

HSPOP

HARVARD SUSSEX
PROGRAM
OCCASIONAL
PAPER

SYRIA COLLECTION

WORKSHOP SUMMARY

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Introduction

The Harvard Sussex Program, in association with Cranfield University, hosted a workshop at the University of Sussex between the 21st and 22nd of March, 2016, to look at allegations of chemical warfare use in Syria and their implications. This workshop represented the concluding phase of a grant on Data Capture of Syria Chemical Weapons Allegations that was awarded to the Harvard Sussex Program (HSP) by the UK's Economic and Social Research Council (ESRC). As part of the ESRC's Urgency Grant scheme the project sought to undertake three activities:

1. Gather data related to allegations of chemical warfare in Syria
2. Perform initial analysis of that data; and
3. Develop a strategy for how the ESRC might take forward research in this area.

On the first day, the methods and outputs of the project were presented as a stimulus for discussion around the future of interdisciplinary academic research at the intersection of conflict, security and media with a particular focus on Syria and social media. On the second day, attention turned to the implications of chemical warfare for the present and future health of the Chemical Weapons Convention (CWC).

The workshop was held under the Chatham House Rule necessitating that the identity of the speakers has been removed from this workshop report.

Session 1: Project dataset, methods and initial analyses

The workshop began with an overview of the ESRC funded urgency project and the activities undertaken and outputs produced. This included a broad introduction to the project which emphasised that chemical weapons were one set of a large number of examples of horror and violence in Syria and therefore needed to be kept in perspective; nevertheless they remain an important area of study. The social media data set was then introduced with the speaker noting that the Syrian conflict has been described as the most socially mediated civil conflict in history, so it made sense to both collect and try to understand social media data. It was outlined how this was done using a data analysis and collection platform provided by *Sysomos* a private company that provides social media monitoring tools. This was used to both collect and analyse social media with two different approaches to collection employed: one thematic and built around particular search strings; a second broader approach to try and capture a wide range of materials from events leading up to the UN Secretary General's (UNSG) investigation, the report and associated events. The introductory session continued with an overview of the collection and organisation of traditional media materials which formed a second dataset built to overcome the possibility of potentially important data being lost and future research being conducted using an incomplete and/or inherently biased or otherwise contaminated dataset. Such a process, it was noted, built upon longstanding HSP search methods and earlier work undertaken in HSP.

The introductory session then proceeded with the project team outlining a selected number of working papers that had been developed, beginning with an overview of two documented chronologies, compilations of fully referenced records of events. It was argued that such

chronologies serve as a means for identifying a variety of different tenable narratives, even strongly conflicting ones; and that the chronological collation of the records can then display any such conflict rather clearly, thereby facilitating analysis of the research question. It was further suggested that such documented chronologies were key tools in HSP's study of a rather wide variety of research questions related to CBW over the past 45 years.

A third paper, on gaps and lies was then outlined, with its author suggesting that data sets on the topic of CBW should not be used without a great deal of circumspection, as they contained errors, lies and spin and much that is unreliable and incomplete. It was suggested that the existence of the problem of gaps and lies is a cautionary message for anyone thinking or writing about Syria/CW who might otherwise be happily dependent on the available sources of information, heedlessly uncritical of their limitations. The core of the paper, it was explained, provides an account of how security interests, particularly, have distorted information publicly available about Syria and chemical weapons; and, secondly, possible ways for detecting disinformation.

A fourth paper was then outlined on the role of the internet in the aftermath of Ghouta. This paper looked at the way both regime and non-regime actors have used the internet over the course of the conflict and suggested that the shaping of our knowledge of the event is not in the hands of traditional print journalists, or members of the intelligence community, but citizens with mobile phones and cameras who have been alerting the world that something has happened via online platforms such as Twitter, Facebook and YouTube. Yet despite the generation of larger volumes of data from a wide range of actors, it was argued that such data does not equate to (1) a comprehensive coverage of the situation on the ground (2) better information or knowledge or (3) that all analyses are equal. The speaker posited that social media platforms are simply tools of communication, and powerful in their reach though they may be, they remain politicised.

A fifth paper provided a critical assessment of differing accounts of what happened in Ghouta and the extent to which these accounts spread. The paper suggested that, unsavoury as it may be, members of the general public who can remember anything about Ghouta may recall any number of possible conclusions about what happened and who was responsible. It argued that this lies in part because of the role of social media and access to camera phones as a much more effective and efficient disseminator of information to easily identifiable networks than was possible with Cold war propaganda dissemination methods. A final paper outlined how a forensic approach could be used to examine sources and language to build an understanding of how the internet could be faked. The paper compared three case studies: a major incident known to be untrue which was unveiled on the internet and two incidents from Syria believed to be true: the now infamous Sarin attacks in Ghouta and the Chlorine Barrel attack in Idlib on 7 May 2015.

The presentations stimulated a number of points of discussion in four general areas, the first was the significance of social media as a tool, with some participants querying whether social media was entirely new, or rather a new manifestation of the human condition but with more immediate susceptibility for conspiracy theories. It was posited that if social media really was qualitatively different, then perhaps new tools were required; however, if it is just a greater quantity of information then perhaps traditional tools and practices of analysis remained valid. It was generally agreed that, regardless of 'newness', the pace of information exchange was different and with it potentially came new pressures upon state actors to make decisions more quickly.

A second area of discussion evolved around the practice of distinguishing between information, misinformation and disinformation, with one participant querying whether it was possible to distinguish between purposeful disinformation, and accidental misinformation. Making such a distinction, it was suggested, was compounded by the fact that certain agencies at points might seek to push out a perspective they believe to be true but which is later disproven; or, alternatively, some individuals might feel obliged to produce information known to be incorrect but nevertheless important in informing understandings of what is happening within a closed system.

Participants also discussed whether false or ill-informed materials actually gained any traction or whether they just resonated across a social media echo-chamber, with limited impact. Related to this, participants queried whether social media resonated more significantly than other forms of communication such as government statements or news articles, or indeed whether the bulk of social media simply built on traditional media stories and statements. It was suggested that for a false narrative to gain really good traction through social media, it would have to be embedded in some organically growing narratives and contain elements of truth. To tease out disinformation, participants suggested that it could be useful to build a list of contributors or try to determine manufacturers of uncertainty.

This led to a third area of discussion, which was on the value of chronologies. Participants generally agreed that these were valuable tools in providing context from which readers can reach their own verdict on narratives and indeed the credibility of claims. It was suggested that there could be means of enhancing such chronologies through, for example, the addition of a spatial dimension taking into account spatial analysis or the development of different 'levels' of chronologies which could form multi-layered frameworks for understanding events.

Session 2: Future academic research strategies

The second session focused on future academic research strategies with discussion centred on how this work and that of others might be exploited and advanced through further academic study. After a short introduction by the Chair that outlined the differences in privacy policies of social media platforms and some of the challenges of research in this area, the ensuing discussion raised a number of issues. One such issue raised was the legal and ethical problems generated by the collection, collation, storage and distribution of social media materials used in research on conflict and security. In this regard, it was suggested academics and academic institutions were currently quite immature in terms of understanding the legal and ethical implications of social media related research and that this was potentially a hugely problematic area for academics for several reasons.

For example, participants were unclear exactly what the responsibility of the academic researcher was when using – and potentially paying significant amounts of money to – a private company to analyse and collect social media data. What responsibility did researchers gathering social media data for academic reasons have in relation to the well-being of individuals in conflict situations, particularly in circumstances where there was an expectation that data sets would be made public? What constituted “personal” or “private” information, not least in conditions where

social media data is captured and sold by private companies? When does social media data shift from being public and “open” to effectively “closed off” by private companies, at least to those that cannot afford access to it? Who should be given access to the dataset and what is the responsibility (or liability) of the PI for the longer term consequences of providing access to materials of a distressing nature? How does - or should - the process of risk transference work with new media?

To overcome this it was suggested that it may be useful to develop a number of hypothetical research scenarios through which to explore the potential implications of ethical and legal challenges. Other participants emphasised the importance of having a challenging and informed discussion about these issues that included a broad range of stakeholders (including academic funders) and working towards some form of guidance in this sphere for future researchers. There was a strong sense amongst some participants that this was an important area to explore further not least because of the potentially significant implications.

A second area of discussion was the possibility of using academic datasets as evidence in the event of future legal proceedings, for example against individuals implicated in the Ghouta event. It was suggested that the internet, rather than being a library was more analogous to a “graffiti wall” with online materials remaining available only for a limited period of time. As such, some participants suggested that datasets containing statements, photos and other media, could be particularly important as possible sources of evidence for the future. Moreover, there was already the precedent of social media being employed as evidence in courts (notably following the London Riots). However, there remained a number of issues with the use of online information in evidence. One issue was how much data is enough, when does data collection generate diminishing returns and limited value. A second key problem was the process of validating material and it was pointed out that this is a challenge currently being faced by international organisations. Although there remained methods of validation – including analysis of the devices used to capture data - and practices (such as the maintenance of data collection logs and remote storage) that could usefully be employed to feed into a chain of custody, questions remained over whether this could be used in evidence or indeed whether it was appropriate for academics to contribute to this process. On the latter point, participants were divided with some perceiving this as an obligation or “duty” in circumstances where materials might be useful, and others urging caution, suggesting this could generate issues of safety and security for academic researchers and may overstep the mark.

A third theme was the extent to which sources of social and traditional forms of media could be evaluated or “graded” in terms of their reliability and credibility. The project team indicated that the sources had not been graded in this project, not least as the focus was on collecting data, including data (such as the claims that the chemical attacks were faked) known to be incorrect but was nevertheless important in understanding the event. It was suggested that grading social media sources was a tricky process; however, it was recognised that there were things that could be done to determine the credibility of sources, such as analysing whether the source was widely followed or not and whether it was a new source or an old one. However, even this was difficult as a number of “pop-up” experts emerged over the course of the Syria conflict providing insightful information. In this regard, one participant suggested that adopting the traditional practice of using a number of independent sources in order to build trust in any claim remained appropriate.

A fourth related area of discussion was the evidential situation. One participant pointed out that what had happened in Ghouta was a major war crime and it was curious that we think the internet is the best way to look at it. He further queried why this had not been resolved through traditional investigative processes and why the technical capabilities to achieve this had not been fully exploited. It was pointed out that there remained limits to what can be achieved in politically sensitive situations and whilst organisations may have previously been more forthcoming in attribution, this was not something an organisation such as the OPCW could necessarily do. Other participants highlighted the possibility of combining social media data with other information from satellite surveillance or trade data to see whether a bigger picture understanding could be developed which could inform models of open source data collection.

Related to this, a final theme that emerged was what more could be done with the materials developed in terms of future academic research with participants querying whether more could be distilled from the collected materials. One participant suggested that the data could be fed into models used in intelligence circles to see what sense could be made of it from an intelligence perspective and questioned whether there could be a future orientated function in which multi-modal data could help inform the development of a manual of operating procedures or a decision making tool for policy makers.

Session 3: Internal health of the Chemical Weapons regime

This session discussed whether the events in Syria suggested anything about the ‘internal’ health of the chemical weapons regime. The session was introduced by means of an outline from the Chair of a number of possible implications generated by the use of chemical weapons in Syria and the ensuing process of destruction. The Chair’s introduction was followed by a lively discussion around a number of themes, including technology change, the ‘utilities’ of chemical weapons, threshold quantities under the CWC, the Syria declaration and destruction process, investigations & attribution, normative issues and terrorism. These broad topics are taken in turn in the following section of this report.

In terms of technology, there was discussion around ‘binary’ chemical weapons, a concept which, it was noted, does not translate well and can generate confusion as it covers a number of different processes of mixing chemical weapons precursors, ranging from sophisticated mix in flight models, to much more crude processes which produced less efficient products. It was suggested that there could be a number of benefits for the Syrian regime in the employment of binary type weapons as it facilitated the security and concealment of such weapons, as well as providing a ‘good enough’ product to achieve certain tactical objectives. Others suggested there could also be advantages for opposition groups seeking to use chemical weapons employing this model. This led to a discussion about technology transfer and the role of export controls and monitoring mechanisms in which participants posited that some aspects of technology transfer may have been built around personal connections rather than state to state transfers but nevertheless, with hindsight, could perhaps have been identified through, albeit then unexceptional, peaks in transfers evident on trade databases.

Related to this, the issue of utilities raised a number of points with participants divided over whether events in Syria had demonstrated a new utility for chemical weapons, or somehow

increased the “attractiveness” of this form of warfare. On the one hand, it was pointed out that there have been so many allegations of chemical weapons use in Syria - assuming that some of these are true - there must be some utilities, perhaps not so much in terms of casualty causing potential but in terms of terrorisation potential, or as part of a process of forced migration or information warfare. On the other hand, it was pointed out that the cost-effectiveness was limited with the actual effect of the weapon relatively low, suggesting the ‘average’ military dictator may not see a utility for chemical weapons based on the Syrian case study. Others pointed out that the number of casualties caused by chemical weapons were comparatively so low the media and political reaction was not commensurate (particularly when juxtaposed with a variety of other means of causing harm evident in the Syrian conflict). It was also suggested that there was a need for caution in undertaking some measures to mitigate chemical warfare in the context of Syria because of the knock-on effects, one example being restricting access to chlorine a step that could have devastating consequences in terms of public health.

The topic of the quantities of chemical weapons used also served as a point of discussion with participants pointing out that the amounts used in Syrian chemical weapons attacks have been very small compared with quantities envisaged in the Cold War scenarios for CW use that underpinned the CWC. This led to questions over potential long-term implications for the health of the CWC if the OPCW was unable or unwilling to address small-scale use of chemical weapons. Participants further pointed to the potentially corrosive introduction of terms such as the “use of chemicals as weapons” rather than “chemical weapons” that were evident in some official materials. Participants suggested that the introduction of this language was the result of semantic brinkmanship and arguments that somehow suggested the use of chlorine as a weapon was distinct from the use of chemical weapons, were nonsense. Nevertheless, the limited international reaction to the significant number of alleged uses of chlorine and other chemical weapons in Syria remained alarming and raised questions amongst participants as to where this left the chemical weapons regime.

The discussion also raised a number of points around declarations. It was suggested that there had been significant bilateral discussions around Syrian declarations of chemical weapons stockpiles and doubts remained over whether there might be things missing. However this was not a problem that was unique to Syria, with past declarations by other states also a source of discussion between states parties. It was suggested that through the work of the Declaration Assessment Committee (DAC) there would come a point when states parties accept the Syrian declaration, although that point had not yet been reached with questions remaining. Similarly the destruction process generated discussion, particularly the costs of destruction and the lack of Syrian financial contributions to this process, something described as scandalous by one participant. Others argued that the main priority at the time was to remove the materials out of the country, and in the future the cost of destruction could yet be revisited. Participants also drew attention to the remarkable nature of the destruction process in which chemicals were removed from the country prior to destruction; it was indicated that such an approach had been proposed in the past, for example in the case of Iraq, but was unacceptable to certain states parties then.

A further area of discussion was the issue of investigations. There was a consensus that the Sellström investigation had been a remarkable success illustrating the proficiency of OPCW facilities and process. Indeed, it was suggested that the scientific dimension of the investigation was sufficiently robust to withstand efforts on the part of some to discredit them. There was

however more to do in terms of biomedical sampling and it was noted that this is an area where OPCW capability was developing. As such it was suggested there was scope for a conceptual discussion on finding the right sample and ensuring a sufficient number of the rights sample evidence for the analysis to be undertaken. There were also operational lessons learned which need to be considered for the future and a number of political challenges posed by investigations.

Linked to this was a discussion around attribution with one participant suggesting that tracking down everyone involved in the chemical weapons attacks could be difficult, particularly with certain states seeking to protect individual actors. However, several participants signalled their determination to prosecute individuals at some stage in the future and in a manner similar to the on-going effort to prosecute former German SS officers. It was suggested that the OPCW's Joint Investigative Mechanism (JIM) was set up as a follow on process, a first step, towards holding people to account; however, this was something easier said than done and JIM was only looking at a limited number of cases although progress had been made here.

Linked to this was a further strand of discussion around morality and legitimacy with one participant querying what it would mean to fight a group accused of genocide and whether the use of chemical weapons to prevent genocide might constitute a morally acceptable act. This raised discussion about the relative seriousness of the crime of chemical warfare in the context of such a brutal conflict.

A final area of discussion was that of chemical terrorism. It was pointed out that earlier use of chlorine in Iraqi truck bombs was relatively ineffective in terms of casualties caused. However radical groups appear to have both learned from this failure and captured media attention through the use of chemicals. Indeed, the mass of media analysis might even serve to assist the user in determining the effectiveness of their weapon and identify points to improve. When looking at chemical terrorism participants suggested it would be important to look at the behaviours of certain groups and other possible utilities that chemical weapons may serve for such organisations (such as generating media attention or for purposes of information warfare). It was agreed that some groups were uninhibited in the use of shocking tactics, however there was also a need for pragmatism in assessments, with groups seemingly inclined towards more readily available tools which were no less capable of causing terror.

Session 4: Future Academic research on the internal health of the regime

The purpose of the fourth session was to build on the earlier discussion and identify things that could be done by academics and other actors outside of government. In the introduction, the Chair acknowledged that there are clear limits to what those outside government can do and that academics and others don't always appreciate the pressures and politics of working on the inside. Nevertheless, it was suggested that there were also advantages for academics, NGOs and others in the form of (potentially) having more time to explore concepts and greater freedom to speak. As food-for-thought, the Chair then outlined a number of things, such as historical digging, that academics and others outside of governments could do in support of the internal health of the regime.

The subsequent discussion proceeded to identify a number of areas where academics could feed in, including looking at history, exploring science and technology, identifying trends; as well as things academics should not do or alternatively be careful in exploring. With regard to the latter categories, it was suggested that there were operational aspects of the CWC that academics did not have experience in, such as how inspections work. Some participants believed there was no role for academics in this area. However, others pointed out the leading role academia plays in forensic science and questioned the appropriateness of such measures being closed to scrutiny or potential improvement. Similarly it was pointed out that declarations are between state parties and based on trust, suggesting that access, analysis and academic commentary on declarations may not be useful. Related to this one participant suggested that there was a need for caution in publishing too much on the mechanics of disarmament diplomacy or, put otherwise “shining a light on magic”.

In terms of the category of things academics could usefully do, several participants outlined the role of academics in work on the history of chemical warfare and disarmament regimes. For example, there was, it was suggested, a clear role for academics in trying to understand the motivations of users of chemical (and other unconventional) weapons, as this was essentially based on political decisions. Related to this was academic research on looking at the wider international scene to make sense of how and why political decisions on unconventional weapons technologies were made, what were the apparent strategic calculations and institutional factors which influenced such decisions to develop and use chemical weapons. Yet others suggested a role for academics in looking at the innovation and evolution of treaty regimes, including cross treaty comparisons and other international precedents that might be useful for states to consider, along with research into what some refer to as ‘taboos’ surrounding the use of certain weapons.

Several participants identified a role for academics in fostering engagement between different stakeholders and bringing together groups of actors that don't normally interact. It was pointed out that there is potentially valuable research to be done in a number of areas of scholarship, for example, in the sphere of psychology which could usefully inform the practice of interviewing in investigations; whereas greater collaboration within criminology and forensic science would not only have potential dividends, but was surprising by its current paucity.

Another strand of academic activity identified by participants was building transparency and accountability in political process through, for example, identifying and revealing obstructions and impediments to efforts to reinforce the disarmament regime. It was unclear the extent to which ‘pointing the finger’ at states parties who were argued to have blocked progress or somehow undermined the norm would be a useful academic pursuit; some participants emphasised that exposure could be a powerful tool that was indispensable for arms control and disarmament, and perhaps even a moral responsibility on civil society. Moreover transparency could potentially shine a light on some of the under-remarked successes of disarmament. Others countered that some actors simply might not care about being identified as “blockers” or, in part because of the apparent stigmatization of chemical weapons, obfuscate transparency in chemical disarmament diplomacy.

A further series of more specific areas of academic and civil society research were also identified over the course of the discussion. One such specific area was looking at science and technology to identify trends or developments with implications for the CWC, such as the implications of

advances in UAV technology for chemical warfare. Related to this was the suggestion that academics could perhaps critically assess the openly available recommendations from the OPCW's Scientific Advisory Board, and examine the extent to which these were being acted upon by relevant actors.

A second specific area was the exploration of open source data and open source intelligence (OSINT). OSINT remains somewhat of an umbrella term for a number of different ideas and activities; however, the concept of the open source informational sphere was identified by several participants as a useful area to investigate further with a view to demonstrating how information can be utilised to inform the governance of chemical weapons technologies. It was pointed out that there was precedent for the use of open source information in other international agreements, and a sense that academics could feed into verification processes through exploring this concept and developing thorough methodologies which illustrated proof of the principle. However it was noted that the value of this concept would be for states to determine.

A third specific area discussed in the session was the possibility of exploring issues of 'duty of care' for those sent into the field in Fact Finding Missions (FFMs) or Joint Investigations. Several participants felt that this was an important issue to address in light of the ongoing work of the Joint Investigative Mechanism in Syria and there could be scope for both surveying how duty of care issues are dealt with by other organisations; and making duty of care a valued component of mission success, rather than a burden. However, some participants expressed concern that too great an emphasis on duty of care might be counterproductive, with the activities of entities such as the JIM becoming stymied by health and safety obligations or other negative knock-on effects.

Session 5: The Chemical Weapons regime and the external environment

The purpose of the fifth session was to discuss whether the events in Syria tell us anything about the health of the chemical weapons regime in relation to its evolving external environment. The session was introduced by the Chair with an overview of what was meant by the external implications, using examples from the pre-circulated workshop paper.

Discussion in session five focused on a number of different topics. One such topic was the definitions used and several participants pointed to the need to maintain fidelity to established definitions of arms control, non-proliferation and disarmament drawing on earlier work by Bull and Schelling. A second topic was the implications of what some participants felt were a significant number of un- (or under-) addressed allegations, a trend which raised the question of why the reactions to earlier allegations was so limited prior to events in Ghouta. It was noted that the media may have had a role here and, whilst there was media attention to Syrian chemical weapons related issues, and indeed a spike in spring of 2013 when Syria requested an investigation, attention was less significant. It was also suggested that the media may have been more sceptical of claims related to chemical and biological weapons than in the past with several participants highlighting the significant hangover of the so-called "dodgy dossier" and the lessons of Iraq as leading to much greater caution towards speculation on the part of those in government and mitigating any sense of enthusiasm for military actions. As such it was

suggested that the cognitive ground was poisoned from the start, enabling certain actors to exploit uncertainty. Other participants pointed out that pre-Ghouta allegations had been discussed between states and indeed, this was one of the major sources of division in the Third CWC Review Conference. However, in part, because Syria was not a party to the Convention and, in part, because of the strong stance of Syrian allies within the Convention there were limits to what could be achieved. This was an area that some participants felt warranted further reflection and perhaps improved work in terms of media strategies.

This also led to discussion around the question of “after detection... what?” and the difficulties of dealing with non-compliance. It was pointed out that historically in the case of United Nations Special Commission (UNSCOM), there remained Security Council unity which made it difficult for the Saddam regime to escape sanction from the international community. However, in circumstances where the international community was divided, as was the case in Syria, effective action became much more difficult with the principle of consensus making discussions around compliance difficult and ensuring that governments had to take difficult decisions and engage in difficult negotiations. In this regard, some participants queried towards whom energies should be directed and where the decision-making power was located.

The discussion further touched upon the broader significance – or lack thereof - of chemical weapons in the context of the Syrian conflict with participants indicating that although the destruction of chemical weapons was perceived as a huge success for the disarmament community, few Syrians spoke of this process in positive terms. Rather, the predominant perception of many Syrians was that this process legitimised the Assad regime and exacerbated the levels of brutality without effectively stopping the use of chemical weapons. This led to questions over how one gauges success in such a context, with one participant suggesting it might be necessary to distinguish between different dimensions of the chemical weapons regime and separate regime breadth, depth, rigour and legitimacy in evaluating the CWC, recognising that not all of these may be achievable at once. Moreover, whilst the CWC had proven effective in dealing with certain forms of chemical weapons and reduced the pool of expertise capable of manufacturing chemical weapons on an industrial scale to extinction, the Convention itself was facing new challenges in knowledge retention and a future orientated towards preventing chemical warfare.

Session 6: Future Academic research on the CW regime

The final substantive sessions focused on what can we learn about how chemical weapons allegations/use should be handled in the future and whether there particular avenues which could usefully benefit from further academic consideration and analysis? The Chair opened the discussion with a series of possible ideas to explore further building on the earlier discussion over the course of the workshop. This was followed by a discussion which identified a number of research themes that have been divided here between looking at the past, dealing with the present and preparing for the future.

In terms of looking at the ‘ugly’ past, it was suggested there was a need to undertake an interdisciplinary analysis of past uses of chemical weapons over the last century in terms of the

perceived utility of the weapons, the role of ideology, international responses, the acquisition pathways pursued and the means whereby scientific expertise was co-opted (or coerced) into working on chemical weapons. A number of examples were identified by participants as being useful to explore, including: the use of chemicals by the Bolsheviks in the Tambov Rebellion; allegations of British use of chemical weapons in Mesopotamia in 1920; the use of chemical weapons by the Spanish during the Rif War in the 1920s; the use of chemical weapons in the Second Italo-Abyssinian conflict; Egyptian use of chemical weapons in Yemen; and the more recent examples of *Ba'athist* uses of chemical weapons by the Saddam and Assad regimes. It was suggested that such a review may be useful in exploding the idea that states behave well.

Concerning the present, the discussion raised questions over justice and closure in relation to events in Syria, the possibility of actions by the International Criminal Court (ICC) in the future and what if anything could be done to assist or explore legal routes to achieving closure over the use of chemical weapons, amongst a number of other crimes. Ethical issues over the transfer of information, such as testimonies and materials, between different groups investigating (and in the future potentially prosecuting) the use of chemical weapons were raised; along with queries over the extent to which those involved in investigations could be expected to present evidence.

In terms of capturing the future, it was pointed out that there are a number of examples of organisations capturing and analysing open source information, such as the work of DEMOS and Kings and the EU's Media Monitor. Working with such organisations and building on such activities, participants suggested that a system could be developed by civil society actors to capture and process data related to chemical weapons better and quicker, something identified as important if, as was argued, early alleged uses of chemical weapons were intended to test international reactions. As one participant noted, if we have a future incident it's really important to capture the narrative and trigger an accurate process of data collection in order to understand the immediacy of an event. This led to discussion about whether it was possible to automatically collect data and bring together materials from social media, crowd sourcing, geo-surveillance systems and other open source information. It was suggested by several participants that academia has a particularly important role to play in building robust methodologies for bringing all this data together and dealing with heterogeneous information types to make sense of an event. However, such a process was recognised as being difficult and requiring a diverse range of expertise moreover, it might be useful to look at how actors in other issue areas such as the IAEA, but also the WHO made use of public information.

In the workshop wrap-up the Chair thanked participants for their contributions and the ESRC for funding the event. It was reiterated that a workshop summary would be produced alongside a document on future research strategies in this area.

The logo for HSPPOP features the letters 'HSP' in white and 'POP' in blue, all in a bold, sans-serif font. The letters are set against a solid tan background.

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HSP is an inter-university collaboration for research, communication and training in support of informed public policy towards chemical and biological weapons. The Program links research groups at Harvard University in the United States and the University of Sussex in the United Kingdom. It began formally in 1990, building on two decades of earlier collaboration between its founding co-directors.

<http://hsp.sussex.ac.uk>