

Why we need a Public Understanding of Social Science

Lewis, Jamie; Bartlett, Andrew; Riesch, Hauke; Stephens, Neil

DOI:

[10.1177/09636625221141862](https://doi.org/10.1177/09636625221141862)

License:

Creative Commons: Attribution-NonCommercial (CC BY-NC)

Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Lewis, J, Bartlett, A, Riesch, H & Stephens, N 2023, 'Why we need a Public Understanding of Social Science', *Public Understanding of Science*. <https://doi.org/10.1177/09636625221141862>

[Link to publication on Research at Birmingham portal](#)

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

Why we need a Public Understanding of Social Science

Public Understanding of Science

1–15

© The Author(s) 2023



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/09636625221141862

journals.sagepub.com/home/pus**Jamie Lewis** 

Cardiff University, UK

Andrew Bartlett 

University of York, UK

Hauke Riesch 

Brunel University London, UK

Neil Stephens 

University of Birmingham, UK

Abstract

Who is licensed to make knowledge claims about society? A more diffuse group of individuals are afforded the status of legitimate speakers on society in the public sphere than is the case when the questions relate to the expertise of the natural sciences. We draw on the concept of the 'locus of legitimate interpretation' and the sensibilities of Collins and Evans' Studies of Expertise and Experience programme to help make sense of these issues. The social sciences are *not* the natural sciences, and one key difference is their relationship with publics. The social sciences are intrinsically entangled, at both the level of the research question and the research subject/object, with public knowledge, the knowledges of publics and public interests. We therefore outline what these differences might mean for a serious, distinct and purposive Public Understanding of Social Science programme and how this differs from current work in the Public Understanding of Science.

Keywords

locus of legitimate interpretation, Public Understanding of Science, publics, Public Understanding of Social Science, sociology

Corresponding author:

Jamie Lewis, Cardiff University, Cardiff CF10 3WA, UK.

Email: LewisJT1@cardiff.ac.uk

1. Introduction

Sharing research findings in public settings is rightly regarded as an important duty of academics in all disciplines. However, discussions on how to do this, and academic work examining its functions, aims, successes and policy implications, have mainly focused on the natural sciences (Gregory and Miller, 1999), leaving the social sciences (and the arts and humanities) speaking to the public through paradigms developed for fundamentally different disciplines. The mismatch between the academic attention given to the Public Understanding of Science (PUS), often focused exclusively upon biomedical and physical sciences, and what we might call the Public Understanding of the Social Sciences, is particularly stark given that the questions and objects of the social sciences are arguably more immediately relevant to a much broader range of public discussion than the natural sciences. Furthermore, as we argue, the need for a robust Public Understanding of Social Science is particularly urgent given the history of devaluing, or ‘flattening’, social science expertise in public fora, and the impact this can have on the quality of public debate and policy making.

A key question here, then, is how should we conceive of a programme of the Public Understanding of Social Science? Should it look something like PUS, built on the same models, the same principles and be directed towards the same goals? Or should it have a significantly different programme, underpinned by lessons learned from the work on PUS, but acknowledging that there are distinct challenges? In this article, we argue that the conditions of the Public Understanding of Social Science are distinct enough from those of PUS to merit a different approach. We ground this argument in the (often taken for granted) differences that we observe in the respective ‘loci of legitimate interpretation’ (Collins and Evans, 2007) for natural science and social science knowledge claims. We expand on how this concept could be utilised in a Public Understanding of Social Science and use it to discuss how – both empirically and normatively – we need distinct tools and perspectives to analyse expertise and participation in public debates regarding the social.

There are several fundamental differences between the natural and social sciences, in their epistemologies, methodologies and ontologies, as well as in their institutional histories and power structures. It is because of these differences that we believe a distinct Public Understanding of Social Science is required. Current PUS paradigms *extend* participation in scientific discussion, and for good reason, to give communities and publics more voice in the development of politics and policies resting on scientific research. That is, for at least the past two decades (House of Lords, 2000), PUS programmes have tried to mobilise and enrol publics in active conversation, moving away from viewing them as simply passive recipients. These will be more salient in, for example, environmental science (e.g. climate emergency), or medical science (e.g. coronavirus), than in astrophysics, since outside of questions of research funding allocation, there is currently little immediate policy relevance in the latter. Indeed, scientific disciplines that are some remove from public concerns and interests may need a slightly different PUS approach to those for whom the research questions press more immediately on public life (Davies et al., 2009; Lewis and Bartlett, 2015). The social sciences, in contrast, face a quite different problem; there is rarely any research question or knowledge claim in the social sciences that is not only in some way relevant to public policy and/or to the interests of publics, but that also involves making knowledge claims that touch on the *expertise* and experience of members of the public.

Here, we focus predominantly on the Public Understanding of Sociology, as an example of a broader Public Understanding of Social Science. We do so while recognising that as well as differences between the social and natural sciences, there are disciplinary differences within the social sciences, just as there are between natural sciences, and each discipline will require analysis of its specificities. We choose sociology partly because we are sociologists, and partly in recognition

that, as described by Abbott (2001), ‘sociology is the most general of the social sciences or to put it more politely the least defined’ (p. 3), and, therefore, is more open to contestation and challenge. We do, however, also discuss social sciences more broadly.

Principally, we maintain that sociology (and, for the most part, social science in general) has a much broader range of people who are able, and feel able, to make legitimate knowledge claims regarding questions and objects that are within its disciplinary domain. In some instances, this can be problematic. We expect those who make knowledge claims in public about, say, genetics, chemistry or astrophysics to be, respectively, geneticists, chemists or astrophysicists. More, we expect those who are given licence to assess and contest these knowledge claims to be, respectively, geneticists, chemists or astrophysicists. By contrast, the social world is the site of public knowledge-making by a wide range of actors, and sociologists lack the cultural authority to assert a distinctive expertise. Expressed frankly, ‘the social’ as a site for making knowledge claims is a (potentially dangerous) ‘free for all’.

While the porousness of sociology’s boundaries has, quite rightly, been celebrated by some who promote the rich variety and diverse perspectives it has supported within the discipline (Burton, 2016; Stanley, 2005), others see this as grounds for critique, as it prevents the discipline from securing authoritative legitimacy (Cole, 1994; Holmwood, 2010; Hope, 2019). We agree that rich variety is valuable. But we also believe that sociological expertise is undervalued in the public sphere, with the ramification that all too often problematic perspectives and received wisdoms are presented as equivalent, or even superior, to sociological expertise when addressing questions and issues that are the object of sociological research. In discussions of claims and theories that fall within the domain of the social sciences, the expertises at work are often ‘flattened’, as the distinctiveness of social science research is equated with the other forms of expertise, or even the *opinions* or *prejudices* of others. Here, we see an important role for what we call ‘responsible boundary-work’, to foster an environment that is better suited to retain a wide range of voices but to create (and/or maintain) an appropriate role and space for social science voices.

It is important to challenge this flattening of social science expertise. But it is equally vital that this is done with a sensitivity about who is being challenged, and how, and with an awareness of the issues of power, access and justice that are inherent to the work of making knowledge-claims about the social. This cannot be understated. Sociology, and social science more broadly, needs to be actively engaged in articulating and defending our expertise in public spaces, but must do so in a manner that is cognisant of the implications of doing this for others.¹ It is for this reason that we believe the Public Understanding of Social Science is an important programme from which to develop these ways of analysing and acting. It can bolster social science in public, but also keep us firmly attentive to the representational, epistemological and social justice implications of any boundary-work we conduct. We are aware, of course, that calls for increased boundary-work (Gieryn, 1999) around knowledge of the social may raise concerns about further marginalising the voices and perspectives of already marginalised people. But we believe an effective Public Understanding of Social Science should be explicitly organised towards conceptualising and studying these issues. It should provide an empirical programme for studying whose voices are privileged and whose are marginalised in making ‘legitimate’ claims about the social, how this happens, and what the impacts are.² The programme of research should also be used reflexively, to analyse the Public Understanding of Social Science as it operates, to assess its relation to power, and to help improve its contribution to social justice and public debate.

To open this conversation, our article makes three contributions. First, we identify the problem. We argue that the current public standing of social science expertise is undervalued, and we detail some of the negative aspects of this for democracy and society at large. Second, we call our peers to action. We argue that PUS scholars, along with colleagues from across the social sciences, are

well placed to address these issues, through the realisation of a programme of research in the Public Understanding of Social Science. Here, we suggest that concepts from the Studies of Expertise and Experience (SEE) are useful as an important provocation for motivating a Public Understanding of Social Science. Third, we point towards the solution. We set out our perspective on why a Public Understanding of Social Science needs to be different to PUS, and begin to outline some of the issues, questions, and approaches scholars may choose to pursue in establishing a theoretically and empirically grounded programme. In doing this, we contribute to the modest literature on the social sciences in public settings (Burawoy, 2016; Cassidy, 2021; Kamwendo, 2020; Medvecky and Macknight, 2017) by examining differences between the natural and social sciences, and what the consequences may be for a Public Understanding of Social Science.

2. Diagnosing the problem: Social science expertise in the public sphere

As we have made clear, we are concerned with the flattening and devaluing of social science expertise in public spaces. In the process of discussing questions of expertise, authority, contestation and consensus, we cannot avoid references to contemporary debates about ‘post-truth’ and the ‘death of expertise’. What sometimes gets lost in these discussions of experts, expertise and post-truth, is that the devaluation of expertise has not been evenly distributed, and nor has the concomitant granting of authority to non-experts. Some communities of experts, some disciplines, are more vulnerable – and more easily challenged – than others. In short, a ‘fact’ produced by the natural sciences has historically carried more weight (with the public), than a fact produced by the social sciences.³

It is, however, extremely important that we are careful with any post-truth periodisation. To position us as living in a ‘dark age’ of the death of expertise and truth is to imply that there was a contrasting ‘golden age’. It is not clear, for the social sciences at least, that this captures recent history. Politicians in the United Kingdom, for example, have long been able to dismiss the collective expertise of social scientists without having their claims being seen as illegitimate or inauthentic. There are many instances; in the 1980s, Keith Joseph de-funded UK social science (Agar, 2019; Scott, 2020), in 2004, Michael Howard publicly dismissed sociological studies of crime as ‘mumbo jumbo’ and, in 2013, Michael Gove called the experts on education that opposed his policies ‘the Blob’ to discredit their contribution to the debate. This is to say that contests over truth and expertise are not a new feature of the post-truth world, and the devaluing of social science predates this claimed new era. Truth has always been value-laden and context-specific, and it has also always been bent, obscured and even downright falsified by people with the power to do so.⁴

Despite this history, in the United Kingdom, many still locate the apparent ‘break’ to a post-truth age with the ‘Leave’ campaign during the 2016 referendum on membership of the European Union (aka Brexit). It is therefore worth considering an exchange that some have seen as indicative of the devaluation of expertise in UK public discourse. Twenty days before the vote on 23 June, during a live Sky News interview with the journalist Faisal Islam, the leader of the official Leave campaign (and at that time Justice Secretary) Michael Gove claimed that ‘the people of this country have had enough of experts’. Following this, on 26 June, just 3 days after the vote, several social science academics engaged in a Twitter debate with former advisor to Michael Gove and Leave campaigner Jamie Martin. Martin made what he saw as an important distinction between disciplines such as politics, for which he suggests there are no experts, and medicine and ‘hard’ sciences such as physics and engineering, which he described as having lots of experts. This is a position he defended, even while social science academics argued for why he was wrong.

This attitude – that the knowledge produced by the social sciences is a legitimate site for contestation from politicians, celebrities and members of the public – demands attention from colleagues in PUS. We can see the problem in cases such as the proliferation of celebrity and television personality theories of gun crime in the United Kingdom and United States (see Russell Brand in the United Kingdom and Tucker Carlson in the United States), and the under-representation of sociology – and the social sciences more generally – in early press and policy responses to the COVID-19 pandemic (Pickersgill and Smith, 2021). Other, more specific examples, include the confrontational and devaluing rhetoric handed out to media sociologist Meredith Jones when her workshop on the social impact of the Kardashians – the Kimposium – attracted national media attention (Jones, 2016), and the space given to UK actor and singer Laurence Fox to deny the existence of structural racism during his 2020 appearance on the BBC television show *Question Time*. These are all different types of examples but, in each case, we can see the problematic devaluing and flattening of sociological and social science expertise. Such interventions change the types of questions that are asked and the agendas that are pursued, underplays the role of original empirical and theoretical research, and lowers the bar for what counts as public knowledge. It is also harmful to the standing and support for the discipline, as well as individual sociologists. This then decreases the quality of public debate and limits the capacity of sociology to improve policy and political processes. This is all part of why we need a robust and theoretically grounded empirical programme in the Public Understanding of Social Science that can document how this flattening has been accomplished and sustained, and inform our thinking on how to address it.

3. The difference between PUS and the Public Understanding of Social Science

There is a significant body of work describing, promoting and critiquing the PUS (see Stilgoe et al., 2014 and Gascoigne and Metcalfe, 2017 for relatively recent reviews). But while many (PUS) scholars have troubled the concept of ‘the public’ or ‘publics’ (Marres, 2007; Renn, 2006) as well as the term ‘understanding’ (Michael and Lupton, 2015), and while work in Science and Technology Studies (STS) has spent decades critically unpacking the concept of ‘science’, less work has been done thinking through the relationship of distinct scientific disciplines, and specifically social science disciplines, with publics (see Cassidy, 2021 for exceptions). Here, we distinguish between the social sciences (defined here as the academic disciplines concerned with human behaviour, interaction and activity, for example, sociology, criminology, economics) and the natural sciences (defined here as the disciplines that deal with the physical world and natural phenomena, for example, chemistry, biology, geology, physics). We recognise, of course, there are disciplines that do not fit neatly into these categories – epidemiology, archaeology, psychology⁵ – and that each deserves a public understanding analysis of its own. However, for our purposes here, we compare the natural and social sciences, to present dimensions upon which they differ, and discuss how this changes the kinds of questions and challenges facing those hoping to engage in a ‘public understanding’ and ‘science communication’ of the social sciences.

First, we expand on a useful concept that brings the distinctiveness between social scientists, natural scientists and the public into perspective. Collins and Evans’ (2007) locus of legitimate interpretation asks us to consider who the authoritative speakers are on certain topics. For them, expertise is a real capacity – not simply an attribution – and is the result of deep immersion in the discourses and practices of a social group (a discipline, for example, but also, of course, a society). Importantly, we must consider the locus of legitimate interpretation in both an empirical sense

(who *does* society licence to make or contest knowledge claims about the social) and a normative sense (who *should* be treated seriously when they make or contest knowledge claims about the social). Both are important facets of the issues at stake here, and a productive Public Understanding of Social Science must engage with both.

Collins and Evans illustrate their concept by comparing the locus of legitimate interpretation found in art with that found in the natural sciences. They maintain that in the sciences, the legitimate arbiters of the quality of scientific work are members of the same community as the producers of the work; that is, physicists (and only physicists) are the legitimate adjudicators of whether something produced by a physicist is good physics or not. The locus of legitimate interpretation in physics is narrow, concentrated within a compact community of experts. Conversely, they maintain, art critics and the art ‘consuming’ public are afforded some licence to legitimately assess the quality of artistic work (though see Berger, 2008 for an alternative view). The same might be said to be true about who can judge good wine and food; in these domains of judgement, the locus of legitimate interpretation is more widely distributed across society (Collins and Evans, 2007). This tells us something about the ways in which we come to value expertise. For certain kinds of knowledge-claims, in certain domains, we afford wider audiences the privilege and/or responsibility to make judgements and counterclaims.

We believe that both empirically and normatively, the locus of legitimate interpretation in the social sciences is wider – more ‘diffuse’ – than it is in the natural sciences. Subsequently, it follows that a programme in the Public Understanding of Social Science must adopt a different model to that of PUS. Within the natural sciences, the locus of legitimate interpretation usually lies well inside the community of producers. By contrast, the locus of legitimate interpretation in the social sciences, while not as diffuse as that in the arts, is more diffuse than the natural sciences, allowing many more to legitimately talk on social science subjects including commentators other than social scientists, for example, celebrities, columnists, think tankers and popular authors.⁶ We see the different public standings of the social sciences and the natural sciences in McCall and Stocking’s (1982) comparison of psychology and physics:

Everyone, including journalists and editors, fancies himself or herself something of a psychologist, but not an astrophysicist. Results from psychology, but not physics, must therefore square with experience to be credible [in the eyes of the public]. (p. 988)

The increased willingness of publics to recognise and articulate their own expertise about the social world should not surprise us, and neither should it trouble us. By virtue of successfully living in a society, participants have expertise in that society. It is through this expertise that participants in society know the rules of society, can navigate social interactions and, importantly for social scientists, how we are able to study societies through interaction. Even if a society member cannot articulate these rules, or cannot systematically analyse their function, they still know them. They must know about society in ways that they need not know about their genetics, their chemistry or the physics that keep their feet on the ground. But to move about the social world we need to have some tacit understanding of the social rules in operation in different contexts, of the dynamics involved in the different, overlapping social groups of which we are a member.⁷ People *are* experts of their own societies. We argue therefore, that on both an empirical and a normative level, the role of experts and expertise in debates about knowledge-claims that fall within the domain of the social sciences *is* different to the role they play in debates about knowledge-claims that fall within the domains of, for example, biology or physics. Publics have legitimate expertise about the social world, and of course their own experience of it, and this needs to be valued and recognised.

A Public Understanding of Social Science, then, needs a framework to discuss this form of expertise, as well as its impact on society and on social science. Again, we return to concepts from Collins and Evans (2007), and what they call ‘ubiquitous tacit knowledge’ and ‘specialist tacit knowledge’. While ‘specialist tacit knowledge’ is the knowledge gleaned from immersing oneself in an expert community, usually requiring some technical competence and significant amounts of training and practise, ‘ubiquitous tacit knowledge’ is the knowledge we absorb as we navigate ourselves in and around society. This is not to belittle ubiquitous tacit knowledge; it involves a high level of skill to speak a native language or navigate complex social interactions. We also note that in practice there may be instances of blurring or bleeding between ubiquitous and specialist knowledge, for example, an academic speaking at the edge of their specialism. But a distinction between those who simply experience and understand the rules of society as they pertain to their own experiences and those who attempt to understand its working needs to be made if social science expertise is to mean anything outside of higher education institutes.

The conflation of ubiquitous and specialist tacit knowledge in public debate is connected to the problematic flattening of social science expertise. It positions the distinctive contribution of the social sciences as somehow less important, equivalent to the life experience of the loudest voice, and renders it easier to ignore or devalue for those pursuing various agendas on topics of the social world. In thinking through these issues, and in protecting against its dangers, we suggest that social scientists in general, and sociologists in particular, may need to perform some form of responsible boundary-work to challenge any moves to diminish our expert status. This would not be to narrow the locus of legitimate interpretation in such a way that only social scientists are able to make knowledge-claims about the social, but to make a claim for the distinctiveness of social science expertise derived from disciplinary socialisation, and work to arrest the flattening of expertises in making knowledge claims about society (see also Geiger, 2021). Of course, due to inherent issues about power, access, and social justice, it is vital that clear consideration is given to how the ‘responsible’ in responsible boundary-work is understood and enacted. Responsibility here should be thoughtful and proportionate, as well as transparent and reflexive. It must be attentive to the power relations and broader implications of our judgements over who we should encourage or discourage from participating in debates over the social, and when we assert our expertise or when we focus on listening. The scope and application of these judgements is likely complex and site-specific, with ramifications for our disciplines and our societies. Accordingly, the mechanisms through which we make and justify these judgements deserves careful consideration and analysis, both as individuals and as academic communities. We believe a Public Understanding of Social Science would offer an important forum in which to conduct this reflection.

Finally, on the locus of legitimate interpretation in the social sciences, and as evidence of where boundary-work has gone wrong previously, we focus on another key difference between the social and natural sciences, that of how the mainstream is conceived. In the natural sciences there are communities of ‘fringe’ science, which includes creation science, anti-vaccination groups, extinction deniers, flat earthers and fringe physics (Collins et al., 2017). This phenomenon is far less pronounced in the social sciences; in part because there is room within ‘disciplinary’ sociology for all manner of heterodox positions, with incompatible, even incommensurable positions on theory, on method, even on the very concept of ‘the social’ accommodated even within one department. But more than this, if someone from outside the institutional social sciences wants to make a claim about the social, they do not need to publish a paper in a ‘fringe’ sociology journal, they can write a letter to the papers, phone in to a radio show, become an activist, stand for election, find employment at a think tank or even make authoritative claims as a celebrity on a panel show. Studies of fringe science (Collins et al., 2017; Gordin, 2021) show us that when people outside the disciplinary

natural sciences want to make knowledge claims about, say, physics, they do so in *contest*, adopting an adversarial stance towards mainstream scientific institutions and communities of disciplinary scientists, even though they sometimes adopt ‘parallel’ community structures such as the journals and conferences of fringe physicists. This is because boundary-work (Gieryn, 1999) has been conducted to guard the legitimacy of knowledge claim-making and contestation. By contrast, when people want to make a knowledge claim about what we might consider ‘social science’ questions, they can legitimately avoid addressing disciplinary social science altogether, going straight to various public audiences. Not only *is* there a much wider, more diffuse locus of legitimate interpretation when it comes to knowledge claims about the social, it is not always accepted that the ‘centre’ of this locus is found in disciplinary social science at all.

4. A note on SEE

At this point, we need to acknowledge that by introducing Collins and Evans’ (2002) SEE framework into our argument we have allowed a contested perspective into our account. There is no shortage of critiques of the SEE framework, accompanied by often firm defences by the core authors (see Collins et al., 2011). Some of this critique is of the reductionist reading of existing STS in asserting the ‘three wave’ model of science studies (Jasanoff, 2003; Rip, 2003; Wynne, 1992). Several critiques target Collins and Evans’ distinction between the political and technical phase of decision-making procedures (e.g. Fischer, 2011; Sismondo, 2017), and the related point of whether their definitions exclude too many people (Epstein, 2011; Plaisance and Kennedy, 2014). More broadly, the central tone of the critique is the appropriateness of the SEE argument and the development of a framework to judge who should and should not be deemed legitimate contributors to technical scientific debates.

Our call for a Public Understanding of Social Science has a much wider focus than developing an equivalent framework for the social sciences alone. As we detail in the following section, we advocate for a research programme as wide as PUS, only bespoke to, and focused upon, the important work of the social sciences. We also recognise that the notion of political and technical phases while often blurry in the natural sciences (Jasanoff, 2003), are thoroughly interpenetrated in the social sciences, where the research questions, methods and forms of analysis are all ‘political’. Yet we do, in our focus on the normative aspects of the locus of legitimate interpretation in social science, make the argument that a Public Understanding of Social Science *should* have an interest in shaping discussions about responsible boundary-work, concerning who does and does not get to assert claims about the social, and on what grounds they can do so. This must be done sensitively, and reflexively, and as just one strand of a broader programme of work, but it remains part of our vision as one of many important contributions a Public Understanding of Social Science could make.

Our intention, though, is not to replicate the divisiveness of the original SEE papers. Instead, we argue the debate about SEE presents an important provocation for the Public Understanding of Social Science, and one that demands considered attention in developing a productive response from this perspective. We hope this would lead a Public Understanding of Social Science to engage in discussions about how the notion of the locus of legitimate interpretation can be productively utilised in the context of the social sciences, how it can be analysed in the context of specialist and ubiquitous tacit knowledge about the social world, and what responsible boundary-work might look like if applied in practice. We expand on these challenges, and how they may be addressed, in the final sections, where we identify some potential pathways forward for a Public Understanding of Social Science, in the hope of inspiring others to adopt such pathways into their own work, or to suggest alternative routes forward that create better or more diverse possibilities.

5. Outlining possible trajectories for the Public Understanding of Social Science

It is not controversial to claim that the dominant models of Science Communication and PUS have focused upon the natural sciences. This in itself is an empirical deficit for STS to address. Beyond this quantitative disparity, we have argued that the public life of sociology (see Burawoy, 2016), and through extension we argue the social sciences, is qualitatively different to the social life of natural sciences. Thus, programmes of Social Science Communication and Public Understanding of Social Science should also be qualitatively different. Our contention is that we need a (re)invention of both, one which recognises these differences.

First, we need a new empirical programme of work, a Public Understanding of Social Science that collects data in multiple forms and analyses how *social science in public* gets done, by whom, why, and with what outcomes. This programme of work must be attentive to disciplinary differences within social science, so a Public Understanding of Social Science will contain constituent elements such as a Public Understanding of Sociology, a Public Understanding of Health Economics, a Public Understanding of Political Science and so on.⁸ These disciplinary studies may differ between them in response to the differing social and epistemological practices they exhibit. For example, the status of different disciplines, the methods of different disciplines (statistical work, qualitative analysis, experiments, etc.⁹), the proximity of data to contemporary society (e.g. some forms of global anthropology may be less connected to mainstream public experience in the countries the researchers are based), the target audiences/publics, the institutional forms that disciplines are embedded within (e.g. the economics within institutions such as the International Monetary Fund (IMF) or national central banks provide a very different context to the social care or management institutions of social psychology) and the various approaches to reflexivity these disciplines adhere to. These studies must also attend to how disciplines and publics interact in various parts of the world, with their distinctive disciplinary histories and politics. The forms these differences take would be part of the work of a programme of Public Understanding of Social Science. And we should be keen to encourage the practitioners of each social science discipline to be active in conducting and studying the Public Understanding of their own community. Each may choose to employ their existing methodological practices to the pursuit of Public Understanding of Social Science, but we would still emphasise a core, shared, multidisciplinary approach.

The Public Understanding of Social Science may well adopt and reinterpret key strategies used in existing PUS, such as media analyses, surveys or interview studies with social scientists. But a Public Understanding of Social Science may also develop novel methodological approaches. For example, a frequent PUS approach is to track a scientific claim from within a scientific community to analyse how it is understood and used in public. A Public Understanding of Social Science may employ methodologies that reverse this and begin with public sites of knowledge to track how this is understood and used within social sciences, and any resultant back and forth, or blurring of boundaries between the two. It should also be attentive to novel forms of participatory social science, which differ from the citizen science models of natural sciences (Riesch and Potter, 2014). Here, the embedding of publics within social science research design requires analysis not just of the ways in which this shapes the research process, but also how it shapes or blurs practices of engagement, the locus of legitimate interpretation and the status of related knowledge claims in academic, policy and public contexts.

A Public Understanding of Social Science may also develop differing theoretical concepts or apply existing ones in novel ways. We have stressed the significance and distinctiveness of using the locus of legitimate interpretation to understand social sciences in public, and it also seems

likely the notions of lay understanding or unaccredited expertise may require augmentation for appropriate use in the Public Understanding of Social Science. There may also be scope for theoretical innovation in considering how some concepts originating within social science become part of common-sense social reasoning, for example, ‘moral panic’ (Cohen, 1972; McLuhan, 1964), ‘emotional labour’ (Hochschild, 1983) or ‘intersectionality’ (Crenshaw, 2018 (1989)) (see also Mandler’s (2019) work acknowledging the success of social science vernacular seeping into everyday speak, but also Giddens (1984) double hermeneutic). Against this backdrop, the Public Understanding of Social Science programme could analyse and assess the impact this adoption of social science ideas has on the status and role of the originating social scientific work. As such, we see our argument in this article as offering a set of opportunities for a new Public Understanding of Social Science, one which is attendant to different empirical and theoretical approaches while understanding the present standing of the field.

Second, we need a renewed Social Science Communication – informed by the work of the Public Understanding of Social Science – which is empirically informed, reflexive, but also normative and active. This should also from its outset be rooted in the reflexive examination of its own ethics, history and social justice politics, as is increasingly being seen within traditional science communication (Dawson, 2018; Felt and Davies, 2020; Medvecky and Leach, 2019; Orthia, 2020). It would also involve a re-inspection of existing public engagement approaches within the social sciences, which may then engender a different, perhaps more assertive, stance on boundary-work around our disciplines. This includes a consideration of what responsible boundary-work should look like in the social sciences, including how to do it, and how to know when it is needed. This may lead to increased engagement with publics by social scientists, but in a different form to how it is pursued today. This is certainly not to suggest that social scientists, including sociologists, adopt a detached one-way model of public education, but is to highlight that the central problem of the Public Understanding of Social Science and Social Science Communication is different to that of PUS and Science Communication. Where Science Communication has been criticised for its deficit approach to publics’ scientific understanding, and through public engagement and public participation activities has responded by seeking to extend the discussion, social scientists, because of the presence of theoretical and methodological pluralism, might need to do work to prevent their knowledge being routinely positioned as debateable/contestable or even invisible. That is, whereas some Science Communication programmes attempt to downplay scientific expertise in order to recognise and appreciate other contextual expertise and lay concerns who might have legitimate contributions to make on a matter, Social Science Communication programmes may need to foreground social science expertise to stress their distinctiveness. This, of course, should be done responsibly and reflexively.

Such work would be informed by ongoing Public Understanding of Social Science research, and the study of how the dynamic category of the ‘public fact’ (Marres, 2018) can be reconstituted and validated in the context of social science. Following Marres, this may require social science insights to be validated partly in the public sphere, and through engagement with publics. But, we urge, it should be done in a manner that recognises the epistemic legitimacy of the social sciences, even if this needs to be acquired in novel ways. In this regard, should Public Understanding of Social Science scholars choose to take forward the locus of legitimate interpretation as a theoretical frame, then they should continue to recognise the tension between its use as an empirical concept in terms of who in practice does society licence to make or contest knowledge claims about the social, and as a way of making normative claims of who should be treated seriously when they make or contest knowledge claims about the social. Analysis of social science public knowledge claims could also assess how shifts in the empirical and normative components of the locus of legitimate interpretation shape each other.

6. Conclusion

The social sciences are not the natural sciences, and one key aspect of this difference is the relationship that the social sciences have with publics. The social sciences are intrinsically entangled, at both the level of the research question and the research subject/object, with public knowledge, the expertises and knowledges of publics, and public interests. Yet the public discussion of knowledge claims that fall within the disciplinary domains of the social sciences only sometimes involve disciplinary experts, and rarely accords these experts with a privileged position of legitimate claim-makers and interpreters. They are certainly not afforded the same epistemic privilege as their natural science counterparts, as too often we see social science expertise flattened and devalued.

Any new model of the Public Understanding of Social Science must resolve the uneasy tension between legitimate public knowledge and public interests and protecting the privilege of expertise. However, the existing equilibrium of this tension is markedly different for the social sciences than it is for the natural sciences. Those engaged in the public understanding of (and engagement in) science grapple with extending participation to wider groups. Decades of STS studies have very carefully demonstrated that the expertise to participate in scientific and technical claim-making and decision making *extends* far beyond simply accredited scientists, thus raising questions of how best to *include* the interests and insights of ‘lay’ publics and knowledgeable publics. However, our cultural default with regard to the social sciences is all too often to treat these domains as if there is nothing much at all to distinguish between social scientific expertise and ‘common-sense’. We need to show that there is more to social science than replacing the common wisdom with specialist jargon.

A successful programme of the Public Understanding of Social Science must not restrict debate but must distinguish between social scientists and social actors. This is a task that might run counter to the prevailing winds, and many of our own disciplinary instincts, but it is one that the natural sciences take for granted. A Public Understanding of Social Science claim might be, for example, that the sociologist does have expertise, that they do possess a capacity for insight, analysis, and – importantly – discriminatory judgement derived from disciplinary socialisation and research experience that a non-sociologist does not. Of course, the locus of legitimate interpretation for the social sciences cannot and should not be as narrow as that of the natural sciences. As we stressed previously, successfully participating in society requires the possession of at least tacit understanding of how society works. We are all skilled at living in our societies – we all possess expertise. Equally, the questions asked, and the claims made, by the social sciences are often of immediate relevance to the interests of the public, and the participation of publics is a democratic necessity. This should be welcomed, and celebrated, but also monitored, and reflexively acted upon. The Public Understanding of Social Science, and a consideration of responsible boundary-work, can support this effort, and keep us attentive to the power, access, and justice issues that shape who gets to speak about what.

Ironically, the truth of any claim that we are experiencing an age of post-truth matters little. However, that such claims have prompted public debates about expertise, legitimate claim-making, and questions of contestation and consensus, has opened up a space for this article. First, this moment has prompted us to use the techniques and concepts of STS and in particular SEE to discuss these issues in a serious manner, informed by decades of collective, disciplinary empirical work in science studies. Second, it allowed us to assert that our experience and expertise as social scientists should enable us to play a more central part in drawing the boundaries of the locus of legitimate interpretation for knowledge claims about the social. Thinking seriously about a programme of Public Understanding of Social Science – making explicit the question of

how we should engage publics not only with fragmentary social knowledge claims, but with disciplinary perspectives and orientations – is the first part of responsible boundary-work. Without it, the social sciences might continue to be ‘everywhere and nowhere in public communication’ (Cassidy, 2021: 206).


Acknowledgements

The authors thank their colleagues and friends for reading earlier versions. They include Helen Blakely, Mark Connolly, Sara Delamont, Robert Evans, Des Fitzgerald, Daniel Smith and Gareth Thomas. They also thank the two anonymous reviewers for their insightful comments.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

ORCID iDs

Jamie Lewis  <https://orcid.org/0000-0002-1065-6017>

Andrew Bartlett  <https://orcid.org/0000-0002-6927-0899>

Hauke Riesch  <https://orcid.org/0000-0002-7830-9046>

Neil Stephens  <https://orcid.org/0000-0003-3871-0887>

Notes

1. In his call for sociology to take a more leading role in dealing with global challenges, Burawoy (2016) states that there is a need for a ‘public sociology that is not simply accessible but accountable to publics’ (p. 957).
2. Power matters. Who is talking over whom, and with what justifications. For example, social scientists should be unapologetic in claiming to have superior expertise when compared with generalist newspaper columnists who have powerful platforms from which to make consequential knowledge claims which shape the public conversation.
3. This is despite the work of Science and Technology Studies (STS) that has shown how scientific facts are themselves a type of social fact.
4. What is different about the climate change denialism of contemporary scientific-politics and the well-funded campaigns to obscure the truth about tobacco smoke (Oreskes and Conway, 2011), or between ‘fake news’ that supported Donald Trump and every bit of election propaganda since the first election races in the earliest democracies?
5. Psychology is a fascinating case study in its own right insofar as it straddles the boundary between the social and natural sciences, ranging from what we might understand as social psychology through to biological psychology. In the public domain we have witnessed a proliferation of ‘psych’ experts, mostly practitioners, that claim to be authoritative speakers on wellbeing, lifestyle and as well as more cognitive behaviours that using psychological language. But as Pettit and Young (2017) point out ‘psychological experts have not necessarily succeeded in controlling the flow of this discourse’ (p. 5).
6. Savage and Burrows (2007) maintain that social scientific authority eroded with the proliferation of digital technologies insofar as access to data on social relations is now available to a wide range of actors outside of academic social science.
7. While there are, for example, ‘expert patients’ who have a deep knowledge of their bodies, our argument is that some understanding of ‘the social’ is necessary to live as a functioning member of society.
8. See Medvecky and Macknight (2017) and Kamwendo (2020) for rare examples of the Public Understanding of Social Science in economics.
9. Schmierbach (2005) maintains that disciplinary fields that draw from quantitative and experimental methods such as social statistics and psychology are more likely to be seen as credible.

References

- Abbott A (2001) *Chaos of Disciplines*. Chicago: Chicago University Press.
- Agar J (2019) *Science Policy Under Thatcher*. London: UCL Press.
- Berger J (2008) *Ways of Seeing*. London: Penguins Books.
- Burawoy M (2016) The Promise of Sociology: Global challenges for national disciplines. *Sociology* 50(5): 949–959.
- Burton S (2016) Becoming sociological: Disciplinarity and a sense of home. *Sociology* 50(5): 984–992.
- Cassidy A (2021) Communicating the Social Sciences and Humanities: Specific Challenges – and broader insights for research communication? In: Bucchi M and Trench B (eds) *Routledge Handbook of Public Communication of Science and Technology*, 3rd edn. London: Routledge, pp. 198–213.
- Cohen S (1972) *Folk Devils and Moral Panics: The Creation of the Mods and Rockers*. London: MacGibbon and Kee Ltd.
- Cole S (1994) Why sociology does not make progress like the natural sciences. *Sociological Forum* 9(2): 133–154.
- Collins HM and Evans RJ (2002) The third wave of science studies: Studies of expertise and experience. *Social Studies of Sciences* 32(2): 35–296.
- Collins HM and Evans RJ (2007) *Rethinking Expertise*. Chicago, IL: The University of Chicago Press.
- Collins HM, Bartlett A and Reyes-Galindo L (2017) Demarcating fringe science for policy. *Perspectives on Science* 25(4): 411–438.
- Collins HM, Weinel M and Evans R (2011) Object and shadow: Responses to the CPS critiques of Collins Weinel and Evans, ‘Politics and Policy of the third wave’. *Critical Policy Studies* 5(3): 340–348.
- Crenshaw K (2018 [1989]) Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory, and antiracist politics. In: Bartlett K (ed.) *Feminist Legal Theory*. London: Routledge, pp. 57–80.
- Davies S, McCallie E, Simonsson E, Lehr JL and Duensing S (2009) Discussing dialogue: Perspectives on the value of science dialogue events that do not inform policy. *Public Understanding of Science* 18(3): 338–353.
- Dawson E (2018) Reimagining publics and (non) participation: Exploring exclusion from science communication through the experiences of low-income, minority ethnic groups. *Public Understanding of Science* 27(7): 772–786.
- Epstein S (2011) Misguided boundary work in studies of expertise: Time to return to the evidence. *Critical Policy Studies* 5(3): 323–328.
- Felt U and Davies SR (eds) (2020) *Exploring Science Communication: A Science and Technology Studies Approach*. London: SAGE.
- Fischer F (2011) The ‘policy turn’ in the Third Wave: Return to the fact–value dichotomy? *Critical Policy Studies* 5(3): 311–316.
- Gascoigne T and Metcalfe J (2017) The emergence of modern science communication in Australia. *Journal of Science Communication* 16(3): 1–18.
- Geiger BB (2021) Performing trustworthiness: The ‘credibility work’ of prominent sociologists. *Sociology* 55(4): 785–802.
- Giddens A (1984) *The Constitution of Society*. Cambridge: Polity Press.
- Gieryn TF (1999) *Cultural Boundaries of Science: Credibility on the Line*. Chicago: University of Chicago Press.
- Gordin MD (2021) *On the Fringe*. Oxford: Oxford University Press.
- Gregory J and Miller S (1999) *Science in Public: Communication, Culture and Credibility*. London: Plenum.
- Hochschild RA (1983) *The Managed Heart: Commercialization of Human Feeling*. Berkeley, CA: University of California Press.
- Holmwood J (2010) Sociology’s misfortune: Disciplines, interdisciplinarity and the impact of audit culture. *The British Journal of Sociology* 61(4): 639–658.

- Hope J (2019) Understanding our potential research publics: Exploring boundary disputes in recruitment to a sociological study. *Current Sociology* 67(5): 742–759.
- House of Lords (2000) *Science and Society*, 3rd Report. London: HMSO.
- Jasanoff S (2003) Breaking the waves in science studies: Comment on HM Collins and Robert Evans: The third wave of science studies'. *Social Studies of Science* 33(3): 389–400.
- Jones M (2016) What's wrong with studying the Kardashians? Available at: <https://www.theguardian.com/higher-education-network/2016/jan/14/whats-wrong-with-studying-the-kardashians> (accessed 21 July 2021).
- Kamwendo ZT (2020) What I learnt about how I learnt about behavioral economists. *Engaging Science, Technology, and Society* 6: 391–410.
- Lewis J and Bartlett A (2015) How UK psychiatric geneticists understand and talk about engaging the public. *New Genetics and Society* 34(1): 89–111.
- McCall RS and Stocking SH (1982) Between Scientists and Public: Communicating psychological research in the mass media. *American Psychologist* 37(9): 985–995.
- McLuhan M (1964) *Understanding Media: The Extensions of Man*. New York, NY: McGraw-Hill.
- Mandler P (2019) The Language of Science in Everyday Life. *History of the Human Sciences* 32: 66–82.
- Marres N (2007) The issues deserve more credit pragmatist contributions to the study of public involvement in controversy. *Social Studies of Science* 37(5): 759–780.
- Marres N (2018) Why we can't have our facts back. *Engaging Science, Technology, and Society* 4: 423–443.
- Medvecky F and Leach J (2019) *An Ethics of Science Communication*. Berlin: Springer Nature.
- Medvecky F and Macknight V (2017) Building the economic-public relationship: Learning from science communication and science studies. *Journal of Science Communication* 16(2): A01.
- Michael M and Lupton D (2015) Toward a manifesto for the 'public understanding of big data'. *Public Understanding of Science* 25(1): 104–116.
- Oreskes N and Conway EM (2011) *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. London: Bloomsbury.
- Orthia L (2020) Strategies for including communication of non-Western and indigenous knowledges in science communication histories. *Journal of Science Communication* 19(2): A02.
- Pettit M and Young JL (2017) Psychology and its Publics. *History of the Social Sciences* 30(4): 3–10.
- Pickersgill M and Smith M (2021) Expertises from the humanities and social sciences in essential for governmental responses to COVID-19. *Journal of Global Health* 11: 03081.
- Plaisance KS and Kennedy EB (2014) A pluralistic approach to interactional expertise. *Studies in History and Philosophy of Science Part A* 47: 60–68.
- Renn O (2006) Risk communication: Consumers between information and irritation. *Journal of Risk Research* 9(8): 883–849.
- Riesch H and Potter C (2014) Citizen science as seen by scientists: Methodological, epistemological and ethical dimensions. *Public Understanding of Science* 23(1): 107–120.
- Rip A (2003) Constructing expertise: In a third wave of science studies? *Social Studies of Science* 33(3): 419–434.
- Savage M and Burrows R (2007) The coming crisis of empirical sociology. *Sociology* 41(5): 885–899.
- Schmierbach M (2005) Method matters: The influence of methodology on journalists assessments of social science research science. *Communication* 26(3): 269–287.
- Scott J (2020) *British Sociology: A History*. Cham; London: Palgrave Pivot.
- Sismondo S (2017) Casting a wider net: A reply to Collins, Evans and Weinel. *Social Studies of Science* 47(4): 587–592.
- Stanley L (2005) A child of its time: Hybridic perspectives on othering in sociology. *Sociological Research Online* 10(3): 1125.
- Stilgoe J, Lock SJ and Wilsdon J (2014) Why should we promote public engagement with science? *Public Understanding of Science* 23(1): 4–15.
- Wynne B (1992) Misunderstood Misunderstanding: Social identities and public uptake of science. *Public Understanding of Science* 1: 281–304.

Author biographies

Jamie Lewis is a Senior Lecturer at Cardiff University. His interests include the social and ethical ramifications of biotechnologies, citizen science, practical accomplishment in the laboratory and fringe/pseudo-science.

Andrew Bartlett is a Research Associate at the University of York. His research interests include the sociology of contemporary life sciences, fringe science and alcohol industry involvement in science.

Hauke Riesch is a Senior Lecturer in Sociology at Brunel University London. His interests include popular science writing, science communication and humour, citizen science and the sociology of the apocalypse.

Neil Stephens is Associate Professor in Technology and Society at the University of Birmingham, School of Social Policy. He is a sociologist and Science and Technology Studies scholar, who has conducted research on social aspects of biotechnological innovation, including human embryonic stem cell science, mitochondrial donation, biobanking and cultured meat.