Expertise in an uncertain world: the role of expert knowledge in addressing environmental and planning challenges

Sophie Elsmore\* and Alina Congreve\*\*

\*Division of Urban, Environment and Leisure Studies, London South Bank University, London, United Kingdom, email: elsmores@lsbu.ac.uk

\*\*Independent Researcher, alina@congrevemail.co.uk

Abstract:

This special section addresses the geographies of knowledge and expertise across contemporary environmental and planning challenges. Understanding the changing role of expert knowledge and how it weaves its way into policy and decision-making is more important than ever given the mammoth challenges we face. Different forms of expertise can often be conflicting and competing with one another, reflecting the power relations underpinning their deployment. The four papers in this special section from geography and planning speak to the diverse knowledge claims and networks of expertise that shape and seek to challenge contemporary decision-making. The special section reflects on how embedded expertise operates across different sectors and scales. It pays attention to how expertise can become destabilized across particular geographies, as the mobility of knowledge generated in one context is deployed elsewhere. By attending to the multiplicities of knowledge at play across environmental and planning challenges, the papers break down the assumption that there is a single form of expertise.

Key words: expert knowledge; knowledge utilization; expertise; power; politics of knowledge.

1.0: Introduction

Policy and decision-makers today face unprecedented challenges. Tackling the climate emergency and protecting the environment, providing access to good quality and affordable housing, supporting the delivery of national and local infrastructure, and delivering essential public services (Mintrom, 2017; Pepinksy, 2020; Markard, 2020). The Covid-19 pandemic in particular has brought to the fore the stark inequalities that have long existed across our society, while also refocusing our attention on the role of expert knowledge within public policy making (Contestabile, 2021).

This special section brings together four papers addressing the geographies of knowledge and expertise across contemporary environmental and planning challenges. Palmer (2019) reveals the contested nature of environmental expertise following the Dieslegate scandal. Cross’ (2019) study of freshwater pollution shows how citizen science can influence policy and decision-making. Muldoon-Smith and McGuinness (2020) highlight the loss of expertise in the English planning system following a decade of public sector austerity. Finally, Colenutt (2020) argues for a new politics of knowledge, challenging the failure of contemporary property development to address the housing crisis. In different ways, each of the papers shows how expert knowledge is mobilized within the context of particular crises. From environmental and ecologies crises, to crises in public sector planning and housing provision.

Decision-making takes place within complex and fragmented environments. While faced with tackling mammoth societal challenges, the role of expert knowledge has also come under increased threat as populist and post-truth politics have sought to undermine and destabilise expertise (Jasonoff and Simmett, 2017). Understanding the changing role of expert knowledge and how it weaves its way into policy and decision-making is imperative against this backdrop. By attending to the politics of knowledge production, the papers in this special section speak to the diverse knowledge claims and networks of expertise shaping contemporary environmental and planning challenges. They demonstrate the complexity of creating and deploying expert knowledge across varying geographical scales from the European Union to grassroots campaigns, and reveal the multiplicities of knowledge often at play across these geographies. The papers enhance our understanding of how embedded expertise operates across environmental and planning challenges, with attention also paid to the ways in which expert knowledge can become destabilized across boundaries.

2.0: Boundaries of expert knowledge

Palmer’s (2019) paper in this special section considers the contested nature of environmental expertise in the wake of the Dieslegate scandal as it played out at the EU level. The controversy began in late 2015 when the US Environmental Protection Agency revealed that in excess of half a million diesel vehicles had been fitted with a “defeat device”, enabling cars to release fewer emissions during official regulatory tests than they would subsequently emit on the open road. Mapping out the knowledge produced by official testing regimes and real- world driving data crowd sourced by individual citizens, Palmer reflects on the two types of conflicting knowledge produced about vehicles emissions by these sources. But more so than this, Palmer argues that we need to question the very boundaries of what is considered credible expertise in this context. The paper invites us to reconsider what and how is deemed governable in the first place, and how we might look to alternative expertise to challenge our understandings of the socio-environmental implications of vehicle emissions.

The paper by Cross (2019) makes a significant contribution to existing research, showing how citizen science data has impacted on policy and decision-making. It draws upon a case study of the River Crane in West London, which was subject to major pollution incidents that caused significant ecological damage and widespread loss of fish. A river restoration fund then established a citizen science project (Citizen Crane). This paper investigates the collaboration between citizen scientists, the Water Company and Environment Agency to address water quality. It considers how citizen science was deployed to inform the management of this urban river and challenges traditional understandings of expertise in environmental decision-making.

Muldoon-Smith and McGuinness (2020) reflect on the difficulties emerging within planning practice and expertise in England. Their paper considers the widespread movement of experienced planners from public sector roles in local government to the private sector as they take with them knowledge built up over many years. Attending to planners’ expert tacit knowledge of how things work on the ground, the paper reveals the shifting knowledge and power dynamics of this mobility between and within the public and private sector. With its potential to influence and redefine local planning decisions, the emergence of new geographies of tacit knowledge can reconfigure locally embedded knowledge as expertise becomes mobilized elsewhere.

Colenutt’s (2020) paper argues for a new politics of knowledge to challenge property development in London. Stemming from grassroots campaigns and local action, he argues that the new politics of knowledge can seek to challenge top-down knowledge and expertise in planning, housing and land. Focusing on the role of economic viability testing in shaping decision-making, Colenutt argues that the power of conventional property market expertise can have a profound influence on the redevelopment of neighbourhoods across the city. Instead he asserts it must be challenged through this new politics of knowledge to create a new politics of opposition.

3.0: Broadening expert knowledge

While expert knowledge is considered an essential part of society, it can be mobilized in a variety of ways through selective deployment to support particular decisions or indirectly influencing decision-making by conditioning wider debates to inform and enlighten discussion (Dunlop, 2014). As we see from the papers in this special section, the desirability of considering different forms of knowledge and expertise to inform decision-making processes is often contested (Grundmann, 2017), with certain forms of knowledge often assuming authority over others (Castree, 2015). Different forms of expertise may therefore be conflicting and competing with one another, reflecting the power relations that underpin the deployment of particular forms of expertise. Calls have been made therefore for the necessity of broadening our understanding of expertise, emphasising the importance of addressing diverse knowledge claims. As is evident across the papers in this special section, rather than confining expertise to techno-scientific expertise, broader understandings of expertise can also emerge from paying attention to the importance of experiential and tacit knowledge (Grundmann, 2017). Expertise therefore can be considered as relational, something that is used and performed, and that mediates between knowledge production and its mobilization (ibid).

The role of expert knowledge has nonetheless continued to come under threat, as ‘our contemporary society is confronting a crisis of truth, as facts and fakes are conflated and disseminated across both digital and spatial communities’ (Gudowsky and Rosa, 2019, p.24). In recent years, Michael Gove, a senior UK government minister proclaimed, “I think the people of this country have had enough of experts” (Portes, 2017). In the wake of Brexit and the 2016 US presidential elections, alternative narratives about truth and politics have been commonly mobilised (Jasonaff and Simmett, 2017). While not new, post-truth and populism have emerged as buzzwords of the 21st century, tapping into popular discontent and seeking to disrupt the establishment and undermine the role of expertise. As has been evident during the coronavirus pandemic, expertise and the role of science and data have been pushed to the forefront and questioned. New and previously unlikely networks have developed as governments, business and civil society have sought to find ways to control and mitigate the public health crisis.

4.0: Responding to crises

Researchers have pointed to the role of crisis as a trigger for systemic change towards sustainability ([Gunderson et al., 2017](https://www.sciencedirect.com/science/article/pii/S1462901120301787#bib0185); [Newig et al., 2019](https://www.sciencedirect.com/science/article/pii/S1462901120301787#bib0270)). Case studies of crisis leading to change have highlighted the role of specific institutional practices including policy and regulatory settings, resource allocation, cognitive culture, and social mobilisation (Novalia and Malekpour, 2020). In different ways, the papers across this special section consider the relationships between crisis and expert knowledge. A crisis and subsequent response is important in Palmer’s paper about Dieselgate. Air pollution as an environmental problem is characterised by both specific pollution incidents that result in deaths and illness over a short period, and systemic long-term air quality problems. The Dieselgate crisis is also one of public trust in the competence of environmental regulators to manage complex environmental problems and hold large companies to account. The regulator and regulated were locked in an ‘inevitable’ regulatory game, with large motor manufacturers having significant financial and technical resources available to ‘outsmart’ their public regulators. Palmer’s research examines the actions of motor manufacturers as they attempt to keep control of the narrative as the crisis unfolds, trying to limit the scope of policy debate and through this the kinds of knowledge considered legitimate. Despite their efforts, the scandal did result in much greater visibility of real world driving data, crowd sourced by individual citizens.

A common feature of contemporary citizen science is collecting data in response to an environmental threat. Our understanding of environmental problems, in particular those related to conservation, are better known because of the data collected by citizen scientists. Our knowledge and understanding of the dramatic decline in farmland birds (Gregory et al., 2005) and pollinating insects has been underpinned by citizen science (Ballard et al, 2017). The data citizen scientists collect also help us better appreciate the threats to ecosystems as a result of climate change, as flowering plants and nesting birds react to changing global temperatures (phenology). Water pollution, like air pollution, came to prominence in advanced economies in the 1970s. There was substantial progress through legislation and the establishment of environmental regulatory agencies, which led to a widespread view that it had been largely solved. This view that the problem has been solved has had to be revisited, as the crisis affecting England’s rivers has been prominent in the national media and political debate (Barkham, 2021; Laville, 2021). The monitoring and testing regimes and data management by government agencies has been the subject of particular criticism.

Technology has transformed the possibilities for individuals and communities to compile and communicate what was previously only possible for government regulatory agencies. During the Covid-19 crisis, one of the most accessible and authoritative databases tracking hospitalisations, infections, vaccinations and deaths at different spatial scales was compiled in Australia by a fourteen year old and two fifteen year olds. Their skills in statistical analysis, coding, and generating infographics outpaced official sources supplied by a range of public agencies in different files and formats. In Cross’ paper, the co-ordinated action by citizens can lead to a transformational change in the data available to statutory agencies to more effectively manage river pollution. His paper provides a valuable case study of how to address concerns about the reliability and validity of citizen collected data. Palmers’ paper also deals with issues of citizen generated big data. It contrasts the official view of the road vehicle emissions tests, with credibility linked to experimental reproducibility; and the alternative crowd sourcing of publically generated fuel economy measurements which has credibility by pooling thousands of diverse driving experiences. Palmer argues that this second approach can lead to better outcomes, more democratic accountability and inclusiveness.

Underpinning Muldoon-Smith and McGuinness’ paper is the crisis of austerity that has impacted profoundly on local government in England over the last decade, and threatened their planning capacities. Thick understanding of individual places built up by experienced local government planners helps keep the planning system moving, avoiding inertia and reducing delays. The tacit knowledge of public sector planners, including: contacts in public and private sector; property ownership; historical perspectives on development; and local community knowledge, help ‘get things done’. Their paper illustrates how the tacit expertise of public sector planners is increasingly underrated, with the traditional networks of knowledge normally transferred from more senior planners to early career planners coming undone through eroding networks of peer support. The movement of knowledge and expertise away from the public to the private sector leaves those left facing growing time and resource constraints, a lack of specialist skills, and stretching government targets. This is further creating a crisis for public sector planning.

Colenutt’s paper brings us to these questions in relation to the housing crisis. The housing crisis is a commonly used expression in the popular media and among built environment professionals to describe the acute problems many people face in accessing good quality and affordable homes. While Colenutt explores this in the context of London, cities and rural areas the world over are contending with this (Rolnik, 2019). The crisis of homelessness, or in decisions to carry out widespread demolition of existing housing for communities. Crises such as the Ronan Point disaster and more recently Grenfell Tower involving high rise residential building,s have resulted in calls for changes to housing policy. But like air pollution and water pollution, housing is also a long-term and systemic crisis. Constructing housing as a crisis that must be addressed immediately can be used by some decision makers to legitimate urgent action, avoiding the delays that come from robust scrutiny by public authorities and deeper community engagement. Some of the positive outcomes pointed to in Colenutt’s paper come from alignments of community activists, academic researchers and individual champions in local government.

5.0: Conclusion

Each of the case studies in the four papers in this special section attend to the geographies of expert knowledge across different sectors, scales and localities across contemporary environmental and planning challenges. They set down a broader challenge to disciplinary knowledge within ecology, addressing air pollution, for planning expertise, and for the property and real estate market. These papers show we must pay attention to the ‘diverse modes and diverse arenas’ in which expert knowledge is produced and mobilized (Healey, 2013, p.1515). The construction and transformation of knowledge can take place outside formalised structures, with policy entrepreneurs and shadow networks increasingly recognised as flexible spaces within which innovations may occur (Dunlop, 2014; Turnpenny *et al.*, 2015). Expert knowledge is rarely mobilized in a linear way, as decision-makers mediate amongst the tensions and often competing interests of stakeholders (Parkhurst, 2017).  As Howlett (2011) illustrates, the policy and decision-making process is made up of a complex array of decision-makers, knowledge producers and knowledge providers. We must recognize and draw attention to the multiplicities of expert knowledge, and consider where knowledge is held and how it is used and performed (McKay *et al.*, 2015). Together, the papers break down the assumption that there is a single form of expertise.

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