

# Essential and Embattled Expertise

## Knowledge/Expert/Policy Nexus around the Sarin Gas attack in Syria

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Var gasangrebet i Syrien i 2013 orkestreret af det syriske styre? Hvor mange døde? Var det ulovligt i henhold til international lov? Anna Leander viser i denne artikel, at disse spørgsmål var centrale ikke blot for afdækningen af episoden, men også for udpegningen af, hvilken ekspertise der autoritativt kunne udlægge sandheden om gasangrebene. Kemikere? Læger uden grænser? Jurister? Artiklen giver et blik ind i et paradoksalt landskab, hvor ekspertise er essentiel, men også konstant udfordret. Og sådan skal det forblive, mener Leander. Kun ved konstant at udfordre ekspertudsagn kan vi bevare en åben og demokratisk dialog.

### Introduction

On 21 August 2013, sarin gas was used in the Ghouta area of Damascus. The incident triggered debates involving the voices ranging from those of bystanders to twitter readers, from presidents to peace activists and issues ranging from how to deal with the medical symptoms related to sarin to what responsibility the „international community“ had and how the attack would or should fashion the strategy for resolving the conflict in Syria. A bewildering variety of contradictory views were advanced on what the core questions pertaining to the attack were and what to think about them. Those advancing them all demanded to be heard and taken into account in the formulation of political strategies. Many of them were. Hence weapons experts, chemical analysts, medical experts, international relations scholars, anthropologist, psychiatrists as well as lay observers (local or not) were brought into the discussion. To further increase the plurality of voices these experts drawing on the same kind of knowledge, disagreed among themselves. Experts clearly did not speak with one

voice, nor did their multiple voices tell a single story with unambiguous implications for strategies of action. This role of expertise in public debate is far from unique to the debate about the sarin gas attack in Ghouta. It is characteristic of contemporary controversies more generally. The safe days when (at the least the illusion that) experts could be consulted to give policy-makers unambiguous and reliable answers regarding issues such as whether or not there was a sarin gas attack in Ghouta and what priorities of action should follow are definitely gone. But what has replaced it? Or as this special issue asks: how is one to understand the role of expertise in the knowledge-expertise-policy nexus?

For some scholars the answer is a welcome weakening or perhaps even demise of expertise and expert rule. The dethroning of „experts“ from their positions as core advisors to the princes of the present is signalling the end to unjustified privileges and the specific power-knowledge relations they re-produce. It is a welcome democratization of expertise signalling the end of the naïve belief in singular, universal and incontestable forms of knowledge (e.g. Sil and Katzenstein 2010). This is the position of scholars of what Collins and Evans term „the second wave of science and technology studies“ (Collins and Evans 2002). Scholars riding this wave focus primarily on „the problem of legitimacy“ of expertise and on the inclusion of „lay“ or „non-certified“ expertise. They concentrate much of their energy on critiquing universal knowledge and the construction of undisputable „facts“ (Latour and Woolgar 1979). Inversely, for others the unruly presence of multiple, contradictory and incompatible expertise in any public controversy is profoundly disturbing. The embattled nature of expertise, they fear, could spell the end of reasonable public debate, based on arguments grounded in (much needed) scientific/technical knowledge,

and instead replace it with a relativist cacophony where the most powerful voice silences all other voices. On this account, the most urgent task is to reinstate and reaffirm the authority of genuine expertise (e.g. Schudson 2006). This position has come to be shared by what Collins and Evans call „the third wave“ of science and technology studies. As Collins and Evans themselves, these scholars are disturbed by the relativist and normatively disturbing implications of opening up and politicizing the core of science. They think „critique has run out of steam“ and think there is a need for „trust“ as Latour puts it in specialized knowledge (Latour 2004 ; 2012 respectively). While not denying, the insights of the „second wave“, their core concern has shifted. They discuss „the problem of extension“.<sup>2</sup>

This article argues for a third position. It suggests that expertise has been subjected neither to a welcome dethroning nor is it (on its way to) a much needed restoration. Rather, expertise has continued to hold an absolutely essential and profoundly embattled position in the knowledge-expertise-policy nexus and this duality of the and rather than the clarity of an either or is to be welcomed. Indeed, precisely because expertise is so essential and inescapable it is important that it also remain embattled. One way of situating this argument in relation to the waves rolled into this text a paragraph ago, is to present it as placed at the point where the second and third waves of the social studies of science break into each other. Although the two waves are usually presented, including by their core proponents, as separate and their corresponding positions on the role of expertise as contradictory or even incompatible, the position argued for in this article is that they are intimately connected and mutually reinforcing. The third wave's concern that specialized knowledge remains indispensable is well taken and that therefore thinking about how to disentangle expertise from hoax, how to deal with „the problem of extension“, is well taken. This is the point where the second wave joins the third. To deal with the „problem of extension“ the critique at the heart of the second wave discussion has to be mobilized. It cannot simply be pushed aside and the problem dealt with through ever more refined distinctions among forms of expertise and of science (as Collins and Evans would have it). Rather, to ensure that expertise continues to re-produce „matters of concern“ and not „matters of fact“ we need to follow Latour's suggestion and swing the „sword of criticism“ (Latour 2004: 227). However, we may have to swing it rather more widely and forcefully than Latour would like. Pursuing his customary battles, Latour directs his sword solely against his mythical arch enemy, the „critical approaches“ from „Criticallyland“ (230) commanded, as usual, by a Pierre Bourdieu (229)

figment of Latour's imagination. According to Latour, this army that purportedly threatens the Latour empire of reason fails to understand „the material“, „the thingness of things“ (245), the „folds“ of their generation (235), and therefore falls back on untenable „fairy positions“ (237) and „conspiracy theories“ (228) (page numbers are from Latour 2004).

While not disagreeing that it is important to mobilize the insights of Latour and others (sic<sup>3</sup>) about materiality, the position argued here is that if the sword is to cut any difference, and hence be able to ensure that matters of concern do not turn into matters of fact, it will need the force also of the broader critique vilified by Latour but largely integral to the second wave of the social studies of science. For expertise to remain embattled „critique“ is needed. The article highlights three such „critiques“: those focussed on the market for ideas, on technologized processes, and on regulatory/legal processes. Since theorizing in abstract makes little sense – Latour and Bourdieu are in touching agreement on this point – the article draws on the sarin gas attack of 21 August 2013 to unpack this argument about how the knowledge-expertise-policy nexus is to be understood.<sup>4</sup> It begins by demonstrating that expertise is essential to policy in the sense that expertise (or better a constellation of expertise) is constituted in the political controversies which expertise in turn defines. The second section argues that because this is the case, it is to be expected and welcomed that expertise remains embattled. It is only through a constant process of reflexive contestation that expertise can be guarded against closure. The article consequently concludes that a pertinent question to pose regarding the contemporary knowledge-expert-policy nexus is how to understand and cultivate a paradoxical expertise that is essential and embattled; independent and authoritative and political and contested.

### Essential Expertise

Once upon a time, there was a land where the link between the province of scientific knowledge and that of policy-making was mediated by disinterested „experts.“ Experts translated „objective“ scientific knowledge that could be mobilized in the public interest. Walter Lippmann's depictions of this land are probably the most authoritative. On his account: experts were „people who cultivated the habit of discounting their own expectations... who tried to put aside their own interests and wishes when they examined the world, and [who were therefore] the best hope to save democracy from itself.“ Lippmann did not suggest that the „experts run the government but that the elected officials who run the government call on experts“ (cited and interpreted by Schudson 2006: 492). Whether or not

Lippmann, or anyone else, thought that the relations between science, expertise and politics ever worked in this way anywhere in the real world is uncertain. But even if Lippmann land was a mythological place, it was (and remains) a point on the political map that many wished to move to. As such the unattainable ideal of a singular, uncontested expertise continues to haunt engagement with the knowledge-expert-policy nexus. However, as this first section argues, while it is amply clear that such a role for expertise and experts is profoundly unrealistic, it does not follow that expertise has become insignificant or that it has vanished. On the contrary, expertise remains essential albeit in a different way. Expertise, in the sense of specialized knowledge plays an absolutely essential role in informing policy in a complex world, where science, technology and local knowledge from a wide range of places is crucial.<sup>5</sup> But as the plural in places indicates, expertise is no longer essential in singular but in plural. One might say that the second wave has won a practical victory of sorts. Moreover, precisely because it is no longer singular, expertise is essential not as a stable body of pre-existing knowledge that draws on a neatly defined science and then communicates results on which policy-makers can draw. Instead, expertise is re-produced in relation to specific controversies (scientific and political) which the specific enactment of expertise in turn re-produces. Gone is the map with tidy lines linking a science that informs an expertise that informs a policy. We are in a place radically different from Lippmann land but one where, just as in Lippmann land, expertise continues to be essential albeit in a very different way. This section draws the contours of this place with reference specifically to the sarin gas attack.

### **A plurality of experts**

In the controversy around the sarin gas attack, „experts“ from widely different fields came forth to contend that their area of knowledge was the most salient for policy. Chemical analysts, weapons experts, medical experts, area studies experts and human rights lawyers but also „non-scientific“, „lay“ knowledge not certified by academic degrees or professional recognition such as that held by charity organizations or Ghouta inhabitants with phones and webcams were competing for attention. To make the situation even more complex, from within each of these areas of knowledge, there was disagreement about what kind of expertise is the best. What kind of chemical expert, for example, was most credible? Was it a chemist walking „the field“ in Syria? Someone with a research record on sarin gas specifically? Or, perhaps, a chemist with broad competencies who could assess a range of diverse evidence?<sup>6</sup> There is no simple, agreed upon answer

to these questions. However, they were as inescapable in the context of the sarin gas attack as they would be in relation to any controversy. „Scientists disagree“ Douglas and Wildawsky laconically entitle chapter three of their classical essay on „the selection of technological and environmental dangers“ (Douglas and Wildawsky 1982).<sup>7</sup> If they had written the essay today, they would have had to insist (more than they do in that book) that there is also disagreement about who the scientists are and even more profoundly on whether or not scientific (rather than lay) knowledge should be the foundation of expertise.

In the sarin gas controversy, as in other contemporary controversies, this plurality and uncertainty over what expertise deserves to be consulted is not only acknowledged and expected. It is also welcomed. The contemporary approach to expertise is one encouraging multiplicity and variety; voices are to be „heard“ and dialogues, consultations and debates are expected (e.g. Irwin 2006). Public consultations, fora and interdisciplinary platforms on core policy questions are flourishing. Arguably, the „professionalism [which] has been the main way of institutionalizing expertise in industrialized countries“ (Abbott 1988: 323) is giving way to a multifarious, fluid and contestable system of expertise. As Helga Nowotny<sup>8</sup> suggests expertise has become „transgressive“ in the sense that it is constantly transgressing conventional limits and boundaries between academic and policy-making fields (Nowotny 2000). She traces this change to macro level changes in our societies that have transformed the status of knowledge and expertise.<sup>9</sup> Nowotny, as most other researchers dealing with the knowledge-expert-policy nexus, therefore thinks the pluralization of knowledge is here to stay. The Lippmann land image of a policy-makers consulting experts mediating information from a distant but easily identifiable province of scientific knowledge is fading. The province of knowledge is as hazy as is the understanding of which experts could mediate from it. This however does not imply that experts can be dispensed with. Policy-makers need specialized knowledge when they approach any complex question, including that of how to understand the sarin gas attack in Ghouta and what to do about it. In that sense, expertise remains essential. However, it is an essential role marked by a constant uncertainty about which expertise exactly is essential. The answer to that question is provided in the controversy itself as experts of different kinds are pulled into and engage the debate. One might in that sense say that controversies produce expertise.

### **Controversy and the production expertise**

The pluralization of expertise has made the inherently contestable choices among competing, incompatible and

even incommensurable expertise more visible. „There is no realistic chance for any kind of scientific body or advisory committee to reassert their claims to a monopolistic control of scientific authority“ on any given issue, Nowotny insists (2000: 19). As a consequence expertise is selected in the absence of agreement about the criteria for selection. This makes the choice vulnerable to critique, and inescapably so. Even the most elaborate efforts to justify reliance on specific forms of expertise will be subjected to criticism. For example, the UN report on the sarin gas attack (UN 2013) was the work of an expert team headed by senior, established, experienced authorities from a variety of fields and with their base in international institutions rather than a country.<sup>10</sup> To further bolster their expert status, the team produced a report of 40 pages of which 31 pages (sic) were scientific appendixes. Of the five pages constituting the main text, one page is devoted to method, in a context where the „narrative and results“ are covered in two pages (UN 2013). This did not stop the critique. The Russian political establishment responded by questioning the expertise on which it rested. President Putin declared it „utter nonsense“ and was backed up by his Deputy Foreign Minister Sergei Ryabkov who called the report „distorting and one-sided“ and demanded an „independent investigation“ (BBC 2013b). In the sarin controversy, as elsewhere, expertise was visibly and contestably selected. Expertise and policy were not separate but intrinsically linked.

This visible intertwining of policy and expertise has far reaching implications for the status of the expert in the knowledge-expert-policy nexus. The involvement of specific experts in the policy-making process is what confers the expert status upon them and makes their knowledge appear interesting and viable. The decision to ground the UN mission on the heads of international organizations, rather than on academic researchers or intelligence professionals – or a mixture of these – reaffirmed a specific understanding not only of which expertise should be consulted for this case, but of what expertise on the sarin gas attack was in the first place. It re-produced a specific understanding expertise. Even more strongly, this re-production of expertise is of more than punctual significance in the sense that its consequences go beyond the sarin gas issue. It is inscribed in a longer history and a broader context. The selection of expertise mirrors current understandings and institutional structures for handling expertise which they in turn contribute to re-shaping – in the dual sense of replicating and changing – the experts consulted gain recognition, standing and usually also funding through the process. Even if experts are not directly paid for their services (which of course they usually are), proven „relevance“ is

a core concern for those funding knowledge producing activities. It is formally integrated as one of the criteria in many research evaluations. This is why as Jasanoff insists (in the context of courts' selection of and reliance on scientific expertise) that, one of the „more subtle findings from ethnography and sociology [is that] expertise often does not pre-exist the disputes the expert is summoned to settle, but is contingently produced within the very context of disputation“ (Jasanoff 2003: 159).

The expertise that continues to play an essential role in the knowledge-expertise-policy nexus is in other words not only plural, it is also produced in relation to the controversies. This wrecks havoc with the idea that there is a pre-existing clearly defined expertise that can merely be pulled into policy and used to settle controversies in the manner most favourable to a (somehow known) public interest. As has just been argued the precise constellation of expertise that will be drawn upon is formed in the controversy in a way which will have ramifications for expertise beyond the specific controversy. So while expertise is essential, it is expertise that is not only plural but intrinsically tied to the controversy itself and, as the following section underlines, also essential in generating the controversy.

### **Expertise generated controversies**

The role of contemporary expertise is anything but one of settling and closing controversies. On the contrary, expertise plays a core role in posing the overarching questions and hence generating and defining controversies. Experts have the specialized knowledge to ask questions and hence to generate the specific form controversies take. Their area of knowledge and work will make them see the problem differently. Is the sarin gas attack mainly about who might be held legally responsible for the attack (as the International Humanitarian law specialist would have it)? Or, mainly about how to deal with its consequences for the internally displaced civilian population (as a migration studies scholar would ask)? Or, is it about the balance between the opposition and the government (as the strategic specialist might wonder)? Or, is it about the environment or any other topic on a potentially very long list? Moreover, for each overarching question, expertise is core for formulating the most pertinent way of moving further in specifying the controversy. If the overarching question is responsibility for the attack; should focus be directed rather towards what kind of warheads can be used to carry out a sarin gas attack, how they match with the warheads found on the ground in Ghouta, from what location they could be launched or on knowledge of the strategies, capabilities and ambitions of those involved in the conflict? The answer will be a combination

of overarching questions and ways of specifying them. As a whole, the combination of questions gives form to the controversies that produce controversies such as those surrounding the use of sarin gas in Ghouta.

Second, and directly related, expertise generates controversies by providing answers to the multiple questions it raises. Since expertise is indeed plural, the answers it provides also are. They therefore become the subject of controversies in their own right. This is true even on the seemingly most technical issues. For example, the UN report analysed the trajectory of the chemical weapons, concluding that they must have been launched from the government held Mount Qassiouin. A team of researchers headed by Theodor Postol, a professor of technology and national security at MIT, reviewed the UN photos (sic) and reached the opposite conclusion. It argued that „... the flight path analyses in particular were, ‘totally nuts’ because the range of the improvised rockets was ‘unlikely’ to be more than two kilometres“ (cited in Hersch 2013: 10). A controversy over the trajectory ensued. The expertise in plural generated around controversies play a core role in making controversies visible both by formulating the controversial questions and by questioning the answers provided to them. Expertise is in other words essential but in a diametrically opposed way from the one suggested by the classical Lippmannian understanding of it. The essential role of experts is not to provide answers to a predefined question but to provide the questions that structure the controversy and then make the contestability of the answers visible. This understanding of what expertise is and does entails such as radical break with the conventional connotations of expertise that some prefer to drop the reference to expertise altogether. For example Callon et al. write:

„Another notion, equally omnipresent in the literature, has disappeared: that of the expert.. [because]... the situations that interest us do not turn so much on available skills and the decisions to be made as on the modes of organizing the process of production of knowledge and on the measures to be implemented in order to re-launch the double exploration on the basis of first lessons“ (Callon, Lascoumes, and Barthes 2009, 228).

Dropping the notion of expertise in this way may be helpful to clarify processes by getting rid of the Lippmannian connotations of the word. However, it has little relation to a reality which is replete with expertise, expert consultations, expert panels, expert interviews, and expert opinions. We live in „Expert Raj“ that is in an empire led

by experts (Jasanoff 2012: 11). The route followed here is therefore a different one; it is to acknowledge the essential role of expertise in the knowledge-expert-policy nexus while insisting that this expertise is very different from the classical one discussed by Lippmann. Contemporary expertise is plural and must be understood as generated in the controversies it is generating. That is knowledge, expert and policy may form a nexus but it is one where they are no longer neatly separable and their respective nature and roles therefore need to be radically rethought.

### Embattled Expertise

The expertise in this revamped guise may remain essential. However, its fluid, changing and questioning character obviously also makes it exceedingly contested. This makes easy score points for all those who have long insisted that expertise is easily manipulated by the powers that be. It is also water on the mill of those who point out that expertise is (and can be) nothing but situated knowledge, the particular point of view of the experts who mediate it. The many „turns“ of the winding social sciences road – including the critical, the feminist, the post-colonial, the linguistic, the post-linguistic, the aesthetic, the practice, the new material etc. etc. – have led to a place far away from the Lippmann land of benevolent expertise. Those who have followed the turns find themselves in a place where expertise is integral to power knowledge practices that are performative in generating specific subjectivities and tied to hierarchies, race and gender relations. If the argument about the essential nature of expertise holds, this is a very uncomfortable place. Expertise will not and cannot disappear. Nor can the politics of expert knowledge be neutralized. For people who have followed these turns, Collins and Evans’ project of trying to delimit safe provinces for specific kinds of science and specific types of expertise consequently carries less promise than Latour’s sword swinging project aimed at those who try to turn „matters of concern into matters of fact“ (Collins and Evans 2007 ; Latour 2004). Latour’s sword swinging is aimed precisely at defending the space for keeping expertise controversial (or embattled) when countering the worries of relativism. Latour allows the third wave of science and technology studies to roll into the second wave rather than just behind it as Collins and Evans would have it. The problems of legitimacy meet, and are used to solve, the problems of extension. However, Latour’s depiction of how this defence of „matters of concern“ works is misleadingly narrow. Latour’s ritual struggles against the mythological „critical approaches“ prevent him from acknowledging – let alone take on board – the relevance of their insights for his work. Most significantly it prevents him from accepting

their insights regarding how a wider context plays into the processes that prevent matters of concern to turn into matters of fact. Yet, the force of these critical insights is necessary if Latour's sharp sword is to be effectively swung and swung against the right target. This section elaborates this point by discussing three such insights. It suggests that critical insights about the broader context created by markets for ideas, technological systems and regulatory processes shape constellations of expertise and have been to be made integral to efforts to keep expertise embattled. These three insights have played a prominent, but not exclusive, role in the discussions surrounding the knowledge-expert-policy nexus. Picking them up is a way of showing that, contrary to Latour's rendering of them, these (and other) critical insights are neither operating in the shadows nor are they dulling the Latourian sword of critique. They are important if that sword is to cut a difference.

### Criticizing the „market for ideas“

The initial Russian reaction to the news that sarin gas had been used in Damascus was to say that this was simply a lie. Foreign minister Sergei Lavrov, who was one of those insisting publicly on this, said he knew the attack had been fabricated on the basis of fake evidence and manipulated images. His arguments seem to have been based largely on the analysis a Carmelite nun (Agnes Mariam de la Croix) had made of the YouTube images posted almost immediately after the fact (Mackey 2013b). She argued amongst other things that these images had been posted before rather than after the event and that therefore they had to be fabricated or at least did not document a supposed sarin attack on 21 August. De la Croix's analysis turned out to hinge on a misunderstanding of how the time is attached to YouTube images. Nonetheless, her analysis for a while figured as central expertise in the discussion. De la Croix was not the only non-certified expert to partake in the debate. In fact, a large share of the initial debate about the deaths from the sarin gas attack has been based on evidence gathered by lay experts. „The strikingly precise US total [of 1492 deaths] was later reported to have been based not on an actual body count, but on an extrapolation by CIA analysts, who scanned more than a hundred YouTube videos from Eastern Ghouta into a computer system and looked for images of the dead“ (Hersch 2013). This death count was then held up against alternative ones. Including for example that made by *Médecins sans Frontières (MSF) who counted 355 deaths in their work on the ground* (BBC 2013a). As this shows, the estimates on something as basic as how many people died in the sarin gas attack in Ghouta have varied from zero (as claimed that no such attack took place) to 1429.

All of the estimates drew on some form of expertise. But obviously the experts cannot all have been right and some (de la Croix for example) were certainly more wrong than others. The question is how to settle who – that is how – to decide which expertise to trust and rely on.

One common answer is that of generating an open and participatory discussion as a way of establishing what expertise is most relevant. The competition among conflicting expertise will sort the hoax from the expert, ensuring that the best, most relevant and solid knowledge prevails. As Mirowski has argued in detail, this idea has much in common with Hayek and the Montpellier Society's idealization of markets in general: just refrain from interfering and the market will sort it out. In this case, the market for ideas will settle the issue too complex for limited and corruptible people to deal with. Markets will ensure that the best possible constellation of expertise is discussed and prevails. The difficulty is that ideas do not float freely in an unfettered market. Rather they are articulated by people with positions and in contexts that systematically (dis)advantage some ideas over others. Russia can decisively shape what is produced as expertise, as can Fox news or the Ford Foundation. De la Croix's analysis would not have featured prominently in the debate if the Russian foreign ministry had not seized it for its own purposes while MSF's analysis might have been far more influential if the US intelligence had picked up on it. But more fundamentally some forms of expertise might be silenced altogether if spoken in a language that cannot be understood by other participants in the debate. This is what Spivak means when she insists that the „subaltern cannot speak“ (Spivak 1988). There is therefore no guarantee that simply allowing people with claims to expertise to speak and participate in a „market for ideas“ will produce some optimal constellation of expertise. This is true however much one derides those „afraid of markets“ (Callon 2007) and insist that „markets and delegative democracy work hand in glove. They mutually reinforce each other“ (Callon, Lascoumes, and Barthes 2009: 237). As Mirowski argues „the Achilles heel of neoliberalism is that it gets the functions of markets in society all wrong: Markets are not only limited and intermittently unreliable information processors; they can equally well be deployed to produce ignorance“ (Mirowski 2011: 318).

Scholars writing from within Actor Network Theory (ANT) / the social studies of science acknowledge that sometimes markets may produce ignorance. Latour even grants the production of ignorance through markets a place of honour in his analysis of the „affects of capitalism“ (Latour 2014). However, neither Latour nor other ANT/Science and Technology Studies (STS) scholars seem willing to make this insight bear on their own un-

derstanding of how matters of concern can be sustained and expertise remain embattled. Instead they put their trust in an open discussion. As Callon et al. put it:

„In the absence of hybrid forums that extend, debate, and reorganize them, markets quickly become contested, illegitimate, and sources of inequity and injustice [...] Let's free markets from the supposedly natural laws that the most extreme liberals doctrines attribute to them, so that they are able to take in the proposals produced by the hybrid forums that manage their weaknesses“ (Callon, Lascoumes, and Barthes 2009: 328).

Pointing to the importance of accepting hybrid forms of knowledge is not particularly satisfying. It merely displaces the problem; how can the „hybrid fora“ or hybrid knowledge escape the (disturbingly visible and systematic) inequality of the participants in the market for ideas? Questioning the YouTube analyses by de la Croix is important, but it would not have mattered at all unless Russia had incorporated it into its expertise. Questioning the analysis of the CIA may be equally important but it is infinitely more difficult. The market for ideas, the hybrid fora, or the open debates are unlikely to provide much assistance in that regard. On the contrary, they will tend to reinforce – not counter – the exclusionary bias towards the already influential and their expertise at the exclusion of others. The defence of matters of concern and embattled expertise is therefore strengthened by critique of the market idea, not weakened.

### Contesting Technological Systems

Along similar lines, while ANT/ STS scholars have contributed greatly to thinking about the hybrid nature of expertise, they have been surprisingly reluctant to acknowledge the extent to which technologies also become part of a context that fashions (and biases) the way that expertise is reproduced in relation to specific controversies. Indeed, reference to technologically grounded knowledge is often presented as authoritative and somehow imbued with a superior precision and objectivity that raises it above that of other forms of knowledge. This was true also in the discussion that has surrounded the sarin gas attack in Syria. For example, the anchoring of intelligence expertise in technological systems was used to bolster the US position on the attack. When the initial assessment of the situation was presented, it was done in a way that made it seem as if „the government and Kerry's comments made it seem as if the administration had been tracking the sarin attack as it happened. It is this version of events, untrue but unchal-

lenged, that was widely reported at the time“. (Hersch 2013) A vague reference to technologically grounded expertise<sup>11</sup> made possible a „White House misrepresentation of what it knew about the attack matched by its readiness to ignore intelligence that would undermine the narrative“ (Hersch 2013). To show the fragile nature of this interpretation, Hersch mounted a case, based on the information provided by the same sources, showing that the attack could very well have been launched by rebel groups and more specifically by the Al-Nursi militia that has already experimented with the use of sarin gas. However, not only did Hersch's interpretation of the data receive scant attention (as might have been expected considering the argument just made about the market of ideas), more generally the claims made by the US government met almost no critique. They seemed to enjoy an immunity of sorts partly linked to their technological foundation. This raises fundamental questions about the way technological systems – such as the CIA observation systems in Syria – feed into the contexts in which expertise constellations emerge and bias the form these constellations end up taking; that is about the way technologies are not only „actants“ in expertise constellations (as most ANT/STS would treat them) but part of the context that shapes what kinds of actants (and agents) will become relevant to these expertise constellations.

Critical approaches to technologically grounded, hybrid, knowledge have a long tradition for working on these questions. They direct attention beyond the obvious fact that technological expertise is prone to manipulation of the powers that be. This critical work has long insisted on the importance of questioning the way that technologies does not only become part of singular expert constellations but also refashion the contexts within which these constellations emerge. An early version of this argument was made by Ursula Franklin.<sup>12</sup> Franklin insisted that many – in fact most – contemporary technologies are „prescriptive“ in the sense that they prescribe what can and should be done.<sup>13</sup> The sensors installed to monitor the chemical weapons arsenal in Syria and the signals they were programmed to pick up to provide „early warnings“ prescribed a specific form of observation focussed on given assumptions of threats. As other „prescriptive technologies“ they therefore „eliminate occasions for decision making and judgement in general and especially for the making of principled decisions. Any goal of the technology is incorporated a priori in the design and is not negotiable“ (Franklin 1992: 25). Arguably, the move to the digital and to „big data“ has accentuated and accelerated this displacement of „principled decisions“. It locates these within the technologies themselves. Indeed, integral to the move to big data has been a view that

data can just be amassed for no particular purpose and then mobilized when it is needed (Mayer-Schönberger and Cukier 2013), as were the audio-recordings from Syria. What is glossed over is that the data thus gathered prescribes observation; it restricts observation to what the data allows for. The technological system defines the parameters of (in)visibility. Even more strongly, contemporary technologies often have „emergent“ qualities; they integrate the results of their own observations and evolve accordingly. Algorithms therefore come to take over a range of very principled decisions (e.g. Amoores 2011), including in the military field (Beard 2009 ; Sharkey 2010).<sup>14</sup>

Critical insights in other words have directed attention to the ways in which technology refashions the context in which expertise constellations are defined. Technology „prescriptively“ (to use Franklin’s term) plays a core role in defining what kind of expertise is most relevant. It often does so by placing technological processes at the heart of that relevance to the extent that these solutions sometimes become completely independent of controversies and debates (as is the case when technologies have „emerging characteristics“). Technologies effectively squeeze Latour’s matters of concern into matters of fact. As Franklin points out:

„with the predominance of prescriptive technologies in today’s world – technologies that have taken over like a giant occupation force [...] We have lost the institution of government in terms of responsibility and accountability to the people as people. We now have nothing but a bunch of managers who run the country to make it safe for technology“ (Franklin 1992: 117 and 120).

For Latour’s sword to be an effective weapon in the defence of matters of concern would seem to require a more strategic position on how it can stop this „giant occupation force“. To date, the process of reflection on this question has not progressed very far. In fact, even seeing the problem is made difficult by the summary and rejection of all things „critical“. In a seemingly naïve, unrealistic and ultimately self-defeating way, Latour is barring himself from drawing on the strength of these critical approaches to make his defence stronger. Indeed, recovering the debate about principled decisions (or politics) and inverting this trend involves critically examining how technologies are refashioning the context in which expertise constellations are defined.<sup>15</sup> It involves ensuring that technologically grounded expertise ... such as

that underlying the White House assessment of Syrian government responsibility for the sarin gas attack on Ghouta – remains embattled. Criticizing, as Hersch does, the interpretations and usages of technological expertise is important; so is questioning the bias and logics built into the technologies even if it is more difficult and demands allying with vilified critical approaches.

### Questioning regulatory procedures

Last but not least, and still along the same line of argument: ANT / STS scholars place enormous emphasis on the processes through which constellations of expertise emerge and remain embattled. In Callon et al.’s words: „the situations that interest us do not turn so much on available skills and the decisions to be made as on the modes of organizing the process of the production of knowledge“ (Callon, Lascombes, and Barthes 2009: 228 emphasis added). Yet, they are surprisingly reluctant when it comes to bringing in the biases, the exclusions and the closure tendencies that are integral to these processes themselves; that is to look critically at these processes themselves and to question the purported objectivity and neutrality of these processes. Tellingly, the concluding chapter of Latour’s fascinating study of the making of law argues that law is made much more in line with the common preconception of how science is made, than science itself (Latour 2010). This is intended as a provocation to established views of how the sciences function. However, it also is revealing of the extent to which Latour’s willingness to lend regulatory processes, especially the formal legal ones, precisely the kind of uncontroversial, singular status that he refuses to grant science and scientific processes. Yet as critical (yes again) work on law has long insisted this is profoundly misleading. And, there is no need to resort to a critical mysticism or metaphysics to discover this; on the contrary. The controversies surrounding regulatory processes provide ample and visible confirmation of it.

This is true also of the procedures surrounding the processes regulating the role of the constellation of expertise in relation to the sarin gas attack in Ghouta. The processes regulating intelligence expertise in the US for example were amply criticized and contested both from within and from outside the circles of professional intelligence. The original US assessment of the incidence insisted on the real time monitoring of the situation (White House 2013). This led to very serious critique of US intelligence experts: Why had there been no warning if they knew? Not surprisingly this (re-)opened a debate about the regulation of how intelligence expertise is mobilized and used. Shawn Turner, a spokesman for the director of national intelligence publicly protested



against the manipulation when he flatly rejected his government's version: „Let's be clear, the United States did not watch, in real time, as this horrible attack took place. The intelligence community was able to gather and analyse information after the fact“ (cited by Hersch 2013). In even stronger terms, the group „Veteran Intelligence Professionals for Sanity“ published a memorandum to the president arguing that the White House assessment was a „political ploy“ and that „CIA Director John Brennan is perpetrating a pre-Iraq-War-type fraud on members of Congress, the media, the public – and perhaps even you [president Obama]“ (VIPS 2013 ; also Mackey 2013a). Inversely, David Cole who has specialized in the law surrounding US intelligence gathering and handling (e.g. Cole 2012, 2003), analysed the way intelligence was dealt with in the sarin gas crisis as a „new turn“ and the ending of the abusive practices associated with the „war on terror“ because the process involved Congress and public debate (Cole 2013b, 2013a). Statements such as those by Shawn Turner, by the VIPS or David Cole focus on the process through which expertise is made relevant..

This debate about regulatory processes for involving intelligence expertise shows the extent to which those directly involved talk about the significance of the broader context of regulatory procedures – including the most formal legal ones – for stabilizing expertise and hence also of the importance of keeping these processes contestable. This dovetails nicely with the insights of critical work in law which insists that legal expertise is one form of expertise among others. As Martti Koskenniemi insists when he discusses the role of legal experts in politically contentious situations „By Their Acts You Shall Know Them... (And Not by Their Legal Theories)“ (Koskenniemi 2004). Logically and by prolongation, it is important to insist with critical legal analysis that legal procedure is no more of a distant province whose experts can mediate knowledge to policy than are other specialized knowledge. Law reproduces its own biases. As Koskenniemi puts it:

„the distinctive contribution of alternative styles [of legal reasoning] lies in their ability to shed light on mainstream law's hidden priorities, the way legal translation articulates some participant values but fails to do so for other values. Much feminist and postcolonial writing has undertaken precisely this task. The introduction of human rights or environmental claims into the law is a familiar outcome of such renewalist 'imagining' earlier in the century“ (Koskenniemi 1999: 358).

Legal knowledge is on par with other forms of knowledge. Not only are legal experts therefore part of a knowledge-expert-policy nexus. Law is no safe-haven where one can find shelter from the disputes (such as the one over procedures) and judge them at a distance (Leander and Aalberts 2013). The current use of „lawfare“ – the mobilization of law in support of the own warfare – makes this disturbingly clear (Dunlap 2008 ; Beard 2009). Critical legal scholarship has played a core role in drawing attention to this and hence in underscoring the limits of wishful thinking exporting the responsibility for ensuring that expertise remains embattled to law. The Latourian defence of matters of concern would certainly do better if it also placed this insight behind its swinging sword.

To sum up, expertise in plural continues to be essential in political debates. Plural expertise is necessarily also embattled; it crystallizes in changing constellations around evolving matters of concern and not in a singular predefined form around unchanging matters of fact. It is therefore of essence (as Latour persuasively insists) to resist closing and exclusionary processes. However, to do so it is not enough to show that expert constellations are hybrid and changing and hence resist the singular and universal. It is also important to resist the process through which the broader context in which the constellations emerge imposes closures and exclusion. This section has argued this point with reference to the market for ideas, technological systems and legal processes. The overarching point is that hasty dismissals of critical insights because of an ancestral resentment à la Latour appears not only unwarranted but risky. To rephrase a statement made by Jasanoff : „for all practical purposes we live in 'Expert Raj' (an imperium of experts)“. It is therefore important that their „modes of acquiring authority, especially in global institutions“ do not remain as „opaque to ordinary citizens“ or to anyone else „as the self-legitimizing claims of rules in distant metropolises were to colonial subjects living in the peripheries of empire“ (Jasanoff 2012: 11). To ensure that they do not it is important that expertise be as embattled as it is essential. Integrating critical insights is of essence for this to happen.

### Conclusion: Cultivating Paradox

The argument in this article has taken us to a place of paradox. On the one hand, it has insisted that expertise is essential. However, plural, malleable, contextually generated, and however much expertise creates the controversies it is supposed to analyse, expertise is authoritative knowledge that remains essential. As such it demands to be trusted. Therefore Latour insists on the creation of a „trust“ in the institutions of science each with their own specific language and regime of truth (Latour 2012: 155:

30 and passim). On the other hand, as this article has insisted, expertise is embattled and in fact must remain so if it is to be more than the expression of already privileged views. To contest something is diametrically opposed to trusting it. Indeed, a conventional way of understanding authority is as that which is accepted and hence neither imposed nor contested (Arendt 1958 ; Krieger 1977).<sup>16</sup> To insist that the knowledge-expert-policy nexus in connection to the sarin gas attack has relied on essential and embattled expertise is to say that it has been paradoxical in the strictest sense of the word.

In the academic world, but also beyond, many would expect a conclusion such as this to dissolve the paradox; to offer some routes away from it or perhaps some advice for how to move away from it practically. Those debating expertise would probably expect a return to a suitable refurbished version of what I have termed Lippmann land above. No such conclusion is intended or forthcoming. On the contrary, as the argument above has made amply clear, not only is expertise, in relation to the sarin gas controversy and beyond, both essential and embattled; this dual characteristic plays a fundamentally important role. It ensures that Expert Raj does not become an arbitrary tyranny of experts. Perhaps this insistence on paradox is no surprise. After all „political reason never proceeds in a straight line“ (Latour 2012: 333). Speaking politics is all about taking the detour generating the issues, views and ultimately the public that politics is about.<sup>17</sup> It is about speaking in curves or perhaps even circles as Latour would have it (Latour 2012: 155). There is no reason to think that speaking about the inherently political expertise in the contemporary knowledge-expert-policy nexus should be any different. Speaking curves does not dissolve the paradox though. It offers a possibility to live with it and perhaps even to cultivate it. There is a dearth of suggestions for how this position can be enacted in practice. The article therefore concludes (as the caricature academic must) that „more research is needed“ and research of a very specific kind: namely research that focuses on how to deal with and cultivate the paradox of embedded and embattled expertise.

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3. As Haraway puts it with reference to Latour (and as has been repeated many times since) „...the science studies scholars aren't reading or listening–or both“ to insights from other scholars; and Haraway is concerned mainly about „critical scholars in antiracist, feminist cultural studies of science and technology“ (Haraway 1997: 35).
  4. The controversy surrounding the sarin gas attack in Damascus is in other words not a „case“ analysed with the help of a „theoretical framework“. Rather, the sarin case provides the insights about the ways in which knowledge, expertise and policy are linked in the contemporary world. These „insights“ constitute the „theoretical claims“ made in this article; they illustrate the contextually specific processes and mechanisms that link knowledge-expertise-policy. These processes differ from existing significant understandings (the article argues for a „third position“) and hence refine existing theorizations.
  5. This point is made repeatedly by Beck who insists on the paradox that on the one hand we increasingly trust science to help us understand risks that are „invisible“, except for science while on the other hand science is also increasingly marred by distrust as stemming from internal disagreements and external distrust (Beck 1992: 45 e.g.).
  6. I borrow this framing trilogy from Jasanoff's classification of different kinds of claims to expertise along the axis of objectivity and experience (Jasanoff 2012: 200). Jasanoff has also usefully developed an analysis of the trajectories making different countries tend to re-produce specific forms of expertise legitimation or what she calls „civic epistemologies“ (Jasanoff 2012: 200: 72).
  7. Their general point is that the selection is culturally re-produced and hence dovetails nicely with Jasanoff's point that the experts who select them are linked to specific scientific cultures.
  8. Helga Nowotny been a central participant in the scholarly debate about the the knowledge-expert-policy nexus. She has also been core in fashioning the politics in the area by holding key positions including that of president of the European Research Council.
  9. She emphasises two core processes: „One process, linked to the rise of the rational and informed individual in the dual role of consumer and citizen, has led to what appear to be irreversible changes in the decision-making structures of liberal Western democracies. The other process, equally wide-ranging in impact and probably also irreversible, has led to the emergence of a societally distributed system of knowledge production, which is no longer confined to institutional monopolies or knowledge bases organized along strictly disciplinary lines.“ (Nowotny 2000: 18).
  10. The mission was headed by Åke Sellström (Professor specialized in chemical weapons and working for the Swedish Defense Research Agency), and supported by the director of the Organization for the Prohibition of Chemical Weapons, Scott Cairns, and Maurizio Barbeschi, the head of the World Health Organization.
  11. The written version of this assessment epitomizes this. It informs its readers that „all-source assessments are based on human, signals, and geospatial intelligence as well as a significant body of open source reporting. Our classified assessments have been shared with the U.S. Congress and key international partners. To protect sources and methods, we cannot publicly release all available intelligence“ (White House 2013).
  12. A Canadian physicist, feminist and peace activist (Franklin 2006 for an overview).
  13. Obviously the notion of prescriptive technologies has many pendants including in Foucauldian work on „technology“ (which Franklin sites) or in Kittler's „cultural technologies“ (Kittler 1999) or in Haraway's „cyborgs“ (Haraway 1991).

## Notes

1. An earlier version of this argument was presented at the public discussion: „Syrienskonflikten – løsninger bordet“ (30 September 2013) co-organized by ToRS and the Centre for Resolution of International Conflict (<http://cric.ku.dk/>). CRIC also supported the research for this article. I thank the editors and anonymous reviewers for helpful comments. I would also like to thank Stefano Guzzini for taking time to talk expertly about expertise.
2. „Problem of extension“ refers to difficulties arising from the fragmentation of knowledge and the multiplicity of actors pertinent to expertise on any given subject. Most central among these difficulties is the problem of legitimizing specialized knowledge.

14. I do not know if emergent technologies were used in observing Syria before or during the sarin gas attack. However, considering the centrality of this kind of technology in routine reconnaissance, surveillance and intelligence it is certainly not impossible.
15. Franklin outlines a series of questions she thinks must and should be systematically put to any plan or project involving technological expertise – that is, the overwhelming majority of initiatives taken in the contemporary world (1992: 127-9).
16. „If authority is to be defined at all, then, it must be in contradistinction to both coercion by force and persuasion through arguments“ (Arendt 1958: 93).
17. Bourdieu’s way of making the point was to insist on the „mystery of ministry“ whereby the minister creates the community/interest s/he is representing in the process of representing it. For an elaboration of the argument see (Wacquant 2005).