Two Worlds, One Common Pursuit: Why Greater Engagement with the Academic Community Could Benefit the UK's National Security

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The practical business of government intelligence and security communities exist, for the most part, in necessary secrecy. There has historically been a measure of ad-hoc interaction between the UK's intelligence community with individual academics and, of course, with those in privileged or knowledgeable positions outside of the community. Universities – being public institutions, albeit funded in an increasingly private way – are a key source of knowledge and innovation for the country. In this chapter we will explore some of the ways in which engagement between the UK's intelligence community and with academia can best be utilised to serve intelligence requirements. In examining the potential benefits of engagement between academia and closed intelligence communities we are not breaking new ground in making the case that there are untapped synergies between the two communities. Indeed, there are several notable UK Government papers that have made this case. However, by analysing the similarities and differences between academic research and the process of intelligence analysis, and the potential obstacles to greater and more systematic engagement, we highlight how mutual benefit may be derived in terms of: *challenge analysis*, *corroboration*, *validation*, and *the enrichment of knowledge*.

Academia, Intelligence and National Security

Definitions of intelligence vary considerably. The most seminal was provided by Sherman Kent. Kent's definition divides intelligence into three parts: intelligence as knowledge, intelligence as an organization, and intelligence as an activity (Kent 1949). This gives us some insight into the nature of intelligence: intelligence is an organizational activity that produces knowledge.[1] Both the intelligence and academic communities seek to advance knowledge and to do so via the selection of, and discrimination between, various sources of information. Both communities try to make robust assessments that have utility in the real world. As such, both spheres share a common core purpose.

For the less sensitive areas of government, interaction with the UK's academic community has been widely encouraged. There have been successive moves in central government to encourage civil servants not only to seek outside expert views, but to have the implementation of policies tested by expert outsiders. In 2013, the UK Government established a network of seven independent centres to inform government decision-making through the provision of independently assessed evidence. The 'What Works Network' covers a range of policy areas, including: crime, health care, social care, and education. Amongst others, the London School of Economics acts as a host for the What Works Centre dedicated to looking at local economic growth (UK Government, August 2015). In 2015, the What Works initiative expanded further in its outreach to academia by establishing a Cross-Government Trial Advice Panel, funded by the Economic and Social Research Council.[2] The panel, comprising twenty five academics, was established to educate civil servants in the use of experimental and quasi-experimental

research methods (Cabinet Office, 2015). By 2015, a considerable infrastructure had been put in place by the Cabinet Office to encourage civil servants to seek external expertise, including academia, to inform a wide range of policy making areas under the Open Policy Making initiative, using the 'latest analytical techniques, and taking an agile, iterative approach to implementation'. (UK Government, 2015)

These clearly demonstrate significant effort by the UK Government to utilise external expertise from, amongst others, the academic community. However, engagement between the spheres of policy making and the academic community is unlikely to be replicated at an equal scale between academia and the intelligence community, largely due to the obvious requirement for secrecy and the protection of sensitive information. However, two major reviews into issues of National Security have highlighted the importance of more engagement between the two spheres. In 2004 the first major review into the intelligence underpinnings of the Iraq war (*Review of Intelligence on Weapons of Mass Destruction*, more commonly known as the Butler Report)[3], made several recommendations encouraging the value of engagement between the intelligence community and academia. The first recommendation was to provide an outlet for analysts within a closed intelligence community to challenge conventional wisdom, received options and assessments based largely on actively gathered intelligence. The benefit to be accrued here is from the potential to reduce the cognitive biases of 'mirror-imaging' and 'group-think', allowing analysts to discuss assessments and theories with subject matter experts who may provide a different perspective based on a different body of source material:

> "Well-developed imagination at all stages of the intelligence process is required to overcome preconceptions. There is a case for encouraging it by providing for

> structured challenge, with established methods and procedures, often described as a 'Devil's advocate' or a 'red teaming' approach. This may also assist in countering another danger: when problems are many and diverse, on any one of them the number of experts can be dangerously small, and individual, possibly idiosyncratic, views may pass unchallenged." (Butler, 2004, p.14)

Engagement with academia for the purpose of *challenge analysis* may benefit a closed intelligence community by providing an additional avenue for systematic and structured challenges. Whilst there is a wide difference in research methodology across different areas of academia, it can be broadly said that professional academics will have achieved a high degree of proficiency in terms of research practice, critiquing evidence and argument through doctoral training, peer review, and professional engagement within the academic community. Butler recommended that challenge analysis should be a systematic function of the UK's intelligence assessments: "Challenge should be an accepted and routine part of the assessment process as well as an occasional formal exercise, built into the system." (Butler, 2004, p.146)

The second key benefit outlined by Butler is the potential for widening the range of information available to the analysts within the closed intelligence community: "We emphasise the importance of the Assessments Staff and the JIC [Joint Intelligence Committee] having access to a wide range of information, especially in circumstances where information on political and social issues will be vital." (Butler, 2004, p.153) Academics within research-intensive universities are likely to have more time in which to produce in-depth assessments and have the freedom to conduct structured fieldwork.[4] Further, the range of sources of information

available to academics, unencumbered by any restrictions of official secrecy, is potentially wider than that of a closed intelligence community.

Following extensive consultation within the intelligence community and external subject matter experts, the *Blackett Review of High Impact Low Probability Risks* (2011) identified several recommendations to strengthen the government's approach to assessing strategic shocks which could, in turn, be applied more widely across government. While the recommendations of the Blackett Review built upon the practices that existed within the community, one of the key factors in the review was the need for the UK Government to include a greater measure of external expertise in their assessment processes. Of the eleven recommendations identified by the *Blackett Review*, six concern engagement between closed intelligence communities and academia, three of which were specifically addressed to the Cabinet Office, where the central analytical function of the community sits.[5] *The Blackett Review* highlighted many benefits for the intelligence community of engaging more fully with the academic community: *to inform key risk assumptions; to inform judgements and analysis; to better detect early signs of strategic shock or surprise; to inform the development of internal and external risk communication strategies*, and; *to strengthen the scrutiny of the National Risk Assessment*. Although these recommendations were identified in the context of a specific type of risk assessment, the recommendations are widely applicable to other areas of assessment and analysis across the UK Government, and should be seen in their widest context.

The range of possible benefits that can be imputed through the Butler and Blackett reviews are certainly sufficient to warrant a further and deeper exploration into the operational elements of an enduring relationship between the two communities. Part of that analysis comes from

making a comparison between fundamental elements of the activities of the two communities, and part comes from understanding where the differences in source information and methodological approaches may lead to limitations in engagement.

The Business of Academic Research vs. Intelligence Analysis

Both academia and intelligence analysis share the same goal of attempting to gain knowledge; however, the approaches taken by each field in this endeavour inevitably varies. Scholarship is the systematic research and experimental development to increase a body of knowledge in a particular disciplinary field.[6] Most scholarship occurs within closely defined methodological traditions, allowing research to be replicated by others in order to test the strength of its conclusions. There are three main research types that are applied in academic research, although the boundaries are sometimes flexible: *Exploratory* research; *Empirical* research, and; *Constructive* research. Exploratory research attempts to identify or define a particular problem or research question. Empirical research attempts to use empirical evidence to test the feasibility of a particular solution to a problem. Constructive research attempts to test particular theories and suggest solutions to a particular problem or research question. Of these three research types, exploratory research is the least likely to generate policy, or decision-making relevant impacts, as its focus is on identifying knowledge gaps rather than delivering actionable information. However, empirical and constructive research have strong resonance in these areas, as they focus on the acquisition of new knowledge.

The majority of academic research can be seen to broadly follow the Hourglass Model, which employs eight key steps in the research process: *Identification of the research problem*; *literature review*; *specification of the purpose of research*; *determination of specific research questions or hypotheses*; *data collection*; *analysis and interpretation of data*; *reporting and evaluation of research,* and; *the communication of research findings and recommendations*. Whilst academic research 'models' are neither uniform nor universally adhered to, the Hourglass Model represents the ideal process of academic research. The Hourglass Model is compatible with the traditional model that is used to describe the system of gathering, processing, and assessing intelligence. Whilst such intelligence cycle models are also neither uniform nor universally representative of the process of intelligence collection and analysis, the classic intelligence cycle features six steps: *Direction of intelligence gathering*; *collection of intelligence*; *processing of intelligence*; *analysis of intelligence*; *dissemination of analytical product*; and, *feedback from customers and policy makers*. (DoD, 2013) The analysis of intelligence integrates intelligence reporting, combining disparate data and information to allow for pattern and trends analysis. Finished intelligence assessments may take a variety of forms depending on the nature and scope of the customer requirement; similarly, they may help to generate an immediate tasking of government resource or feed into a more strategic level picture change. (DoD, 2013) The intelligence cycle model is closed by the process of feedback from customers and policy makers that enables the revision of requirements. As the table below demonstrates, almost all of the steps of the Hourglass Model (Academic Research Model) are mirrored by the traditional intelligence cycle Model.

<FIGURE 25.1 ABOUT HERE>

The structural process of research and analysis clearly correspond. According to both models of knowledge creation, the development of hypotheses occurs in the mid-stages of the models, alongside the identification of end product. For the Hourglass Model, this occurs at the fourth stage: identifying the research problem. In the intelligence cycle, it is reasonable to assume that the development of a hypothesis will occur during the stage of *analysis of intelligence,* but equally it might occur as a product of institutional memory or the experience of the individual analyst. The testing of the hypothesis in the Hourglass Model will be undertaken through the stages of analysis and *interpretation of data*, and *reporting and evaluating research findings*. For the intelligence cycle, it is reasonable to assume that the validation of hypothesis will occur also occur at the stage of *analysis of intelligence*. The models are not entirely synergistic: the intelligence cycle's requirement to produce to order for policy communities and the final step, which includes feedback and refinement, is distinct. The feedback and refinement loop in scholarship is for quality purposes, rather than for refinement for policy, and might end up spurring a new research project, which is step one in the indicative academic model. A comparison of these models highlights four distinct areas that can be used to break down the nature and process of analysis and assessment that are likely to be used in both closed intelligence communities and in academic research: *end-product requirement*; *development of hypothesis; dataset;* and *validation of hypotheses*. These activities will inevitably be influenced by different cultural factors in each community. However, by exploring the differences and similarities between academia and closed intelligence communities in each of these areas, a greater understanding of the mutual benefits of engagement between the two communities can gained.

The End-Product Requirement

The academic and intelligence communities face different influencing factors in their pursuit of knowledge. Similarly, the intellectual products of each are used in different ways by their target audiences. The core purpose and end-use of analysing intelligence is clearly distinct from the intended end-use of scholarship, though arguably both are designed to inform relevant debates. The scholar is more interested in answering a particular question, freed from a consequence that might result from a policy maker or decision-maker, whereas a government analyst is acutely aware that their work will be filtered into the government's decision-making processes to inform policy or to target the use of government assets or resources. The compressed timelines faced by government analysts are also likely to over-determine the sort of product they produce. Whilst scholars are far more time-pressed now than in previous years, they are relatively time-rich in comparison to their intelligence analyst colleagues. It would be wrong to suggest that scholars are entirely driven by intellectual purity in their research endeavours (although that is the ideal to which scholars mostly aspire) and a mix of university, industry-wide and funding requirements now factor into the work of a scholar that tailors their research in various ways. By contrast, intelligence requirements are likely to be largely determined by policy community and customer requirements, but are also determined by intelligence gaps and coverage requirements. (DoD, 2013)

Both academic and intelligence endeavours essentially concern the identification and verification of valid and sound assessments to bridge gaps in available knowledge. The

requirement for intelligence analysis is determined by a variety of government customers which cut across risk and threat assessments, from policy, government and military customers. The final dissemination of analytical product is determined partly by the customer, and partly by the issue. These variables impact upon the amount of content in the dissemination, the structure and the overarching narrative. As such there is likely to be little in the way of standardisation and the relationship between customers and the analyst shapes the way the dissemination occurs, in a way that would be mostly alien to academic researchers. But for scholars there is a commonality for experience in the sense that requirements will vary depending on factors such as: audience, analytical process, timeframe for research, data collection and the practical utilisation of the end product.

The Development of Hypotheses

In the field of academia, hypotheses are typically designed to measure a cause and effect relationship between two entities, typically using a null hypothesis, developed to fill knowledge gaps in the particular field of research, or to collect further data to validate existing theories. Intelligence analysis, whilst also aimed at filling knowledge gaps, is likely to be largely geared towards providing actionable information to inform decision-makers. Exam questions, and therefore hypotheses, in intelligence analysis, are more likely to be based on modal questions regarding what's going on somewhere in the world, or predicting how the world might look in the future. Both target knowledge gaps but approach hypothesis development differently. Modal questions can feasibly have an endless range of possible answers, and therefore require

the development and consideration of multiple hypotheses.[7] However, academic research largely looks to analyse the relationship between two discrete entities, and therefore tends to develop a single, a null hypothesis.

Sources of Information and Data

The most significant difference between the two practices lies in the type of source information used. The collection of intelligence is applied against available closed and open sources and methods, and in collaboration with other intelligence agencies, both domestically and those abroad with whom liaison relationships have been forged. Once the raw intelligence has been collected, it is then processed by the respective agency (and more often now by the officer in charge of collecting it) in preparation for assessment and exploitation. (DoD, 2013) Intelligence datasets can typically include a mix of: human intelligence (HUMINT), digital intelligence (DIGINT), imagery intelligence (IMINT), electronic intelligence (ELINT), signals intelligence (SIGINT) and open source intelligence (OSINT). The total available intelligence for each specific analytical requirement is likely to be fragmentary. A pool of intelligence comprised purely of human intelligence is likely to face the limitations of a highly complex validity assessment and a lack of comprehensive representation of human sources. A pool of intelligence comprising purely of digital intelligence is similarly likely to face the limitation of being partial or incomplete from an epistemic standpoint due to the likely restrictions of access both to targets or technology, as well as legal restrictions in place for sensitive or invasive collection. The invocation of the ‘all source mix’ in intelligence analysis is an essential risk

mitigation for avoiding the pitfalls associated with an over-reliance on one particular kind of intelligence information.

By contrast, academic datasets mostly comprise open source information. Open source information is understood as publically available information, but might be better described as information that is not subject to commercial or security classification. Government use of open source information can become classified based on why it has been collected; the same cannot be said for academic open source information. The benefits of the peer review system of publication is that not only has the information used to make academic assessments been subjected to the professional judgement of the individual scholar, it has also been verified by a board of anonymous academic reviewers. Whilst certainly not flawless, this system provides a quality marker (but not a cast guarantee) that the information has been quality assured. Pools of information for intelligence analysis are likely to be more hegemonic in comparison to academic research. It does not necessarily follow that source material for intelligence analysis will be either of higher or lower quality than a dataset comprised through academic research, but almost certainly it will be harder to check.

The Validation of Hypotheses

The business of analysis is essentially a process in two stages: the first is the collection of data (from a mix of open and covert sources) and the second is the application of techniques and

methodologies upon that information to distil it down into ‘best truths’. Because intelligence is the business of discovering hitherto unknown things, analysis requires the assessment of abstract hypotheses to be matched against what can be created as an independent reality to evaluate whether that hypothesis is falsifiable, probable or possible. The successful evaluation of any hypothesis relies on a comparison against an objective, reliable and comprehensive set of information. Intelligence needs to be representative of an independent reality, a ‘best truth’, irrespective of its relevant context and subject matter. Discrimination between sources is, therefore, the professional expertise of the individual analyst, which is why intelligence has often been described as an art, rather than a science: a statement that likely undervalues the rigour that often goes into analytical endeavour.

The fundamental difference between the intelligence and academic community in the validation of hypotheses is not due to any fundamental intellectual premise, but to the time sensitive nature of intelligence analysis. Both academics and intelligence analysts operate under the same near-impossible standards by which truth can be established. Both worlds often rely on establishing the justification of their hypotheses rather than the goal of proof or disproof. However, less time is likely to be available for intelligence analysts to pursue knowledge. An intelligence analyst will therefore seek to validate, or invalidate their hypothesis using information available to them at the time. In academia, the collection of a sufficient body of data to be able to prove or disprove a hypothesis is a more achievable goal. The research conducted by each academic is part of a larger endeavour to collect sufficient information to achieve knowledge in a particular topic.

Intelligence analysis involves the key variables of intentional deception and misinformation that is less likely to be an influence in academic research. Neither the classic intelligence cycle model, nor academic research has a speedy solution to identify such intentional misinformation: validation through repeated research, peer review, challenge, or intelligence collection takes time to complete. However, comparing the results of academic research to intelligence assessments and analysis could provide an alternative or additional avenue of validation. Deception and misinformation (as well as the necessarily truncated timeline for action in the intelligence community) are known as systematic variables. Systematic variables affect the process of analysis, including the requirements for end product, the methods of data collection, the quality and validation of the dataset, and the process of analysis itself. All of these systematic variables will have an impact upon academic research too. However, as there are no procedures currently in place to capture the effect of systematic variables in academic research, the disparity or lack-thereof in the effect these variables have on each community cannot be assessed.

A Question of Methodology

Whilst the intelligence community and academia share the same purpose of knowledge acquisition, the methods through which each community attempt to acquire knowledge significantly differ. Understanding these differences allows the identification of where engagement between the two could provide mutual benefit. There are two overarching types of academic research methodologies: *qualitative* and *quantitative*. Qualitative research attempts

to explore the motivations or reasons governing human behaviour. The majority of research in this field is exploratory, and is used to develop quantitative research. Quantitative research takes the form of systematic empirical investigation of properties (phenomena and relationships between properties) that can be quantified. This traditionally involves positing a narrow question and collecting numerical data. This data is then analysed using statistical methodology. Quantitative research can be designed to be experimental, correlational and descriptive. The statistics derived from quantitative research can be used to identify the existence of relationships between variables: either causal or associative. Data collection for quantitative research involves random sampling of data and structured collection. This produces results that can easily taxonymised and compared. Quantitative methodology is particularly important for accurate assessments of probability.

Intelligence analysis may utilise a range of structured analytical techniques, or may be performed without any methodological approach. Structured analytical techniques range from simple brainstorming instructions to the application of Subjective Bayesian analysis.[8] However, few of these techniques were designed to stand as a comprehensive methodological approach to intelligence analysis; rather they provide specific techniques for application at different stages of intelligence analysis.[9] Analytical methods taught and applied by the internal intelligence community will have necessarily been adapted for use in analysing intelligence efficiently, often at pace. As such, they are unlikely to match academic research methodologies for rigour. Academic communities have the advantage of time, which allows for multiple testing routes or time-consuming research techniques. While the benefit of time for research and theory development afforded to scholars might also be useful to the closed intelligence community (both in terms of the development of subject matter expertise, and the collection of

information from alternative sources than intelligence communities may have access to), it is an unrealistic commodity to expect.

There is likely to be limited applicability for quantitative research methods to be applied in intelligence analysis, as the majority of types of intelligence are not quantitative in nature. Few intelligence types are likely to provide objective, irreducible, and equal units of numerical measurement. However, discrete areas of intelligence analysis do rely on numerical data, such as the analysis of financial crime. Academic approaches to quantitative research could be utilised to enhance the intelligence community's work into criminal finance. Further, the growing field of 'big data' analysis in academia (that looks to interrogate communications data, and social media data) could be used by the intelligence community as a means to support and challenge their own work. Academic developments in big data analysis could provide innovative methodologies and research of relevance to the intelligence community. However, the insights gained through quantitative research methods can have significant application to intelligence analysis. For example, engagement with scientists and scientific researchers in the academic community could provide enrichment to knowledge held within a closed intelligence community on a variety of technical areas, including weapon systems, the capability of non-state actors and terrorist groups and to advice on methods and techniques associated with the utilisation of chemical, biological, nuclear and radiological materials, or the proliferation or production of weapons of mass destruction. Scientific research follows a structured process which may vary according to the research question, hypothesis or subject matter.[10] Scientific research on areas that are pertinent to the analytical and assessment requirements of a closed intelligence community may have the advantage of applying more rigorous or thorough testing and research techniques, or to have researched the subject at a more granular level using a wider scope of data. The natural and engineering sciences are also more familiar with working

with industry stakeholders than social science and humanities scholars, although there is a much wider expectation on income generation in the natural and engineering sciences which presents additional barriers to activity here. Much as the old Department of Trade and Industry used to employ former university academics to work within its armaments licensing function, there might be reasonable scope for natural and engineering scientists to be employed directly to contribute to analysis and assessment requirements.

Qualitative research also has potential benefits to offer the intelligence community. For example, historical research uses a variety of research techniques that are aimed at assessing the quality of information, including: identification of origin; evidence of localisation; recognition of authorship; identification of integrity; and, the assessment of credibility. These skills could be of benefit to the intelligence community, particularly in the evaluation of raw intelligence. These skills are not ones that can be routinely utilised by intelligence analysis through engagement with academics as the underlying data will be classified, the sharing of which would not only put place the information at risk, but also the method of collection. The clear benefit for a closed intelligence community to derive from engagement with historians in the academic community would be to compare analysis and assessment of open source intelligence. Established historians will be working from open source material, and are likely to have the time to be able to conduct research at a more granular level and from a larger pool of information. The benefit that historians could derive from a closed intelligence community is the comparison of assessment of similar research questions. Another mutual benefit could be realised through the granting of controlled access to intelligence material to a historian who attains the requisite security clearance vetting: Britain has a long history of producing Official Histories that focus either completely, or in part, on intelligence material. This limited practice in the UK can be contrasted with the far more open American system of visiting fellowships

where a better defined and operational revolving door makes the interaction between intelligence and academic communities more fluid and, by extension, more fruitful.

The Benefits of Greater Engagement

As argued in the Butler Report, the main benefit to the closed intelligence community from enhanced cooperation comes in the form of *challenge analysis***.** Engaging with individuals who have conducted research on similar topics using open source data has the benefit of providing quality control, corroboration or confirmation methods, as well as the enrichment of the intelligence community's fragmentary dataset. In this way, and if organised effectively, engagement with academia offers a closed intelligence community the benefit of an additional open source capability drawn from organisations specifically geared to providing all source analysis. Systematic engagement with academia may also provide the benefit of external peer review, particularly on technical issues. (Butler, 2004, p.146)

A related area of potential benefit is in the provision of an alternative avenue of *corroboration and validation***.** Engagement with the academic community offers a closed intelligence community a substantial analytical resource capable of providing key contextual insight. This can be provided in the following ways:

1. Trends analysis based on statistical data capture applicable to a range of thematic topics using both random and structured sampling. Similarly, with qualitative research methods, of historical trends and essential context.
2. Corroboration or validation from academic research that has undergone more rigorous testing and research techniques.
3. Corroboration or validation from academic research conducted at a more granular level in terms of topic matter.
4. Corroboration or validation analysis from academic research derived from a wider or alternative pool of information.

Finally, a key benefit is the *enrichment of knowledge and the intelligence picture***.** The intelligence community's necessity to respond to short-term customer-placed requirements will inevitably leave significant gaps in the knowledge generated by intelligence coverage. Whilst the knowledge enrichment that can be provided by academia is likely to be more contextual and environmental than the core business of intelligence, it still has its necessary place and value in the ability to correctly interpret information about other regions and cultures.

The intelligence community could quite feasibly increase its contacts across a wide range of disciplines, research organisations, universities and think tanks both in the UK and abroad. In doing so, it may be able to leverage or influence the direction of researchers without necessarily having to provide funding. Access to the views of the intelligence community on mutual topics of interest, and the chance to use academic research to inform and impact upon decision-making on issues of national security, is likely to be incentive enough to achieve involvement from the academic world.

However, the benefit of engagement is not all balanced on the side of the intelligence community. Academia and academics stand to benefit in several ways through closer interaction between the two worlds. Like the intelligence community, the first benefit to academia comes in *corroboration and challenge analysis*. For academics, engagement with individuals who are analysing similar topics using classified data has the benefit of providing them with informal measures of quality control, corroboration or confirmation to academic hypotheses and judgements. Similarly, to the benefits that a closed intelligence community could derive from engagement with academia, academia may gain the benefit of external peer review, the reduction of their own collective group-think and mirror imaging, and the provision of a unique arena for challenging from those with unique and unrepeatable data sets. However, this is obviously heavily contingent on the ability and willingness of a closed intelligence community to be able to communicate assessments in confidence at an unclassified or open level. Such willingness is very closely aligned with issues of trust. This will be dependent on the internal risk versus benefits assessment of the closed intelligence community.

The second benefit comes from the *enrichment of knowledge.* Where a closed intelligence community could benefit from being able to close intelligence and knowledge gaps by steering or influence academic research, the academic community can equally gain from this process by being given a unique insight into areas of research that would have impact and benefit for national security and official policy. This could provide a high impact for future academic research commissioned or approved by academic funding bodies and higher education institutions. The Research Excellence Framework (REF), which assesses the quality of university research, places a great emphasis on the impact of research on the external world,

by which – for social sciences and humanities – is mostly meant the policy world. Even outside the formal requirement of the REF, there is a pressure within academic departments to be connected more with external stakeholders, and thus for most academics, whilst the intellectual advantages of engaging with the intelligence community will be very real, the necessity and demand to be impacting on the practitioner community will also play a part in driving engagement with the intelligence community.

Navigating the Divide: Overcoming Obstacles and Developing Best Practice

The cross-over of the two communities is not without fundamental pressures and tensions: it does not necessarily follow that scholarship can be directly applied to the business of the intelligence community. Academic output is not geared to directly influence decision-making or government policy. Gaining the maximum benefit of closer interaction between academics and intelligence analysts is likely to require sensitive negotiation. There are three key complications or obstacles to engagement between the two communities: *the need for secrecy*; *the need for speed*; and, *the changing requirements of the intelligence community*. The simplest, and arguably most effective forms of engagement, are those involving in-house talks, lectures and discussions either held at a location in the academic community, or within the intelligence community. These events may be of varying size, depending on the complexity of the topic, the range of subject matter experts available, and the level of interest. It is reasonable to assume that specifically tailored and structured in-house events could offer high-level cost effectiveness in terms of the time available to analysts within the intelligence community. In

this way, engagement between the two communities takes the form of a flexible liaison resource with the ability to gain high impact tailored to specific targeting.[11]

Allowing academics to record their engagement, and indeed the impact of their engagement with the intelligence community, generates a separate set of challenges. Garnering evidence of impact – mostly through reference letters provided by intelligence practitioners – is more challenging in this area because of the restrictions on operational data and a general cultural disposition to retaining, rather than broadcasting information. So, there is a need for an alignment between individual scholars, universities and REF assessors and the intelligence community to understand a common set of frameworks to record the engagement in a way that does not breach the Official Secret Act, but allows enough indication of the impact the scholar made. Without that alignment, there will be a smaller pool of potential contributors than might otherwise be the case.

Summary

There are many synergies and benefits to be drawn for both the intelligence and academic communities from working more closely together. Whilst we have only focussed on the benefits to be gained from the research aspect of academia, there are clearly further benefits in education and training opportunities within the UK's university systems to members of the intelligence community. (Goodman and Omand, 2008) In research terms, the benefits of

collaboration are mostly instrumental in nature: improved information resources, methods and validation techniques for both communities. Some of the benefits can be located in professional enrichment: from working with skilled professionals from outside of a respective community bubble, and in improving professional techniques. However, significant barriers to developing a closer relationship between the two worlds are likely to remain: security, timeliness, money, organisation and motivation are hindrances that require a recalibration of existing relationships, culture and system. The clichéd claim that these changes need to occur in the intelligence community are too simple. Changes are equally required in individual scholars, their universities and the funding councils. Yet, the intellectual justification for trying to square these bureaucratic circles, and the benefits that stand to be gained by both worlds, are considerable. Greater engagement between the two worlds is already increasing, with the development of a security research hub, hosted by a consortium of universities led by Lancaster University.[12] This hub aims to provide research that will have an impact on areas of direct relevance to the intelligence community. Such initiatives have the power to alter the course of research undertaken by the fields of intelligence studies, defence studies, and international relations, increasing and enriching the pool of knowledge available to inform national security decision-making. Despite some difficulties and obstacles in managing an engagement relationship between academia and the intelligence community, in an era of diversifying national security threats to the United Kingdom interaction between these two worlds should be the rule, rather than the exception.

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[1] There is a clear dichotomy revealed in the competing definitions of intelligence between intelligence as an organizational entity or machinery and intelligence as an end product. These two perspectives can successfully combined by analogy with the phases of and requirements of analysis as an activity. Analysis is a detailed examination of the elements or structure of an object or concept in order to provide knowledge or add to a previous body of knowledge. The perspective of intelligence as an organization can be resolved as a machinery geared around the production of an analytical end product for the purpose of being action guiding. The most developed definition of *intelligence analysis* is by Rob Johnston (Johnson 2005), from his ethnographic study into analytical culture in the US in 2005. Johnston (2005) defined intelligence analysis as: *the application of individual and collective cognitive methods to weigh data and test hypotheses within a secret socio-cultural context*. This definition focuses entirely on the process of intelligence analysis, but arguably does not provide any component that separates this definition of intelligence analysis from the definition of the process of analysis beyond the inclusion of secrecy.

[2] The ESRC is one of the national research councils, funded centrally but administered outside of government control.

[3] In February 2004, HMG announced the creation of a committee to investigate intelligence available to the UK's intelligence community regarding WMD programmes in countries of concern, to investigate the accuracy of intelligence on Iraqi WMD leading up to March 2003, and to examine any discrepancies between this intelligence, and information discovered by the Iraq survey group following the end of the Iraq war. Lord Butler published the findings of the review in July 2004.

[4] This conclusion needs to be tempered with the realities of university life, which are increasingly focussed around teaching requirements (even in research intensive institutions) and fluctuating workload requirements across the calendar and academic year. It is a strong misperception amongst those outside of academia that there is a uniform bandwidth and availability of faculty to engage in extraneous research tasks – the additional institutional pressures around funded research means that engagement with government, which is often poorly remunerated or unpaid, attracts a lower priority than might ordinarily be the case.

[5] The central analytic function within the Cabinet Office in regard to intelligence analysis is the Joint Intelligence Organisation.

[6] For the purposes of this essay we define 'Scholarship' as research activity mostly occurring within higher education institutions. The division of scholarship into disciplinary communities is notable for the barriers it places upon the accumulation of knowledge, and the gaps it produces as bunkered solutions are preferred for a number of strategic and tactical reasons by aspiring and tenured academics.

[7] The Central Intelligence Agency (2009) recommend evaluating competing hypotheses by identifying and monitoring indicators that can be matched against the total set of competing hypotheses. The process involves an analyst identifying a list of observable events that would indicate if a particular hypothesis was true, and then monitoring for the occurrence of the list of events. This technique provides a way to match supporting evidence against a set of competing hypotheses, which will hopefully identify which hypotheses are in play, and which have the most supporting evidence.

[8] Subjective Bayesianism provides a framework based on inductive logic whereby an analyst can identify mathematical probability from subjective judgements about the likelihood of the occurrence of a single event or a set of events that have been identified by the analyst.

[9] Only two structured analytical techniques come close to providing a methodology for intelligence analysis. These are Rational Choice Theory, and the Analysis of Competing Hypotheses (ACH). There is only one method proposed for intelligence analysis that involves both a structured technique for hypothesis generation and for hypothesis evaluation against available evidence. This method is known as the Assessment of Competing Hypotheses (ACH), and was developed by Richards Heuer. ACH requires the analyst to develop several hypotheses to explain a particular phenomenon, and then match every part of the available dataset against each hypothesis, looking to refute hypotheses, rather than to confirm them. The hypothesis that is most likely to be deemed true by ACH is the hypothesis that has the least evidence that counters it (Heuer and Pherson 2010).

[10] Most formal scientific research is conducted according to the following research stages: Observations and formulation of topic, including justification of importance of topic linked to existing body of knowledge; Formulation of hypothesis (Where a 'hypothesis' is understood as a testable prediction that focuses on the relationship between two or more variables); Conceptual definition (explanation of concept in relation to other concepts); Operations definition (definition of variables and how they will be measured and assessed); Data collection; Analysis of data; Interpretation of data; Revision/Testing of hypothesis, and; Conclusion.

[11] More ambitious forms of engagement are possible, but are more challenging. A pool of academics cleared to an appropriate level, working as research fellows, either inside the intelligence community or outside could offer a reliable 'on-tap' service to the intelligence community. The problem here is one of scale, and thus of cost. Scaling across a wide enough spread of disciplinary areas is expensive both in terms of the number of bodies, but also in terms of recruitment, vetting and counter-intelligence costs. However, making a case for the added value of this arrangement will be difficult, because it will necessarily be a prospective case and cautious managers are likely to prefer to recruit fully formed intelligence analysts than the slightly riskier proposition of academic fellowship holders. Asking universities to find the costs for these research fellows, when the knowledge they have acquired will be unpublishable will be a difficult ask, particularly when university budgets are so pressed.

[12] http://www.lancaster.ac.uk/security-lancaster/news-and-events/news/2015/national-centre-for-research-and-evidence-on-security-threats/ accessed 5 November 2015.