4 *Studying the Assembling of Expertise in Global Governance*

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International organisations (IOs), as well as other sites of global governance, make claims to the 'evidence-based' or 'expert-based' nature of their agendas and policy interventions, whether in health, climate, education, or development aid.[1] Global policies and programmes are largely legitimised by reference to their reliance on 'evidence', presented as reliable, scientific, and 'expert'. 'Experts' – sitting in IOs, expert groups, academia, high level commissions, or advisory committees of all sorts – indeed abound in global governance forums and produce a plethora of studies, databases, and seminal papers that form the knowledge base in given issue domains. This self-proclaimed rationalisation of the work of IOs largely goes unchallenged in academia.[2] Existing scholarship in International Relations (IR) and International Law (IL) often rehearses a narrative where IOs are seen as relying on scientific expertise to solve global problems. This view is based on two assumptions. First, the expertise of IOs is perceived to be strongly associated with science, and science itself is understood as developed independently of the circumstances of time, place, and social conditions. Second, global 'problems' are largely seen as given,

[1] S. Timmermans and A. Angell, 'Evidence-based medicine, clinical uncertainty, and learning to doctor' (2001) 42 *Journal of Health and Social Behavior* 342–59; K. P. Donovan, 'The rise of the randomistas: on the experimental turn in international aid' (2018) 47 *Economy and Society* 27–58; O. J. Sending, 'Recognition and liquid authority' (2017) 9 *International Theory* 311–28; A. Jatteau, 'Expérimenter le développement? Des économistes et leurs terrains' (2013) 93 *Genèses* 8–28.

[2] S. Jasanoff, *The Fifth Branch: Science Advisers as Policymakers* (Harvard University Press, 1998); T. F. Gieryn, 'Boundary-work and the demarcation of science from non-science: strains and interests in professional ideologies of scientists' (1983) 48 *American Sociological Review* 781–95; T. M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton University Press, 1995); L. Daston and P. Galison, *Objectivity* (Princeton University Press, 2021).

existing out there for policymakers, or scholars, to address and solve them with the best knowledge and tools that they have.

Yet, the making of expertise involves decisions regarding what forms of knowledge to include and exclude. It also involves processes of assembling, which give shape to dispersed facts and knowledge and profoundly delineate what emerges as 'expertise'. Such processes are deeply political; not only are they shaped by and through epistemic controversies and contests, where financial, epistemic, and social resources are all at play, but they are also embedded in time-specific macro-epistemic conditions, which shape the contours of what forms of knowledge count.

Acknowledging that the making of expertise involves political processes of inclusion, exclusion, and assembling also has implications for how we conceive global objects of governance, those 'matters of concern', or 'problems', that IOs govern. It brings to light that such problems are themselves defined through processes of sense-making, where expertise plays a central role. Objects of governance are, indeed, interpreted and made sense of through and with knowledge and tools seen as 'expert' and relevant. Acknowledging the subtle political processes at play in the delineation of objects of governance has implications for scholars in IR and IL, who study objects such as bioethics, the law of the sea, and biodiversity, amongst others. It makes it possible to see these not just as problems in need of solving through the mobilisation of evidence, statistics, or scientific studies, but as complex and 'wicked' matters of concern that ought to be made sense of in the first place.

It is, thus, necessary to open up the black-box of knowledge-making processes in global governance and engage with the processes through which IOs produce and stabilise expertise. How do certain forms of knowledge gain the status of expertise? What kinds of evidence come to be seen as valid and relevant for governance purposes? As we know, '[e]xpertise is authoritative knowledge at a given decision point'.[3] This does not imply that 'anything goes'. Certainly, expertise also consists of substantive knowledge in a given domain.[4] But when a multitude of

[3] A. Leander and O. Wæver, 'Introduction: assembling exclusive expertise: knowledge, ignorance and conflict resolution in the Global South' in A. Leander and O. Wæver (eds.), *Assembling Exclusive Expertise: Knowledge, Ignorance and Conflict Resolution in the Global South*, (Routledge, 2018) p. 2.

[4] H. M. Collins and R. Evans, 'The third wave of science studies: studies of expertise and experience' (2002) 32 *Social Studies of Science* 235–96.

professional, scientific, or experiential knowledge forms co-exist and struggle for recognition, power dynamics and asymmetries also play out in the delineation of specific knowledge forms as expert. Thus, what is seen as expertise 'conforms to no transcendent criteria of logic or method, but frequently incorporates popular conceptions (and misconceptions) of relevance and reliability, and all too commonly reflects differences in the social and material positions of disputing parties and decisionmakers'.[5]

Thus, in this chapter, I propose some entry points to study the making and stabilisation of expertise in global governance. The approach goes beyond an exclusive focus on IOs, which are understood to be part of a broader machinery of knowledge production that involves a complex web of actors, sites, infrastructures, and power relationships. Taking the study of IOs away from international secretariats, member states, and formal negotiating structures makes it possible to examine how expert groups, think-tanks, professional organisations, large activist organisations, academic research clusters, and private actors, as well as their knowledge techniques and 'ways of seeing', participate in the production of 'expertise' in global governance.

In a first part, I outline ways in which expertise has been discussed in IR, as well as in Political Science, Sociology, and Science and Technology Studies (STS). In a second part, I shed light on specific and concrete paths through which the politics of expertise can be analysed. I argue that the power–knowledge nexus can be analysed by exploring sites and networks of knowledge production (i), infrastructures of knowledge production (ii), and relations between humans and/or things (iii). In a third part, I propose three potential methodological entry points to study the making of expertise.

IR Scholarship and Expertise

In IR, IL, and Political Science, as well as in policy circles, 'expertise' is largely seen as 'the real and substantive possession of groups of experts'.[6] Experts, thus, distinguish themselves from 'non-experts' by their possession of knowledge of facts, theories, methods, and

[5] S. Jasanoff, 'Accountability: (no?) accounting for expertise' (2003) 30 *Science and Public Policy* 157–62 at 159.

[6] H. Collins and R. Evans, *Rethinking Expertise* (University of Chicago Press, 2008) p. 2.

techniques that pertain to a discipline or professional field. Such knowledge can be gained through training and legitimised through the traditional university degree and/or through long-term professional experience in a given domain. According to this view, expertise is also isolated from the social and the political; it is a form of knowledge produced through systematic techniques, which ensure that it is 'valid', 'accurate', and 'objective'. This understanding of expertise relies on the assumption that the development of expertise is tied to that of science, and that scientific knowledge is itself developed in isolation from social and political conditions. The prevalence of this view is widely established in governmental spheres, as well as in IR and IL.[7]

Thus, if science produces true and valid knowledge, using such knowledge will also produce the right political decisions.[8] This 'rationality project' emerged in debates amongst political scientists in the 1950s, when a group of scholars developed hopes that policymakers would advance better policy agendas and programmes if they used sound evidence in the formulation of their decisions.[9] From this perspective, the development of scientific knowledge is driven by the logic of science, which is independent from the circumstances of time, place, and social conditions. If it is possible to understand reality by 'getting down to the facts', the application of science-based knowledge would seem, indeed, to be the best way to help solving policy problems. As a result, existing work on expertise is predominantly concerned with the way experts influence or shape policy, based on the assumption that the scientific and the policy spheres are neatly separated and driven by different logics.

The focus on the impacts of expert knowledge in policymaking also prevails in IR. Scholars in the field have argued that, because they deal with highly complex and technical issues, international decision-makers depend on science and technology for determining the risks and consequences associated with political action. As decision-makers seek

[7] Jasanoff, *The Fifth Branch*; Gieryn, 'Boundary-work and the demarcation of science from non-science: strains and interests in professional ideologies of scientists'; Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life*; Daston and Galison, *Objectivity*.

[8] N. Caplan, 'The two-communities theory and knowledge utilization' (1979) 22 *American Behavioral Scientist* 459–70.

[9] R. E. Lane, *Political Ideology* (Free Press, 1962); D. Bell, *The End of Ideology: On the Exhaustion of Political Ideas in the Fifties* (Free Press, 1960).

information to make choices, this enables epistemic communities to provide information that favours or excludes different alternatives.[10] This approach has stimulated a research programme that seeks to identify the scope conditions of the influence of research on policy, as well as the obstacles to a better flow of scientific research to policy-making.[11] Not only does this perspective assume that knowledge and policy *are* distinct but also that they *should* be. In the hopes that policymakers advance better policy agendas and programmes, the focus was on enhancing the use of sound evidence in the formulation of their decisions.

Other accounts in Political Science and IR have focused on the mobilisation of knowledge for political purposes. Such perspectives no longer assume that knowledge is valued only as a way of rationalising decisions, but acknowledge its symbolic and legitimising role.[12] Existing insights have revealed the way policymakers use expert knowledge selectively, and sometimes misleadingly, in order to back their agendas and programmes, frame issues in a way that pushes the policy solutions they prefer, gain legitimacy, or yet expand their competences.[13] In their work on international bureaucracies, Barnett and Finnemore have revealed that expertise is central to the assertion of IOs' authority. When 'emphasising the "objective" nature of

[10] P. M. Haas, 'Introduction: epistemic communities and international policy coordination' (1992) 46 *International Organization* 1–35.

[11] A. Verdun, 'The role of the Delors Committee in the creation of EMU: an epistemic community?' (1999) 6 *Journal of European Public Policy* 308–28; P. M. Haas and C. Stevens, 'Organized science, usable knowledge, and multilateral environmental governance' in R. Lidskog and G. Sundqvist (eds.), *Governing the Air: The Dynamics of Science, Policy, and Citizen Interaction*, (The MIT Press, 2011), pp. 125–62; M. K. D. Cross, 'Rethinking epistemic communities twenty years later' (2013) 39 *Review of International Studies* 137–60.

[12] C. H. Weiss, 'The circuitry of enlightenment: diffusion of social science research to policymakers' (1986) 8 *Knowledge* 274–81; C. Boswell, *The Political Uses of Expert Knowledge: Immigration Policy and Social Research* (Cambridge University Press, 2009); D. Nelkin, 'The political impact of technical expertise' (1975) 5 *Social Studies of Science* 35–54.

[13] C. H. Weiss, 'Bureaucratic maladies and remedies' (1979) 22 *American Behavioral Scientist* 477–82; A. Littoz-Monnet (ed.), *The Politics of Expertise in International Organizations: How International Bureaucracies Produce and Mobilize Knowledge* (Routledge, 2017); A. Littoz-Monnet, 'Expanding without much ado. International bureaucratic expansion tactics in the case of bioethics' (2021) 28 *Journal of European Public Policy* 858–79.

their knowledge, staff of IOs are able to present themselves as technocrats whose advice is unaffected by partisan squabbles'.[14] While these contributions have pointed to the crucial role(s) of knowledge in politics, they assume either that expertise is externally produced and subsequently enters the political domain, or that policymakers use knowledge to pursue specific interests. Such accounts, which bracket the production of knowledge, do not point to the different forms of enmeshment between knowledge and politics in processes of knowledge-making.

'De-Blackboxing' the Making of Expertise

Sociologists of science, scholars in the field of STS, and critical scholars more broadly have problematised the view that expertise is 'objective' and 'neutral' for decades. The French sociologist Bruno Latour has pointed out that scientific knowledge enjoys no independence or claim to authority beyond the political and economic interests that helped develop the scientific claims.[15] From that perspective, science embeds and is embedded in the social and the political. As put by sociologist of science Sheila Jasanoff, '[w]hat counts as expertise … frequently incorporates popular conceptions (and misconceptions) of relevance and reliability, and all too commonly reflects differences in the social and material positions of disputing parties and decision-makers'.[16] What counts as expert knowledge can and does change. It is embedded in time and place-specific political circumstances, power dynamics, and conceptions of what is worthwhile, valid, and relevant. The power–knowledge nexus has, of course, consequences for the way governance objects, whether human rights, biodiversity, food, or trade, are seen, governed, and regulated through the norms and practices of IL. Yet, this is often overlooked by scholars who study such issues as unproblematic problems in need of solving.

I propose later that capturing the politics of the production of knowledge and expertise requires paying attention to where and by

[14] M. Barnett and M. Finnemore, *Rules for the World: International Organizations in Global Politics* (Cornell University Press, 2004) p. 24.
[15] B. Latour, *We Have Never Been Modern* (Harvard University Press, 1993).
[16] Jasanoff, 'Accountability: (no?) accounting for expertise', 159; M. Lynch and S. Jasanoff, 'Contested identities: science, law and forensic practice' (1998) 28 *Social Studies of Science* 675–86.

whom knowledge is produced (knowledge sites and networks), infrastructures of knowledge production (material artifacts), and relations. This approach makes it possible to analyse the way expertise is produced by and through a nucleus of sites, organisations, knowledge techniques, and material artifacts, which operate in a highly enmeshed and mutually reliant space.[17]

Sites

Studying sites of knowledge-making in global governance requires paying attention to centres of knowledge production within, across, and beyond IOs. The spatiality of knowledge production is changing. Sites of knowledge production are increasingly situated outside established expert networks and are therefore increasingly dispersed. The knowledge considered as 'expert' by IOs is often produced in hybrid and informal spaces, located beyond or across traditional governmental spheres, such as boundary expert groups, high-profile academic clusters, private sites, or ephemeral 'crossing points': the events, forums, and fairs where officials, activists, experts, and regulators meet and stabilise understandings of problems. At the same time, the apparent dispersion of knowledge sites can conceal novel forms of concentration, where hierarchies persist, and which determine access, and the possession of knowledge becomes a major source of power.[18]

IOs have research departments and statistical units, which produce profuse in-house knowledge that is central to their authority and legitimacy. Still, they often set up expert groups to produce knowledge and recommendations on specific issues. Also in these groups, knowledge considered as authoritative and 'expert' is produced and stabilised. Such groups typically gather high-profile professionals, who have multiple affiliations in the policy, academic, and private spheres. Discussions within such groups typically focus on the technicality of issues, leaving aside, or at least making opaquer, their political implications. Experts tend to internalise their role as technical advisors, rather than political advocates, thus facilitating more consensual and

[17] S. Jasanoff, 'The idiom of co-production' in S. Jasanoff (ed.), *States of Knowledge: The Co-Production of Science and the Social Order* (Routledge, 2004), pp. 1–12, p. 3.

[18] C. Rikap, *Capitalism, Power and Innovation: Intellectual Monopoly Capitalism Uncovered* (Routledge, 2021).

less conflicting discussions.[19] The seemingly technical knowledge – reports, studies, guidelines – produced by expert groups then act as material manifestations of this consensus, which have their own self-perpetuating dynamics. Endowed with authority and intellectual prestige, such inscriptions stabilise the consensus reached and perpetuate its reproduction. Such reports typically become heavily cited and circulate across spheres, becoming the uncontested reference points for all governance actors in given domains.

In a number of governance domains, a limited number of influential research clusters, located in prestigious academic institutions, also maintain close ties with IOs and other sites of global governance. High-profile research clusters can also act as boundary sites; they tend to produce research in an intersected space in between academic and policy spheres. Distinct kinds of relationships work to entangle research clusters with IOs. Professionals often move between the research clusters and IOs and their expert groups, and IOs can routinely request research from the clusters. More entrenched forms of collaborations can also be observed, where IOs and academic clusters co-sponsor events, produce 'policy-scientific reports', or co-sponsor courses and trainings. The ties between policymakers and the clusters, which are typically already endowed with a high degree of resources and reputational prestige, work to further reinforce their prestige and authority. As a result, such entanglements also cement and amplify existing hierarchies, so that less prestigious academic institutions or schools hardly ever have access to IOs. IOs, for their part, boost their authority while invoking their collaborations with prestigious schools.

But IOs increasingly find partners beyond academia, in private sites. The knowledge mobilised by IOs as 'expertise' is, indeed, also increasingly produced in partnership with philanthropists' data centres, large consultancy firms, private companies' research labs, or yet large NGOs, which have their own research staff and statisticians.[20]

[19] M. Abélès and I. Bellier, 'La Commission européenne: du compromis culturel à la culture politique du compromis' (1996) 46 *Revue française de science politique* 431–56.

[20] C. Ban, L. Seabrooke, and S. Freitas, 'Grey matter in shadow banking: international organizations and expert strategies in global financial governance' (2016) 23 *Review of International Political Economy* 1001–33; A. Littoz-Monnet, 'Exclusivity and circularity in the production of global governance expertise: the making of "global mental health" knowledge'

Such sites collaborate with IOs, but also increasingly produce the data that makes up the knowledge base of global governance.[21] Private actors and their big datasets are becoming increasingly involved in processes of data collection and analysis for UN agencies.[22] Sapignoli has shown that IOs have been turning towards 'big data' through the creation of new large-scale 'data mining' strategies, thus 'making corporations hugely significant for the information-gathering objectives of global governance, often in partnership or in competition with international organizations and states'.[23] The World Bank has been incorporating data compiled by private companies into its own datasets.[24] In the field of security, 'datasets are transferred from private to public databases', eventually informing security decisions.[25] In global health, private companies, as well as data centres funded by philanthropic foundations, collect and generate big data, metrics, and a plethora of studies that interpret these numbers and make specific policy recommendations based on them.[26] As global processes

(2022) 16 *International Political Sociology* 1–20; L. Seabrooke and O. J. Sending, 'Contracting development: managerialism and consultants in intergovernmental organizations' (2020) 27 *Review of International Political Economy* 802–27.

[21] J. Eckl and T. Hanrieder, 'The political economy of consulting firms in reform processes: the case of the World Health Organization' (2023) 30 *Review of International Political Economy* 1–24; A. Littoz-Monnet and X. Osorio Garate, 'Knowledge politics in global governance: philanthropists' knowledge-making practices in global health' (2023) 31 *Review of International Political Economy* 1–26; M. Tichenor and D. Sridhar, 'Metric partnerships: global burden of disease estimates within the World Bank, the World Health Organisation and the Institute for Health Metrics and Evaluation' (2020) 4 *Wellcome Open Research* 35.

[22] F. Johns, 'Data mining as global governance' in R. Brownsword, E. Scotford, and K. Yeung (eds.), *The Oxford Handbook of Law, Regulation and Technology* (Oxford University Press, 2017), pp. 776–98.

[23] M. Sapignoli, 'Anthropology and the AI-turn in global governance' (2021) 115 *American Journal of International Law* 4–8 at 7.

[24] K. Pistor, 'Re-construction of private indicators for public purposes' in K. E. Davis, B. Kingsbury, and S. Engle Merry (eds.), *Governance by Indicators: Global Power through Quantification and Rankings* (Oxford University Press, 2012), pp. 165–79.

[25] R. Bellanova and M. de Goede, 'The algorithmic regulation of security: an infrastructural perspective' (2022) 16 *Regulation & Governance* 102–18 at 102.

[26] Littoz-Monnet and Osorio Garate, 'Knowledge politics in global governance'; A. Littoz-Monnet, 'Knowledge machineries and their objects of expertise: knowing bodies, moves, and moods through "mobile health" data' (2024) 4 *Global Studies Quarterly*.

of agenda-setting and prioritisation turn to digital technologies, IOs, think-tanks, and even NGOs increasingly rely on the huge datasets of the private sector, which has the resources to develop the technologies used for data collection and transformation, as well as the corporate experts who seem to have the required training to design and implement technologies for data collection, storage, and analysis. When private actors and sites produce data, metrics, and studies autonomously or in partnership with IOs, they are in a critical position to shape how objects are known. They also shape knowledge validation standards themselves, thus delineating what is considered as expertise.

Finally, the many ephemeral yet routine work meetings, fairs, conferences, consultative forums, reflection forums, and roundtables that pepper global governance in most policy domains consist of 'crossing points' where expertise is assembled and stabilised.[27] In these (often physical) spaces, policymakers, experts, private actors, activists, and consultants routinely meet and discuss. Here, the governance of problems takes place in ways that are mundane and informal, away from formal decision-making arenas. These routine meetings can act as 'field-configuring events', that provide a focal point where certain understandings are articulated. As the same data and documents, and their associated assumptions, are circulated and rehearsed, certain affirmations come to be taken for granted and appear incontestable.[28]

Despite their appearance of multi-actorness and diversity, often widely advertised by IOs when they convene such events, the meetings are often quite exclusive and structured by their own hierarchies. IOs are increasingly pressed by calls for being more participatory and inclusive, and, in response, tend to incorporate diverse and sometimes contentious voices in the consultation exercises they convene. However, IOs may orchestrate such processes until critical voices become subdued to the mainstream agenda. Civil society organisations might be represented, but large and already recognised ones can be chosen, while small, more contentious organisations can be left out. Additionally, amongst those who attend, not all have the same opportunities to speak. Some act as hosts or panellists and sit at the

[27] A. Littoz-Monnet, *Governing through Expertise: The Politics of Bioethics* (Cambridge University Press, 2020).

[28] C. Hardy and S. Maguire, 'Discourse, field-configuring events, and change in organizations and institutional fields: narratives of DDT and the Stockholm Convention' (2010) 53 *The Academy of Management Journal* 1365–92.

core of these crossing points, while others remain at their periphery. IOs may also seemingly accommodate contentious claims, while at the same time reinterpreting them in a way that tames them or subjects them to their own agendas. Examining how understandings are articulated within crossing points makes it possible to ask 'what forms of knowledge count in global ordering'.[29] As such, the workings of events reflect and might even reinforce broader social hierarchies.[30]

The dispersion of knowledge-making does not imply that such processes are flat. Certain sites, endowed with prestige and resources, sit at the core of the global knowledge machinery, while others are peripheral. Despite an apparent multiplicity, diversity, and openness, the production of knowledge in global governance tends to be highly exclusive.[31] Even when participation is seemingly broad, resources and asymmetries operate to delineate who can speak and what knowledge counts.

Material Infrastructures

IOs 'know' social reality through and with diverse 'objects of expertise',[32] whether indicators, metrics, documents, or legal tools, such as treaties, decisions, digests, and so on. Paying attention to the materiality of expertise provides another entry point to study its politics. Although the material has always been ubiquitous in our lives, for, as put by Latour, 'Society is not made up just of men, for everywhere microbes intervene and act',[33] the effects of material objects have, recently, been more widely recognised, as algorithms, models, and tools of cyber surveillance visibly 'act' autonomously.

Scholarship in the field of IR has, thus, recently been catching up with insights that are already well-established in STS, Sociology, and Political Economy, on the significance of materiality in the study of

[29] L. M. Coleman, 'The making of Docile Dissent: neoliberalization and resistance in Colombia and beyond' (2013) 7 *International Political Sociology* 170–87.

[30] Hardy and Maguire, 'Discourse, field-configuring events, and change in organizations and institutional fields'.

[31] Littoz-Monnet, 'Exclusivity and circularity in the production of global governance expertise'.

[32] A. Esguerra, 'Objects of expertise: the politics of socio-material expert knowledge in global governance' (2024) 4 *Global Studies Quarterly*.

[33] B. Latour, *The Pasteurization of France* (Harvard University Press, 1988) p. 35.

knowledge and its politics. Such material artifacts, what Latour called 'inscriptions', are highly portable and endlessly reproducible. As they circulate, texts, for instance, serve to stabilise and naturalise facts.[34] Knowledge artifacts function as 'durable, more mobile traces which can be transported between locales'.[35] They do not only 'represent' cultures, ideas, and discourses. They also 'mediate ties between humans' over a long time and large distances and, as such, make transportable and perpetuate certain ways of knowing.[36] Thus, knowledge objects have been shown to have their own 'lives', as they travel and are used in ways that produce a multiplicity of meanings and political effects.[37]

Not all knowledge artifacts are materially bounded in the same way. Data, metrics, and estimates are not 'materially bounded in the ways that drones, tanks, bodies, and boats are'.[38] Rather, they acquire materiality and stability in a more processual fashion, as they circulate, are reproduced, and become performative.[39] Knowledge objects, thus, are characteristically open, question-generating, and complex. They are processes and projections rather than definitive things.[40] They become meaningful as they are captured, assembled, and acted upon.

Thus, studying the politics of the material objects considered as 'expertise' by IOs requires paying attention to the networks, relationships,

[34] T. F. Gieryn, *Cultural Boundaries of Science: Credibility on the Line* (University of Chicago Press, 1999); B. Latour and S. Woolgar, *Laboratory Life: The Social Construction of Scientific Facts* (Princeton University Press, 1979).

[35] W. Walters, 'The power of inscription: beyond social construction and deconstruction in European integration studies' (2002) 31 *Millennium* 83–108 at 91; B. Latour, *Science in Action: How to Follow Scientists and Engineers Through Society* (Harvard University Press, 1987).

[36] S. L. Star, 'The ethnography of infrastructure' (1999) 43 *American Behavioral Scientist* 377–91.

[37] C. Aradau and T. Blanke, 'Politics of prediction: security and the time/space of governmentality in the age of big data' (2017) 20 *European Journal of Social Theory* 373–91; A. Finiguerra, 'A boat's afterlife: multiple translations of migratory debris' (2023) 29 *European Journal of International Relations* 628–50; A. Leander, 'Technological agency in the co-constitution of legal expertise and the US drone program' (2013) 26 *Leiden Journal of International Law* 811–31.

[38] M. de Goede, 'The chain of security' (2018) 44 *Review of International Studies* 24–42 at 31.

[39] K. Knorr Cetina, 'Objectual practice' in K. Knorr Cetina, T. R. Schatzki, and E. von Savigny (eds.), *The Practice Turn in Contemporary Theory* (Routledge, 2001), pp. 184–97.

[40] Knorr Cetina, 'Objectual practice', p. 190.

and claims that give traction to those material systems.[41] Some scholars have therefore shifted away from a focus on knowledge artifacts towards 'knowledge infrastructures' to refer more specifically to the socio-material ensembles that underpin and shape the production of knowledge.[42] For Edwards, knowledge infrastructures are the 'robust networks of people, artifacts, and institutions that generate, share, and maintain specific knowledge about the human and natural worlds'.[43] Such works go beyond the study of immediate processes of knowledge creation and pay attention, instead, to the infrastructures that generate, organise, and shape the production of knowledge.[44] Tichenor et al.[45] for instance define infrastructures as the background structures – the materials, people, and ideas – that enable the production of certain knowledge forms. By adopting this lens, scholars have been able to go beyond the micro-processes of producing artifacts, such as numbers, documents, or forecasts, and pay attention to the broader system(s) within which certain forms of knowledge are produced.[46] Doing so reveals how such infrastructures place limits on the knowledge and imaginaries that can be produced through them. Thus, IOs use objects of expertise in specific kinds of socio-material arrangements, which have their own power dimensions and social relations that they bundle together.[47]

The increased dispersion of sites of knowledge production in global governance has been strongly entangled with transformations in the

[41] N. Anand, *Hydraulic City: Water and the Infrastructures of Citizenship in Mumbai* (Duke University Press, 2017).

[42] S. Hirsch and D. Ribes, 'Innovation and legacy in energy knowledge infrastructures' (2021) 80 *Energy Research & Social Science* 102218.

[43] P. N. Edwards, *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming* (MIT Press, 2010) p. 17.

[44] C. Bueger, 'Making things known: epistemic practices, the United Nations, and the translation of piracy' (2015) 9 *International Political Sociology* 1–18; M. Tichenor, S. E. Merry, S. Grek, and J. Bandola-Gill, 'Global public policy in a quantified world: Sustainable Development Goals as epistemic infrastructures' (2022) 41 *Policy and Society* 431–44; Littoz-Monnet, 'Knowledge machineries and their objects of expertise'.

[45] Tichenor, Merry, Grek, and Bandola-Gill, 'Global public policy in a quantified world'.

[46] Bueger, 'Making things known'; J. Bandola-Gill, 'Our common metrics? Our common agenda report and the epistemic infrastructure of the sustainable development goals' (2023) 14 *Global Policy* 8–12; M. Langevin, 'Big data for (not so) small loans: technological infrastructures and the massification of fringe finance' (2019) 26 *Review of International Political Economy* 790–814.

[47] Langevin, 'Big data for (not so) small loans'.

materiality of knowledge-making practices. The material infrastructures and techniques through which knowledge is produced and assembled by IOs are changing. '"Big data" are increasingly used to monitor, know, and govern populations', whether in IOs, private sites, or even academia.[48] With digitalisation, new possibilities of integrating and aggregating highly disparate forms of data through new techniques have emerged.[49] Statisticians themselves are being replaced by new kinds of experts, the data analysts and software engineers often working in private companies. These novel methods of data generation, accumulation, and transformation have been associated with new kinds of 'data flows' and 'messy geographies' of knowledge-making. While such transformations have been discussed in an exciting body of scholarship, the way they affect how global problems are known and governed has been given scant attention.[50]

Relations

Studying relations between people, sites, and things also provides us with another way of studying the politics of expertise. Relations, in fact, are their own objects of study, where transactions, seen as a dynamic, unfolding process, become the primary unit of analysis rather than the constituent elements themselves.[51]

Scholars studying knowledge in global governance have focused, first, on the *circulation of people* across spheres and organisations, either simultaneously or successively.[52] Recent insights in IR and International Political Sociology (IPS) have argued that 'the concept

[48] A. K. Madsen, M. Flyverbom, M. Hilbert, and E. Ruppert, 'Big data: issues for an international political sociology of data practices 1' (2016) 10 *International Political Sociology* 275–96 at 276.

[49] M. Flyverbom, A. K. Madsen, and A. Rasche, 'Big data as governmentality in international development: digital traces, algorithms, and altered visibilities' (2017) 33 *The Information Society* 35–42; A. Mackenzie, 'The production of prediction: what does machine learning want?' (2015) 18 *European Journal of Cultural Studies* 429–45 at 433; J. van Dijck, 'Datafication, dataism and dataveillance: big data between scientific paradigm and ideology' (2014) 12 *Surveillance & Society* 197–208 at 198.

[50] Sapignoli, 'Anthropology and the AI-turn in global governance'.

[51] M. Emirbayer, 'Manifesto for a relational sociology' (1997) 103 *American Journal of Sociology* 281–317.

[52] O. J. Sending, *The Politics of Expertise: Competing for Authority in Global Governance* (University of Michigan Press, 2015) p. 5.

of an epistemic community does not stand if the community and those that it is meant to advise are the same'.[53] Shifting away from a focus on scientists or experts, who would be producing expert knowledge autonomously from 'politics',[54] scholars have revealed that 'identities and behavioural patterns cut across analytical categories of epistemic communities, international organisations, or advocacy networks'.[55] From that perspective, it no longer makes sense to conceive of expertise as produced by 'experts' or scientists autonomously, as people hold multiple roles and identities, circulate between spheres and organisations, and thus can act as 'experts' while at the same time performing other roles.[56]

Individuals can, indeed, be detached from their formal affiliations and move across spheres. More often, they enjoy familiarity with different settings *simultaneously* and transfer their knowledge across these different spaces in what has been called 'identity switching'.[57] The circulation of people contributes to the circularity and exclusivity of expertise. Those who tend to occupy, simultaneously or successively, multiple positions are typically endowed with resources, be they epistemic, social, or reputational. These resources make it possible for actors to navigate spheres and organisations and put themselves in influential positions.[58] Thus, by paying attention to the professionals – often a small, circular, exclusive, and intersected nucleus of people and organisations – who produce the reports, guidelines, studies, or

[53] E. Tsingou, 'Club governance and the making of global financial rules' (2015) 22 *Review of International Political Economy* 225–56 at 230.
[54] Haas, 'Introduction'.
[55] Sending, *The Politics of Expertise: Competing for Authority in Global Governance*, p. 5.
[56] L. Seabrooke, 'Identity switching and transnational professionals' (2014) 8 *International Political Sociology* 335–37.
[57] Seabrooke, 'Identity switching and transnational professionals'; L. Seabrooke and E. Tsingou, 'Power elites and everyday politics in international financial reform 2' (2009) 3 *International Political Sociology* 457–61; D. Demortain, 'Standardising through concepts: the power of scientific experts in international standard-setting' (2008) 35 *Science and Public Policy* 391–402.
[58] P. Bourdieu and L. J. D. Wacquant, *An Invitation to Reflexive Sociology* (University of Chicago Press, 1992); Y. Dezalay and M. R. Madsen, 'In the "field" of transnational professionals: a post-Bourdieusian approach to transnational legal entrepreneurs' in L. Seabrooke and L. F. Henriksen (eds.), *Professional Networks in Transnational Governance* (Cambridge University Press, 2017), pp. 25–38.

numbers, which constitute the 'evidence' or 'expertise' seen as relevant in a given issue domain, one can grasp significant aspects of knowledge-making practices.

Recent scholarship reveals that expertise is articulated by diverse actors or groups in continuous relations with one another, who gather in transnational communities,[59] communities of practice,[60] professional networks,[61] or yet clubs.[62] In the legal field, such communities typically involve legal elites from the academic, policy, and private spheres. Shifting away from a focus on specific actors and their influence, such accounts have shown that whatever their specific form or configuration, such arenas or groupings act as the loci where global governance knowledge is articulated, co-produced, and stabilised, until certain understandings of problems come to be seen as natural, evident, and incontestable.[63]

Second, scholars have also focused on the *circulation and assembling of material knowledge things*. Relations can be produced, for instance, by the circulation, exchange, and citing of material objects, what Latour calls 'inscriptions'.[64] The knowledge considered as relevant for policymaking purposes in specific domains often consists of a narrow set of research findings and data. Thus, the same studies, metrics, or reports circulate in a self-referential fashion. They can be heavily cross-cited, adding to the circularity of expertise.

[59] D. Stone, 'Partners to diplomacy: transnational experts and knowledge transfer among global policy programs' in A. Littoz-Monnet (ed.), *The Politics of Expertise in International Organizations* (Routledge, 2017), pp. 93–110; M.-L. Djelic and S. Quack (eds.), *Transnational Communities: Shaping Global Economic Governance* (Cambridge University Press, 2010).

[60] Bueger, 'Making things known'.

[61] A. Cohen, 'Legal professionals or political entrepreneurs? Constitution making as a process of social construction and political mobilization' (2010) 4 *International Political Sociology* 107–23; Seabrooke and Tsingou, 'Power elites and everyday politics in international financial reform 2'; L. Seabrooke and L. F. Henriksen, 'Issue control in transnational professional and organizational networks' in L. Seabrooke and L. F. Henriksen (eds.), *Professional Networks in Transnational Governance* (Cambridge University Press, 2017), pp. 3–24.

[62] Tsingou, 'Club governance and the making of global financial rules'.

[63] A. Vauchez, 'The force of a weak field: law and lawyers in the Government of the European Union (for a renewed research agenda)' (2008) 2 *International Political Sociology* 128–44.

[64] Latour and Woolgar, *Laboratory Life: The Social Construction of Scientific Facts*.

Expert groups, private actors, IOs, and research clusters often make repeated affirmations of particular numbers or studies, resulting in the 'recursive recognition' of this knowledge over time.[65] By contrast, studies or experiential insights that do not resonate with dominant ideas or well-established norms of scientific validity, or that are simply produced by people or organisations not endowed with social or epistemic prestige, tend to be disregarded.[66] In order to be heard, one needs to speak the exclusive language and use the theoretical frameworks of the dominant.[67] As a result, a narrow body of knowledge circulates across spheres so that the same data or research becomes heavily cross-cited by everyone.[68] The circulation of knowledge goes *de pair* with the circulation of individuals described earlier. But data circulation can also act autonomously and beyond the role of specific individuals. Cross-citing and recursive recognition become inscribed in particular sites and products of expertise and tend to be self-perpetuating. What becomes interesting, here, is how and where such knowledge circulates, and the way such flows feed into the circular, but also exclusive, nature of expertise.

Methodological Entry Points

A number of methodological approaches and techniques provide entry points into studying the making of expertise in global governance. Methods and sources may be eclectic; there is no 'right' or 'wrong' when it comes to methodology. Engagement with sources can also be polymorphous. In addition, the same sources can be examined, analysed, and interpreted, with and through distinct methods.

[65] A. Broome and L. Seabrooke, 'Recursive recognition in the international political economy' (2021) 28 *Review of International Political Economy* 369–81.

[66] D. L. Sackett and W. M. Rosenberg, 'The need for evidence-based medicine' (1995) 88 *Journal of the Royal Society of Medicine* 620–24.

[67] T. Biersteker, 'Participating in transnational policy networks: targeted sanctions' in M. E. Bertucci and A. F. Lowenthal (eds.), *Scholars, Policymakers and International Affairs: Finding Common Cause* (Johns Hopkins University Press, 2014), pp. 137–54; M. Eagleton-Pierce, 'Professionalizing protest: scientific capital and advocacy in trade politics' (2018) 12 *International Political Sociology* 233–55.

[68] Littoz-Monnet, 'Exclusivity and circularity in the production of global governance expertise'.

Studying People

As expert knowledge is typically produced by a myriad of actors and networks across spheres and organisations, as discussed earlier, one possible entry point when studying the making of expertise is therefore to focus on the networks, or communities, that produce the knowledge considered as expert in a given domain. Studying such groups can prove particularly useful in order to capture enmeshments between knowledge and politics in processes of knowledge-making. It can also help identify which actors and sites are excluded from the production and assembling of expertise. Prosopographic methods, a specific biographical method which consists of examining the 'social profiles' of professionals in an issue domain – their career trajectories and relationships rather than their particular actions – is a promising avenue. A prosopographic study involves an in-depth examination of the biographies, and multiple and changing affiliations across time and locations, of those that are recognised as 'experts' in a given domain. Social profiles can be traced through an examination of CVs, online job profiles, online searches, or the authoring of documents considered as 'expert' documents. Studying the authorship and sponsorship of specific documents can prove particularly useful for identifying networks of expertise. Alternatively, mapping the phenomenon of cross-citing also reveals such networks, where specific groups of professionals cite each other in ways that can be highly circular and exclusive.[69] Expert groups, private actors, IOs, or boundary research clusters indeed make repeated affirmations of particular claims, studies, or numbers, resulting in the 'recursive recognition' of this knowledge over time.[70]

Other forms of network analysis can also be mobilised to help trace the complex entanglements between actors and sites involved in the making of expertise.[71] In order to map expertise networks, and

[69] Littoz-Monnet, 'Exclusivity and circularity in the production of global governance expertise'.

[70] Broome and Seabrooke, 'Recursive recognition in the international political economy'.

[71] J. Attride-Stirling, 'Thematic networks: an analytic tool for qualitative research' (2001) 1 *Qualitative Research* 385–405; H. Knox, M. Savage, and P. Harvey, 'Social networks and the study of relations: networks as method, metaphor and form' (2006) 35 *Economy and Society* 113–40; B. Latour, P. Jensen, T. Venturini, S. Grauwin, and D. Boullier, '"The whole is always

conceptualise the nature of the relationships between actors and sites within such networks, qualitative Visual Network Analysis (VNA) can be an interesting avenue. VNA is concerned with the *visual* rather than the structural (social) properties of networks.[72] It can be conducted with the help of different software packages, in which qualitative data gathered through interviews or observations (actors, relations, type of relations, contextual information) can be inserted, and which allows for visualisation of the continuous interplay between forces of attraction and repulsion between actors or groups of actors. This can be relevant in terms of identifying who sits at the core or at the periphery of the community of actors that produces expert knowledge. As such, it can capture existing hierarchies and power asymmetries within and beyond expert networks.

Studying Texts

The material products of expertise, whether expert reports, studies, datasets, or yet numbers, can also provide an excellent starting point to study the fabric of expertise in global governance. Discursive and genealogical forms of analysis can be particularly useful. Discursive analysis is an attempt to deconstruct the tenets or the framing of discourses. Genealogy, for its part, is a form of historical enquiry; It aims to reconstruct the past through an analysis of historical sources, texts, events, and processes.[73] This can be crucial in terms of revealing the

smaller than its parts" – a digital test of Gabriel Tardes' monads' (2012) 63 *The British Journal of Sociology* 590–615; T. Venturini, M. Jacomy, A. Meunier, and B. Latour, 'An unexpected journey: a few lessons from sciences Po médialab's experience' (2017) 4 *Big Data & Society* 2053951717720949.

[72] One could also rely on quantitative forms of Social Network Analysis (SNA), which typically are used to study relational ties that link actors through flows of data or personal interactions. Yet, while formalistic methods evaluate the frequency of interactions either directly between individuals or groups or through the circulation of information and data (S. P. Borgatti, A. Mehra, D. J. Brass, and G. Labianca, 'Network analysis in the social sciences' (2009) 323 *Science* 892–95.), they focus too strongly on the density of interactions and its measurable forms (number of contacts, quantity of information exchanged), leaving aside more informal and invisible forms of relationships (Knox, Savage, and Harvey, 'Social networks and the study of relations').

[73] M. Bevir, 'What is Genealogy?' (2008) 2 *Journal of the Philosophy of History* 263–75.

contingency of given knowledge forms with long lineages and open a space for alternatives.[74]

There is a diverse 'toolkit' when it comes to discursive forms of analysis, including genealogical, deconstructive, and juxtapositional forms of analysis.[75] 'Critical framing analysis', which conceives of discourse as frames, can be a promising technique. Frames are devices that actors use 'to situate events, to interpret problems, to fashion a shared understanding of the world and to galvanise possible resolutions to current plights'.[76] Examining the way experts and other actors who work with them identify and frame problems provides crucial insights into 'embedded and tacit assumptions, meanings, reasonings and patterns of action and inaction'.[77] When conducting critical framing analysis, or any other kind of discursive analysis, one may start identifying texts that constitute 'points of reference',[78] i.e., texts which are taken as a basis for all further reflections on how to govern the domain at stake. This includes the policy documents, official reports, and meeting documentation produced by IOs, or the reports and evaluations produced by expert groups, private foundations, or private actors.

Studying Sites and Infrastructures

Particularly relevant to global terrains, participant observation and ethnographic interviews provide a unique internal perspective for understanding global knowledge-making practices. Participant observation is also particularly useful for observing the varied and often contradictory conceptualisations of the 'global'.[79] Ethnographic methods have

[74] S. Borg, 'Genealogy as critique in International Relations: beyond the hermeneutics of baseless suspicion' (2018) 14 *Journal of International Political Theory* 41–59.

[75] In the genealogical method, contingency of contemporary discursive practices examined through study of past discursive practices. Juxtapositional analysis consists in juxtaposing one discursive 'truth' to events and issues that 'truth' fails to acknowledge or alternatively pairing dominant representation with alternative accounts.

[76] M. Barnett, 'Culture, strategy and foreign policy change: Israel's road to Oslo' (1999) 5 *European Journal of International Relations* 5–36 at 15.

[77] T. Wengraf, *Qualitative Research Interviewing: Biographic Narrative and Semi-structured Methods* (Sage, 2001) p. 116.

[78] N. Fairclough, *Critical Discourse Analysis* (Longman, 1995).

[79] L. Maertens, 'Ouvrir la boîte noire. Observation participante et organisations internationales' (2016) 5 *Terrains/Théories*.

proven to be promising ways to provide thick descriptions of actors, sites, and infrastructures involved in the production of knowledge and the relationships between these.[80] They can thus provide an excellent vantage point to map sites of expertise production and knowledge machineries, as well as types of relations (meetings, exchange of data, financial flows, co-organisation of events) within a knowledge machinery. Participant observation provides direct access to the machineries of knowledge production and their often-opaque dynamics. It also allows for observing the dynamics between macro and micro scales, where power and relationships of authority operate in subtle ways. This can be crucial in terms of accessing contextual information on hierarchies, resources, invisible relations, and constraints in the process of knowledge production. Observing sites, their relations, and hierarchies in these processes may result, of course, in a plethora of information. In that case, the use of systematised observation protocols – using a notebook where all actors and interactions are recorded – is important. The ethnographic process goes back and forth between the theoretical and the empirical, the abstract and the concrete.

Conclusion

Using these methodological entry points makes it possible to reveal the reasons why specific formations are in place and reintegrate power dynamics and hierarchies into the analysis of knowledge-making. Exploring global governance expertise through one of these avenues involves making a shift away from studying formal arenas, mechanisms, and actors of global governance, and instead zoom in on ways of doing politics 'by other means'.[81] The processes of knowledge production discussed here point to the political nature of expertise, and the need to understand its making as a subtle way of governing that takes place beyond the traditional spheres of decision-making. Examining the processes, boundary sites, and infrastructures of knowledge production help us understand how the co-production of science and politics operates in practice. Such enmeshment can be observed in often

[80] A. Riles, *The Network Inside Out* (University of Michigan Press, 2001).

[81] B. Latour, 'Give me a laboratory and I will raise the world' in M. Biagioli (ed.), *The Science Studies Reader* (Routledge, 1999 [1983]), pp. 141–70; M. Callon, P. Lascoumes, and Y. Barthe, *Acting in an Uncertain World: An Essay on Technical Democracy* (MIT Press, 2009) p. 68.

tangible forms when one engages with the meso- or micro-level study of processes of knowledge production. This enmeshment produces circularity and exclusivity in the making and content of global governance expertise. It thus has exclusionary effects, which cannot be dissociated from those stemming from more structural hierarchies. In addition to financial or material resources, widely accepted norms of validity also structurally delineate what forms of knowledge are seen as valuable in global governance. Certain norms act as markers of what is scientific and what is not, with the effect that knowledge that does not match these criteria tends to be dismissed as anecdotal, inconclusive, biased, or 'non-expert'. Thus, the concrete micro knowledge-making processes which embed expertise in the political can also intersect with and replicate macro-epistemic structures, both material and ideational, inscribing certain forms of expertise and the power of their protagonists in global governance. This of course has implications for the way global problems are understood and acted upon. Those knowledge forms which count as expert strongly shape how global issues are seen, governed, and regulated by IOs.