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# Science and security expertise: Authority, knowledge, subjectivity

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## ABSTRACT

What role does science play in shaping the political? This themed issue brings together scholars from political science, human geography, natural science and related fields with the common aim of exploring links between science/expertise and politics with a specific focus on security implications. The increasing attention to threats and risks related to issues such as climate change, migration, energy security, or emerging technologies creates a demand for new types of experts and expertise relevant for security politics. By looking at the actors who operate at the boundary between science, bureaucracy and security politics, this themed issue seeks to destabilize the notion of an apolitical sphere of science and expertise, while at the same time demonstrating how the politics of expertise shapes the authority and subjectivity of scientists and reconfigures the meanings and roles of scientific knowledge. In this editorial, we connect relevant literatures and introduce the individual articles that compose the themed issue.

### 1. Introduction

Science and scientific knowledge - especially in the area of the natural or 'hard' sciences - have traditionally held a special status in society. Generally speaking, the natural sciences have been considered objective and hence free from 'politics'. Results could be trusted to not be biased or carry any hidden agendas. Social science, on the other hand, has not enjoyed equal status. According to Pierre Bourdieu,"... everyone feels entitled to have their say in sociology and to enter into the struggle over the legitimate view of the social world" (Bourdieu, 2004, 87). In other words, social scientists have constantly been struggling with a range of 'experts' and other (non-)scientific social agents over the legitimate knowledge of the social. Its knowledge has been considered less objective and perhaps even inherently political, contra natural scientific 'truths'.

While debates within the natural sciences have cast doubt on the clear cut separation of scientific truth and politics (Forsyth, 2003, 2011), the image of politics-free science has prevailed. But with the rise of risk management practices in security politics and the focus on so-called 'securitization' or framing of specific political issues as security threats, natural scientists and other experts have become increasingly involved in security politics, whether by explicitly taking part in the decision-making process, serving as advisors, expressing their opinion

in media, or even implementing (security) policies. This puts the hard scientists on unfamiliar territory and resuscitates a number of questions about the supposedly apolitical nature of their work. Is the gap between the status of natural and social sciences a misrepresentation? To what extent is natural science – like its social science cousin – bound up in politics by default? This themed issue seeks to unpack these novel connections between security and (scientific) expertise and address some of the new questions that the involvement of a broader scope of experts in security politics bring about. Compared to prior research that focused on the links between science and expertise, the themed issue expands the focus to include under-researched expert sites and specifically the *security dimensions* of (natural) science and expertise.

The editorial is structured as follows: In the next section, we explore in depth three literatures of relevance for understanding the new situation. First, we introduce previous discussions of expertise and 'the political' within the field broadly conceived of as physical and human 'geography'.<sup>1</sup> Second, we then turn to the increasingly relevant debate within science and technology studies (STS) focused on the co-constitution of science and society and the impossibility of hermetically sealing off the scientific sphere. And third, we argue for the relevance of the evolving debate within security studies known as securitization theory, which is concerned with the normative dilemma of conducting security research and/or mobilizing scientific knowledge with regards

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<sup>&</sup>lt;sup>1</sup> These two main branches of Geography broadly focus on Earth science aiming to understand issues across physical spheres and patterns (physical geography), and the distribution of social phenomena and the relation between humans and nature across space and place (human geography).

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to security matters. The following section fleshes out what a research agenda connecting the three literatures would look like, and argues for the importance of focusing on three points: authority, knowledge, and subjectivity. The final section introduces the articles in this themed issue and points to further research needed in the future.

## 2. Security and the politics of scientific expertise

Within the more physical branches of geography and environmental studies a strong trend to view science and expertise in apolitical terms has been present for a long time. However, a number of openings towards situating science in a less than apolitical sphere can be found in the literature, and a focus on the shortcomings of technical and apolitical approaches to and expertise in environmental problems have emerged.

Within the subfield of natural resource management (NRM) for instance, such openings can be found. Political Ecology scholars in particular, although diverse in their individual interpretations of the meaning and objective of Political Ecology itself, are bridging fields of Ecology (or environmental science) with Political Economy and/or STS to add a political dimension to the criticized apolitical approaches. For instance, some scholars are concerned with the politics of ecology as a scientific legitimization of environmental policy (Forsyth, 2003, p. 4) and propose discourse analysis to interrogate the relationship between power and scientific knowledge (Neumann, 2005, p. 7). These and other Political Ecology approaches criticize the perceived political neutrality offered by "science", and instead view science as socially and politically constructed and influenced, emphasizing the multifaceted relationship of politics to the science of ecology, but without completely dismissing one over the other. By diversifying scales and perspectives, environmental problems are contextualised to specific habitats so as to understand local dynamics rather than seeking universal explanations from a more positivistic and apolitical lens (Forsyth, 2011, p. 34).

Political Ecology approaches are exemplified and empirically unfolded in critical literature on the marketization of nature (e.g. Bumpus and Liverman, 2011; Fairhead et al., 2012; Van Hecken and Bastiaensen, 2010), revealing political and discursive dynamics showing the hidden political ambiguities of environmental protection frameworks. Likewise, work by Tania Murray Li on community-based forest policies (Li, 2007) has demonstrated the blind spots of the apolitical approach. She persuasively brings together notions of 'rendering technical' social problems and solutions, of 'authorizing knowledge' by assimilating science and containing critique, and of the 'anti-politics' of reposing political questions as matters of technique. Li and likeminded critical scholars (e.g. Aguilar-Stoen, 2015; Buscher, 2014; Nel, 2015) unfold the role of different types of experts who diagnose disorders and prescribe the needed interventions, and examine the active agency and influence of scientists across disciplines, including human geography (Pasgaard et al., 2017). Another recent take on scientific expertise in NRM is by Lund and colleagues, (Green and Lund, 2015; Lund, 2015) who focus on 'professionalization'<sup>2</sup> of forestry, and on how knowledge and expertise are created and shape access to benefits from participatory forest management. These scholars focus on the scientific management approaches undertaken by forestry bureaucrats and social elites of forest adjacent communities (rather than a focus on scientists or researchers like the authors themselves), and show how these central actors frame participatory forestry in a way that downplays politics by demanding technical, scientifically-grounded expertise. So, issues of universality, technicality, professionalization and expertise have provided ways into understanding the 'political' within natural resource management and political ecology.<sup>3</sup>

In development research, a similar political turn addresses the

shortcomings of technical framings of problems and solutions. For instance, James Ferguson's influential book "The Anti-Politics machine" (Ferguson, 1994) effectively disentangled the "construction" of development from prevailing realities, arguing for a new politics of oppositions, where "the most important jobs for 'experts' is combating imperialist policies" (p. 181). More recently, scholars such as Mosse (2011, 2005), de Sardan (Bierschenk and De Sardan, 2014; de Sardan, 2005), Mitchell (2002) and Goldman (2005) all critically explore the role of a category of actors called "intermediary", brokers/translators of development, or simply development experts, who are typically Northern-based workers in non-governmental organisations (NGOs) or government officials (local bureaucrats). Along the same lines, work compiled by Cooper and Packard (1997; fourth cover) explores the relationship between academic knowledge and development practice, treating development as a "vast industry involving billions of dollars and a worldwide community of experts". Overall, debates have focused on experts as actively participating in the making of the issues they study, on science as an already situated practice, rather than a neutral observatory site 'out there', and on the mechanisms of the market and environment policies as factors posed as apolitical technicalities, but indeed shaping scientific/political outcomes.

Taken together, these perspectives on 'the political' surrounding science within debates in the main branches of geography touch upon dimensions long discussed within the subfield of STS. Situated in the broader constructivist paradigm within the social sciences, STS has stressed the inherently social and constructed character of the scientific endeavour,<sup>4</sup> even in areas seemingly unrelated to any social and political issues at all (Kitcher, 1984). Sheila Jasanoff is perhaps the person who has combined the constructivist trend most directly with the natural sciences (Jasanoff, 2014, 2005a)<sup>5</sup> by showing how science and expertise are bound up in cultural structures which favour some types of research and experts over others (Jasanoff, 2005b). As a more general statement about the relation between science and society, she has developed the concept of *co-production*, which highlights that science and social order are inextricably linked: It is impossible to understand science in the absence of the social order it is inscribed in and vice versa (Jasanoff, 2004). From this follows an understanding that an apolitical sphere of science is logically impossible. This does not imply that party politics or individual agendas cloud scientists' minds and lead to bad science. It rather means that science is always situated in the time and the space of a specific social order. In order to understand the political dimensions of science it is thus necessary to analyse not only the internal processes of a specific specialization or the ways in which scientists go about doing their science,<sup>6</sup> but also the 'situatedness' of science in a social milieu in a specific time period. In Jasanoff's words, we have to connect the micro-worlds of scientific practice with the macro categories of political and social thought (Jasanoff, 2004). Just as the above mentioned research in NRM and Ecology has branched out to contemplate various political dimensions, this themed issue seeks to unveil and situate science in its political and social context.

Compared to prior research that focuses on the links between science and expertise in the fields of natural resource management or human development, this themed issue includes analysis of under-researched expert sites and specifically the *security dimensions* of (natural) science and expertise. It does so by investigating a number of political processes not yet thoroughly analyzed in human development, geography and the geosciences. Based on the work in STS on the impossibility of hermetically closing of science from social order and the importance of the 'situatedness' of science, we introduce a focus on the performative effects of what we might call *security framing* as a

<sup>&</sup>lt;sup>2</sup> See Nightingale (2005).

<sup>&</sup>lt;sup>3</sup> Ferguson being an anthropologist, this also applies to anthropology.

<sup>&</sup>lt;sup>4</sup> For an overview of the STS debate, see (Hackett et al., 2008)

<sup>&</sup>lt;sup>5</sup> Recent work by Bruno Latour has also taken up this connection (Latour, 2013).

<sup>&</sup>lt;sup>6</sup> This has been a lead theme in early STS work. See e.g. (Barnes, 1974; Bloor, 1976; Barnes and Bloor, 1982)

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