association for the Study of Innovation, Science and Technology), Yearley (Royal Society of Edinburgh). Members of the UoA have also held 22 **memberships of ESRC and other funding-body committees**: Bancroft, Calvert (3 positions), Castle, Jamieson (2 positions), R. Jeffery (3 positions), Kennedy, Lyall, MacInnes, MacKenzie (2 positions), Molony, Sturdy, Tait (3 positions), Yearley (2 positions). Stanley served on the **Sociology Panel of RAE2008**, and she and Crow are serving on the **REF2014 Panel**.

e.6 Cooperation and collaborative arrangements for PGR training

As noted above, our School hosts, and UoA member Crow directs, the Scottish Graduate School of Social Science and ESRC Doctoral Training Centre in Scotland. The Sociology UoA is heavily involved in three of the latter's pathways: Sociology; Science, Technology and Innovation Studies; and African Studies and International Development. These Scotland-wide collaborative arrangements are supplemented where appropriate by international collaborations: eg the PISCES consortium (REF3b, Bioenergy Case Study); the joint Edinburgh/National University of Singapore PhD programme in Science and Technology Studies, which includes joint supervision and research training for one UK and one Singapore PhD student per year; the link between our Centre for South Asian Studies and Heidelberg (the largest centre in the area in Continental Europe); and the UK-India Education and Research Initiative grant for Gorrington and R. Jeffery to provide methodological training to PhD researchers in the Tata Institute of Social Sciences and Edinburgh.

e.7 Other indicators of wider influence

Translations: since 2008, 18 books or articles by members of the UoA have been translated into 11 foreign languages: Catalan (Haggett, twice), Chinese (Henry, MacKenzie), French (MacKenzie, twice; Prior), German (MacKenzie), Hungarian (Prior), Italian (Crozier), Japanese (MacKenzie), Korean (Bancroft, Henry), Russian (Haggett, Henry, MacKenzie), Spanish (MacInnes), Turkish (Henry). Four further translations are forthcoming: Spanish (Bruce, Lyall), Swedish (Holmes), Turkish (Henry).

Members of the UoA have given 430 presentations (external to the University of Edinburgh) since 2008. These include 212 **plenaries and invited talks (international)** given by 34 people in 34 countries (Australia, Austria, Belgium, Canada, China, Colombia, Denmark, Finland, France, Germany, Greece, Hungary, India, Ireland, Italy, Japan, Lithuania, Mali, Nepal, Netherlands, Norway, Poland, Portugal, Romania, Singapore, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Taiwan, Uruguay, USA, Zambia) and 84 **other international presentations** given by 28 people in 20 countries (Australia, Austria, Brazil, Canada, Denmark, Ethiopia, Finland, France, Germany, Italy, Japan, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, USA). 221 **plenaries and invited talks in the UK** were given by 34 people. 58 **other UK presentations** were given by 26 people.