Introduction: making knowledge public

The public presentation of science is enjoying a purple patch. The Infinite Monkey Cage live and radio shows are hits and there is a crop of scientist celebrities. But even a line-up of the most stellar names would struggle to muster the kinds of crowds represented on the cover of the *Illustrated London News* in 1865 for the opening of the British Association for the Advancement of Science (BAAS) annual meeting. It is not just the crowd that is striking but also the Birmingham venue. One of London’s most popular publications gave over its front page to a celebration of a provincial event. This was no anomaly; for more than a century the meetings of the BAAS were held in London only once, otherwise they were scattered around the UK, responding to the come-hither offers of provincial science bodies, universities and civic leaders. Science was to be taken to the people, wherever they may be.
The cover is reproduced in Charles Withers’ monograph *Geography and Science in Britain, 1831-1939: A study of the British Association for the Advancement in Science*. Withers addresses how the ‘geographical work’ of the BAAS (now the British Science Association or BSA) was not a matter of ‘decanting’ knowledge into a waiting public, convened at every stop of its century-plus tour of the nation and empire, but rather a matter of science being constructed in relation to and in relationship with diverse publics and places. His prime focus is on the career of geography within these broader processes. This engaging story throws up a narrative that has striking relevance today. It suggests the purposeful ways in which a discipline is made and re-made and the role that different forms of public engagement have in those processes. Withers’ narrative invites thinking about the opportunities – or rather responsibilities – presented to today’s geographers to make geography public and to make public geographies. All very timely given our contemporary musings on public engagement and knowledge transfer.

This review addresses three challenges and opportunities for contemporary geography: the nature of ‘public geography’; the ever-unsettled nature of geography as a difficult mix of performance, practice and discipline; and finally, turning from the content of Withers’ book to its form, a consideration of what ‘digital scholarship’ means for the practice and publicity of contemporary geographical research.
**Geography in public and public geography**

Withers’ discussion of the annual BAAS Presidential Addresses illustrates well the varied geographies of reception. The reactions within one city were not the same as another, or shared by all who heard it or read about it afterwards (12). The institution wilfully provincialized London by ignoring it as a venue every year but one throughout the period. Why did the organisation choose to be provincial and peripatetic, and ‘why that city then?’ Paul Clarke’s (2010) recent historical geography of eighteenth century science lays the groundwork for understanding science as a distributed practice across the British nations and regions but Withers extends this to examine why science mattered to British provincial economy and society throughout the long nineteenth century. His raw materials are the stuff of the meetings. He investigates ‘their blend of talks excursions, social perambulation and, after 1874, use of handbooks’. His interest is not just in the content but also the nature of the activities as speech acts and performances, and the way these meetings ‘combined elements of ‘holding forth’, ‘science gossip’, ‘display’ and ‘ballyhoo’’ (13). The vigorous publicity of the annual meetings, including the distribution of the programme throughout a town and its immediate environs, and the diverse participation in terms of gender and class, might well embarrass any twenty first century university geography department’s claims to achieve ‘outreach’.

There is a lively debate currently about what geography-in-public and public geography is or should be (e.g. Fuller and Askins 2007; Mitchell 2008 and
Murphy 2011) and the distinction between public geography and policy relevant geography (Ward, 2006). But it is striking how the current wave of popular interest in science and some aspects of social science (notably psychology) proceed with geography being only rarely labelled as such in its public manifestations. At the same time the disjuncture between popular enthusiasms for geography’s imagined objects of study (maps and people in different places – especially distant ones) and most of the contents of academic journals is striking. Academic geography generally has little or no disciplinary presence in episodic media enthusiasms for geographic topics ranging from glacier behaviour, food labelling, or flows of people, goods or waste. Geographer Mark Maslin has sold more copies than many fictional bestsellers of his introduction to climate change (2004) however the publishers choose to bill him as an earth scientist. Similarly Iain Stewart, who has become a prominent communicator of geography, earth and environmental sciences through his highly successful TV series, tends to be identified exclusively as a geologist.

The subject has perhaps done too little to assert its presence and relevance, whether in technical or critical terms, to popular engagement with satellite mapping, mapping inspired artworks, infographics and augmented reality. Geography researchers may be gaining great understanding about cultural, economic and environmental change issues but can seem cautious compared to their nineteenth century forebears when it comes to sharing or debating those findings in ways that the media or public can easily engage with.
The exceptions are instructive. There are some impressive examples of ‘geography in public’. These span digital media, books, broadcasting and more immediate public engagement through events and interventions. Danny Dorling, Anna Barford, Ben Hennig and co’s canny and well-designed cartograms have been put to extensive and varied work by research, teaching, media and popular users (Worldmapper and Dorling et al 2010). George MacKerron and Susana Mourato’s Mappiness project captured substantial online and mainstream media attention and public participation with its engaging approach to iPhone app design to plot and track attitudes to well-being (Mappiness). There are many instances of quiet but far reaching influence where geographical research informs public and policy discourses more indirectly, whether through advice to journalists or policy communities (in relation to diverse pressing or chronic issues such as flooding, geopolitics of resources, civil unrest or housing). These are by their nature difficult to catalogue, although one significant by-product of the REF process for the discipline will be the creation of a database of impact narratives that surface such work.

In a different form of ‘making geography public’ Frances Harris’ experience of seeing geographic themes mediated via radio during a BSA media fellowship equipped the researcher with a rare insider knowledge of broadcast media, but also prepared her to publicise her own research many months later (Harris, 2011). UCL’s geographers have welcomed artists and writers in residence to the
Environment Institute and collaborated in the curation of urban-themed film festivals. The Open University geography department has supplied lead academic consultants to some of the biggest ratings hits in factual television related to environmental or geographical themes, including the BBC’s first climate change season (2006) and most of the Coast series (2005-2009). However it is notable, and some kind of index of the way the discipline is (mis)understood, that programme makers and critics rarely acknowledged that Coast was explicitly geographical in framing and execution.

An inspiring piece of solo work in similar vein has been undertaken by Joseph Murphy in the form of his rich account of walking the Atlantic coast of Ireland and Scotland, which he presented in parallel to academic and popular audiences in different forms. He explains the project as a reflexive process whereby research data, practice and publicity were bound up in the walking, and the writing about the walking (2009). In placing that work within a notion of public geography Murphy (2011) confirms others who insist that engaging with publics requires ‘interaction and reciprocity’ (Ward, 2006, 499).

Changes in academia may help to propel these examples from being the wayward behaviour of enthusiasts to being a more central practice in the discipline. This is not to say that everyone should be expected to be ‘in public’ or to practice public geography, but there is a need to mark out space for more
people to engage in these ways. These kinds of practices need to be nurtured with resources of time and money. They will often demand new skills of the scholar, a willingness to experiment and frequently require the pursuit of imaginative, even surprising partnerships. This is very similar to the mix of aptitudes and attitudes that Wither’s reveals in the work of Section E of the BAAS as it developed the public face of geography in the long nineteenth century. Geographers today can do much more to inhabit and help form the novel public sphere that has opened up around digital media, and in doing so work to enhance the capacity and legitimacy of the subject. Extending Murphy’s point about walking geographies, we should also welcome the fact that our journeys with online publics will change our own thinking and working.

**Geography as performance, practice or discipline?**

Withers’ second task after plotting the geography of BAAS meetings is to give an account of the development of geography as a science, and that project also prompts timely questions in the present. Victorian geography faced a persistent dilemma. With its diverse practices, spanning mapping and exploration, and strong links to Earth and nascent human sciences, it could present many faces (a point fully elaborated in Driver, 2000). The fact that from the 1870s onwards it could draw on some of the greatest celebrities of the day in the form of explorers such as Livingston, Nansen and Stanley meant that it could also draw the biggest crowds. Geography was seen as ‘the happy hunting-ground of the unattached and amateur Associate. Thanks to the profuse and promiscuous use of the magic
lantern, it has become the attractive show-room of the Association. … The audience is panting for sensations; the ubiquitous and irrepressible globe-trotter is the ideal of the hour’ (89).

At the same time others were seeking to establish the scholarly credentials of geography as a discipline in the face of critiques from their increasingly tightly focused and defined colleagues in the BAAS. These could be bluntly and publicly dismissive: for example one chemist decried it as ‘a patch-work taken from nearly every other science’ (203). Former military cartographer Charles Close made an assertive defence of geography as a distinctive science of maps and mapping in his presidential address to geographers at the Portsmouth meeting in 1911. His speech was controversial, but his private defence reveals something of the insecurity in the discipline: ‘The position which geography at present occupies in the scientific world is really humiliating… It is outside scientific men we must convince’ (207). Others were much more comfortable inhabiting this heterogenous field, with its scientific mappers, heroic explorers and human geographers. Indeed in her 1922 presidential address to the section Marion Newbigin suggests that ‘the main interest of geography is not in its facts as such… Rather does it lie in the way in which the geographer studies these facts in their relations to each other and to the life of man’ (192).

Clearly the tense relationship between geography’s public and academic identities, illustrated in the present by the ‘expedition debates’ (Maddrell 2010)
has deep roots, but Newbigin’s point seems to be that geography’s greatest potential and distinctiveness lies precisely in its willingness to cross borders, synthesise knowledge and to make sense of the differences between places. When considered against a setting of increasingly narrow disciplinary work in cognate disciplines in the natural sciences this is a very powerful contribution today, particularly considering the demands posed by pressing global environmental, economic and cultural changes (a point established in a paper that brought together a mix of human and physical geographers: Harrison et al, 2004).

**Digital geographers**

This paper has considered some of the contemporary comparisons and challenges triggered by Withers’ study. But the nature of the book itself prompts some important questions about academic geography past and future. Is it too fanciful to suggest that this monograph may come at the tail end of a form of scholarly production that was shaped by the evolution of academic organisation and disciplinary division in the mid-nineteenth century? Are we seeing the end of a practice established when time rich scholars gained grants that allowed them to employ and train young scholars to do fine grained work in the archives, lab or field? This was a world where craftspeople and their apprentices were supported by university presses to produce thoroughly, even extravagantly, well-considered artefacts. Is this book one of the last remnants of a fast retreating practice? Withers and the researchers he credits (Diarmid Finnegan and Becky Higgitt)
have produced a careful work that unearths enlightening details and contributes to broader arguments. There is a scholarly infrastructure underpinning this work. It includes the support of meaningfully independent scholarship and the existence of university presses with the capacity to turn out monographs. Public funding is a keystone of this kind of work in the humanities and critical social sciences. All of these components are under direct threat or buckle-inducing pressure.

But the strengths of the hard copy monograph also generate its limitations. It presents one transect through often very large bodies of material. Demands of space, budget and scholarly practice dictate a particular form. Consider the illustration choices in Withers’ volume as one example of the limitations of this form for the author, other scholars, students and potential attentive publics. The heavy hand of university press budgets presumably dictated a limited number of relatively poor reproductions (small, grainy and black and white). These images do not share the completeness or clarity of the text. The discussion of an ethnographic map of Europe, for example (167), would have been better illuminated by a sharper and larger reproduction. Similarly it would have greatly enhanced the text to have, for example, more than a cover page of a BAAS Handbook, and the odd illustration of excursions, given their significance in the run of the argument. This is all the more so given that visual representations clearly played a central role in the popularity of the BAAS meetings at their zenith, and say a great deal about how scientists understood the business of
connecting science and civics. The visual dimensions were clearly important in terms of the mass mediations of the BAAS, but Withers shows how the demonstrations and lantern slide shows were also central to the direct experience of science and scientists in the meetings.

There are opportunities in the new working environment for digital scholarship practices that might dramatically improve the conditions for the conduct, reception and debate of our geographical work (see Weller 2011 for a full account of what the term digital scholar implies). How might Withers’ book be produced differently in, say, ten years time? The central modes of academic production, such as literature review, archival research, piecing together, drafting and revising and critical review by peers seem unlikely to change significantly. However the ways in which such a monograph might be prepared, distributed, read and worked with could change dramatically, and beneficially.

Electronic book production creates opportunities to produce media-rich and easily distributed content at low cost for scholar and publisher. The sober phrase ‘digital humanities’ disguises revolutionary opportunities for the holding, annotating, searching and publicising of empirical materials, and the embedding of links and alternative paths through these alongside the carefully constructed arguments of a linear text. Social media open up new scope for peer and public review and debate, and for collective work with digitised archives. For a variety of reasons we can expect that funders will (subject to copyright and ethical
considerations) have high expectations regarding public digital accessibility of data. These expectations will extend to qualitative data sets and primary materials in humanities research (see, for example, UK Minister for Science David Willetts’ comments on the subject, 2012). The capacity to produce light-touch wraparound text for some of the more accessible and engaging empirical material and present it online at minimal cost opens the way to direct public and student engagement in the work of scholars. This is increasingly important within the work of publicly or charitably funded research, but an activity of much wider significance in explaining the purpose and legitimacy of geography or indeed any other field of study.

With universities increasingly needing to demonstrate impact for their researchers there is a need to refresh the mission of university presses to include, for example, sponsored scholarly blogs, open data holdings and e-monographs (see Weller 2012 for a development of this argument). ‘Print on demand’ allows short print runs, maintaining access to ‘classic’ hard copy monographs. In terms of generating engaging content for students and public audiences, both online and face-to-face, there are already good examples of what can be done, and some university presses have started to play an active role in these processes.

The multi-institution geography and anthropology research project Waste of the World made deft use of a project website to provide context for pieces of work-in-
progress writing, but also closed with a free public event that included a commission for artist Clare Patey (Waste of the World). School geography teaching has generated some path breaking content combining web, print and ‘field trips’, including the Geography Collective’s Mission Explore series of publications/projects (Mission Explore, 2012). The RGS’s Geography in the News site (2012), partnership projects such as Climate4Classrooms (produced jointly by the British Council, RGS and the Royal Meteorological Society, 2012) and the clearly designed web teaching resource aggregator/curator role played by the Geographical Association demonstrate effective forms of public geography at school level (2012). If institutions and scholars grasp the opportunities available to extend higher education level scholarship then far from bidding adieu to the monograph it can become one important strand within a richer bundle of scholarly material, including some in easily accessible and shareable form. Hence hard won findings can be worked with by fellow scholars and at the same time reach new audiences in diverse ways.

Conclusion: making geographical knowledge for and with publics

A particularly important public for the future of geography is convened at kitchen tables as families discuss subject choices for school and university. Noel Castree reminds us of the importance of ‘clear and compelling’ narratives about the subject, especially if there is only a hazy understanding of the sweep of the discipline (2011). Many parents and children will be looking out for a subject that is relevant to the world’s big questions such as on-going climate change and
resource scarcity, that offers a kitbag of practical and intellectual skills but also one that exhibits some charisma.

There is no shortage of stories to tell. One recent RGS/IBG Neville Shulman Challenge Award supports a project titled: ‘Hugging the Coast: an exploration by sea kayak of liminal living in the Sangihe Archipelago, North Sulawesi, Indonesia’. This is an interdisciplinary research-based expedition about seaweed, and what liminal living means in that context, particularly for women who farm seaweed. It is about global interconnectedness through carageenan’s very invisibility; it is about the women harvesting it and inevitably also about the six women explorers, including geographer Johanna Wadsley. Wadsley hints at the ways in which the research, and plans for sharing the process and findings publicly, plays off and subverts popular notions of ‘the expedition’:

‘the novelty of coming across ‘humans’ as part of what populates an expedition experience (in addition to sea snakes, weather, reefs etc.), adds an extra dimension to what the idea of expedition-based fieldwork… can mean… It is also a bit dangerous - things could go terribly wrong… a factor which must never leave our minds.’

The project offers a fresh example of geography’s continuing distinctiveness, relevance and charisma, but the same qualities are also found in many less immediately eye-catching projects that might be rooted in work in labs, libraries, fields or streets. The research team, combining scholarship, media and
expedition skills, intend to make the most of digital media to represent their work and the women and places they are engaging with, to make their findings public. But such work will also, inevitably, challenge those publics to acknowledge their place in an interdependent world.

Geography enjoys a mix of capabilities and tendencies that are unusually well suited to making sense of contemporary problems, and preparing people to ‘act in the world’.

These attributes can cast the subject in the role of pathfinder in developing new forms of exchange between publics and scholars, particularly in the context of the opportunities created by the Internet and digital media. The Internet offers a distinctive combination of qualities as a medium for both publication and participation. Digital media offer new opportunities for geography to put on some of the best lantern shows on Earth. But this is not just about creating digital spectacles. Among other things the subject can lend context and focus to questions about distributions of economic or environmental vulnerability and responsibility. It does not fully exercise its convening power on such topics. To make the most of these opportunities will require a more widely shared sense of experiment, initiative and imagination of the kind of that saw nineteenth century members of the BAAS go out on the road to make science for, and with, diverse Victorian publics. Withers’ book reminds us that geography used to fill Victorian public halls. Geographers can and do achieve the same today, virtually and
physically, but it is worth looking as closely as Withers does at how and why this comes about.
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