

Impact template (REF3a)

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| Institution: University of York |
| Unit of Assessment: 28, Modern Languages and Linguistics |
| a. Context |

Language is central to almost all human activities. As the study of language, linguistics is intimately connected with cognition, communication, and society. The potential impacts of linguistics are therefore extremely diverse. Our research strategy prioritises the integration of theoretical advances and empirical innovation, encouraging collaboration with a wide range of partners. We study language through analysis of data from natural and experimental contexts to explore, for example, how language shapes identity (a focus of our Sociolinguistics research group), how communication unfolds in professional settings (Phonetics & Phonology group, especially in Conversation Analysis), and how understanding can be impaired in special populations (Psycholinguistics). We also develop tools that yield new insights into language structure, usage, and change (e.g. corpus methods). Several strands of our research are conducted in collaboration with non-academic partners, who are thus the primary beneficiaries of research impact. Our particular strategic focus has been on the impact of our research in forensic applications, drawing on background research conducted in sociolinguistics and phonetics, as well as new work with a direct forensic purpose. Our commitment to this field pre-dates REF and has been formalised and strengthened in 2008-13. Our forensic research is inherently driven by its potential impact on forensic analysis practices. The main beneficiary of our research is J P French Associates, a world-leading private forensic speech laboratory, based in York. In the public sector our work also has impact within the UK and international judicial systems via expert evidence provision and contributions to policy. The second main beneficiary has been [text removed for publication] via the knowledge transfer of methods and standards developed in York research on historical corpora into the technology of automatic translation systems, now operational, which deal with massive quantities of text and speech in a wide variety of genres [text removed for publication].

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| b. Approach to impact |
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In 2008-13 we followed two main strategies to develop and deliver impact. First, we have a long-standing commitment to research in forensic speech science. We have therefore targeted this field through support to our staff, developing new lines of impact-driven research in collaboration with partners in the private and public sectors, and integrating these partners into our research culture. Second, we have actively sought new opportunities to develop impact by seeking new collaborators, and by embedding impact into applications for external funding.

Forensic speech science

Our main focus has been impact associated with forensic applications of phonetics and linguistics. Our work in this field dates back to 2000, when Foulkes was appointed at York with a specific remit to develop forensic phonetics through his collaborative link to J P French Associates (JPFA), drawing especially on research in sociolinguistics and phonetics. In 2007-8 the success of this initiative led to the establishment of Forensic Speech Science as a separate research cluster in order to foster new research with forensic applications, with a wider group of collaborators and beneficiaries. This development was supported by a new lectureship (Watt), the appointment of Peter French as Honorary Professor, and the launch of a new MSc. By 2013 the research group had grown to around 30, including all six professional analysts at JPFA, around 20 postgraduates, and the inclusion of further York staff. To develop the graduate programme the University funded five MSc fees scholarships (2007-10) and nine awards for PhD students (2008-13; six externally-funded). The Department invested in a new laboratory for the group in 2013, housing state-of-the-art specialist hardware and software for speech analysis, and space to host visitors. A Memorandum of Understanding operates between JPFA and the University, formalising the commitment to mutually beneficial research. Impact in forensics has been assured through two paths: (i) communication of background research to JPFA through regular meetings on site or at JPFA premises (situated less than 2 miles from the University), and (ii) collaborative research conducted with JPFA staff to address issues in casework practices. Meetings are held on average at least weekly, to consider ongoing research or the potential contribution of background research (e.g. descriptive information derived from sociolinguistic projects) to JPFA's casework. French and two other full-time forensic scientists at JPFA are engaged in collaborative research with York staff. In the REF period four JPFA analysts also conducted PhDs at York. The collaboration has also

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been supported by University seed-corn funding for research with forensic applications, and through partnership in a Marie Curie FP7 Network (also involving partners in speech technology and other forensic sciences). Watt, Llamas and Foulkes provide regular consultancy on casework, with time released from regular duties. York's facilities (staff time, lab, corpora) are routinely available to JPFA. Departmental funding enables staff to meet with agency representatives to plan work.

Developments

We have a strong and continuing record of national and international collaboration in research, with both academic and non-academic partners. Our ongoing research into the syntax of Old and Middle English, and the long-standing working relationship with the University of Pennsylvania, led to York expertise being targeted for one part of a large automatic translation project, **[text removed for publication]**. Based on experiences such as this, and our close and local working relationships in forensics, we have identified direct collaboration as the most productive means to establish new paths to impact. New collaborations have therefore been developed through exploiting personal connections (e.g. with speech therapists, some of whom are our graduates). We have also developed new lines of impact from the early planning stages of new research projects. Most funding bodies now require impact plans for large grant applications. Others, such as Marie Curie FP7 grants, typically involve non-academic partners as an integral aspect of their design, facilitating exchange of ideas and dissemination of research direct to potential beneficiaries. We have secured two such awards during the period. While recognising that dissemination is not itself impact, we consider it a vital first step in promoting research to potential beneficiaries. All staff are thus encouraged through mentoring and performance review to engage in dissemination activities to diverse audiences, including via public events, media interviews, and through production of texts for non-academic audiences. Several staff have delivered research-oriented talks in schools and to the general public, or have been interviewed by the media. We have also been responsive to calls for academic input, e.g. Ogden providing linguistic consultancy in an English-BSL translation project for Lime Trees (the National Deaf Child and Adolescent Mental Health Service, York).

Support

Impact activities are supported at Departmental and University levels. In response to developments in criteria for external funding, the Departmental Research Committee (DRC) has taken on a monitoring role to support grant applications. DRC assists with the construction of impact statements integral to applications, with support for authors via peer-level feedback. DRC has a policy to prioritise grant applications with clear and achievable impact plans, and has awarded seed-corn funds on this basis (including for a collaborative project with JPFA, noted above). Plans for outreach activities are requested in research leave applications and in annual performance review. Information about activities is recorded by each member of staff in a central research information system, *Pure*, linking impact activities to research.

The University has a central fund for the development of impact activities. An institutional *Guide to Expertise* lists most staff with details of their research specialisms and invitations to engage with partners in particular domains. Within the Arts & Humanities, impact support is concentrated in the £11m Humanities Research Centre (opened 2009), which has four staff dedicated to supporting impact activity (a director, administrator, external partnerships manager, and research coordinator). They facilitate interdisciplinary projects and assist with grant proposals; train postgraduates, ECRs and established staff in developing and delivering impact; provide assistance in establishing and optimising external partnerships; offer a congenial and versatile space in which external partnerships may be nurtured; and devise mechanisms for monitoring and measuring impact.

c. Strategy and plans

In the coming years we aim to extend and strengthen existing collaborative links with non-academic partners, both in forensics and more widely. We plan to increase dissemination activities to wider audiences, as a first step towards impact delivery. Our guiding principles are:

- to actively foster relations with partners outside the University (in York and beyond) which enable us to build an impact component into our research from the design stage.
- to support impact-related activities through the allocation of resources, making impact a more prominent element of our research activities.

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- to support activities which promote engagement with potential beneficiaries of our research, and encourage staff to involve beneficiaries at early stages of planning research.
- to incentivise and reward staff for engaging in impact activities as an integral aspect of their research, with status equal to traditional research activities such as publishing.

In 2013 DRC established a post of Impact Officer (IO), with the remit to advise staff and DRC on impact activities. The IO assists in developing contacts, identifying impact pathways within grant applications, and disseminating existing research effectively. The Department has established a separate budget to support activity that will lead to impact, e.g. for covering the costs of travel and staging events, or undertaking exploratory research with impact potential. Staff may apply to DRC for these funds, and for relief from other duties, in a process akin to applying for research leave. Workload credits will be awarded to staff engaging in impact delivery.

Ongoing impact activities form three clusters. Our aim is to promote further work in these fields particularly, as they align with our research group structures and expertise.

Language and Communication

- influencing practices of health care professionals using Supported Conversation Intervention (SCI; Phonetics research group). SCI facilitates comprehension and expression for people with aphasia, enabling them to participate in conversation, thereby improving well-being and enhancing social contact. Pilot work in collaboration with NHS speech therapists is underway to develop linguistically-informed SCI methods, based on our work in conversation analysis. The work is funded by York's Centre for Chronic Diseases and Disorders (C2D2), established in 2011 through the Wellcome Trust's £20m Institutional Strategic Support Fund. The aphasia project is one of 39 projects funded via C2D2, of which only five are led by the Arts & Humanities.

Language and Education

- developing a portfolio of research-led materials to aid teachers who deliver the A-Level in English Language, and developing ongoing relationships with them to provide better access to linguistic data, research values and research practice, to inform greater awareness (e.g. the recent press on multilingualism, and the issue on "suppressing" local varieties). University and Departmental funding has employed assistants to develop initial materials, and to stage a workshop for 15 teachers in 2013 to advise them on using research materials in their teaching.

Language and Justice

- continuing to improve practices in forensic speaker comparison and continuing activities as expert witnesses. Close collaboration in research and casework with JPFA ensures that potential benefits are steered directly to this lab, and enables us to address developing issues in the field, informed by direct experience of judicial systems internationally.
- improving professional practices in LADO (language testing in asylum claim cases), including via contracted research begun in 2012 with the Dutch Immigration and Naturalisation Office.
- addressing a major development in forensic sciences to express expert evidence statistically (in the form of Bayesian likelihood ratios). Through a British Academy grant (2013-15) with leading forensic statisticians we are engaged in testing the robustness of such statistics based on linguistic data, and to develop new statistical models applicable to all fields and thus to lead improvements in the delivery and use of expert forensic evidence.
- a new staff member is planned for forensic speech science within the next two years, with a specific remit to develop CPD (continuing professional development) activities.

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| <h4>d. Relationship to case studies</h4> |
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The *Forensic Speaker Comparison* case study describes a wide range of activities in forensic applications of linguistics and phonetics, reflecting our long-standing commitment to this field, the emphasis we have placed upon it in the REF period, the strength of our research base, and in particular the success in delivering impact through our collaboration with J P French Associates.
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