Foreign & Commonwealth Office

Wilton Park

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Report

Diplomacy in the information age

Wednesday 22 – Friday 24 February 2017 | WP1519

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This forum examined the changing nature of diplomacy in the information age. It explored new opportunities for the FCO to make better use of data in diplomacy, but also emerging threats that challenge the current ways of working. While some new opportunities and threats are applicable to any large international organisation, the focus of the forum was on those that are of particular application to the FCO's role in diplomacy and international policy making. The framework for discussion was the exploration of four inter-related themes; Networks: Diplomatic and social, Fusing insight and information in new data sources, Forecasting and Analytics, and Influence and Impact – ensuring effect. Discussion looked at recent trends and developments within these topic areas, also leaving space for other topics of relevance to the core discussion. There was an element of futures analysis in considering a 10-20 year horizon scan.

The intended outcomes of the forum were to:

- Generate ideas and recommendations for the FCO to consider in making better use of data in foreign policy.
- Raise awareness of the threats and opportunities arising from the use of data in the areas of the conference themes, including through the sharing of experiences among likeminded international partners and to encourage further collaboration between experts and the FCO through the development of a community of thought leaders on diplomacy in the information age.

Key points

"This conversation was not designed to be one focussed on defence and security. It was instead to talk about technology as disrupter and opportunity, and what a thoroughly modern diplomatic service needs to understand on tech"

How the FCO pursues its diplomatic objectives must change; it must adopt a new interdisciplinary approach. While the fundamental aim of exerting influence remains unchanged, the FCO increasingly needs a data-augmented diplomacy if it is not to lose effectiveness and relevance in the 21st Century. This means:

Utilising its existing resources more effectively through

- Better exploiting its existing data and resources such as through management data, diptels, i-records, BBC Monitoring and other reporting and monitoring mechanisms.
- Better exploiting its data and resources overseas throughout the network, including joining up data held locally by Posts, British Council, and other government departments (OGDs) including the Department for International Development (DFID).
- Better exploiting its collective brain power, for example by setting up and training panels of "super forecasters" both domestically among FCO and OGDs, and internationally with close foreign partners.
- Better exploiting its data sharing and collective analysis with foreign partners,

such as Five Eyes and Europeans.

Exploiting new technology through

- Being bold, innovative and willing to fail fast, but also pursuing bite-sized and manageable pilot projects so as to absorb and fully exploit the capabilities.
- Exploring the benefits of big data tools, sentiment analysis, forecasting and modelling tools, and other instruments that help the FCO to measure effect. This needs to be done with a critical eye however, with 100% clarity on the exam question that the FCO wants to answer.
- Sharing experiences with foreign partners on what works and what does not.
- Thinking through the ethical, legal and presentational questions around big data and social media exploitation.

The FCO needs to learn both from itself and others. It needs to upskill internally across the Office and mainstream use of new technologies; cultural change will be needed too. It also needs to reach outside of government to tap expertise. This means:

- Using the Diplomatic Academy and other human resources or learning and development tools in order to mainstream data skills among staff and make the FCO genuinely data literate.
- As well as making diplomats technology-literate, considering how the FCO can make technologists diplomacy-literate: does the FCO need to think about the skills sets for future FCO recruitment and/or inward/outward secondments?
- Initiating new pilot projects in the FCO, bringing together desk officers and data scientists to explore what capabilities and technologies are useful in practice. While doing so, it needs to keep asking itself what works and what does not, and "is it possible to…?" should be a mantra. Defence and Intelligence Directorate and National Security Directorate should host initial pilots.
- In addition to cross-Whitehall partners such as the intelligence agencies and foreign partners such as Five Eyes/Europeans, exploring whether other partners in business and elsewhere have additional skills to be learned from. A prospective partner currently modelling best practice was highlighted as being Proctor & Gamble. US tech companies are also keen to engage with Her Majesty's Government (HMG), whether through briefings and training events or inward/outward secondments. The FCO should be proactive in pursuing such partnerships, which will likely be received warmly.

The FCO should maintain and nurture this network. There was much goodwill and enthusiasm amongst attendees to work with the FCO that should be exploited. The FCO now has a free "brains trust" it can use as an informal advisory board. Going forward, it needs to think about how best to do so without duplicating efforts elsewhere in HMG and ensuring continued engagement with the most useful people, whether bilaterally through the Cabinet Office network or the Ditchley Foundation.

"The new battle for hearts and minds is on our Twitter feeds and Facebook groups"

Networks: diplomatic and social

1. Technology is an agent of social change, changing us in terms of who we think we are and how we relate to each other, solve problems, and fall in love. Humans are predisposed to trust those close to them, rather than distant experts, which in the information age is allowing a thousand different subcultures to bloom. It has never been easier to find a niche group or fellow travellers.
2. Technology is also changing how ideas flow between people, for example through the propagation or mimicking of behaviours online. The internet is an engine of norms and is even changing how states relate to publics. The grand lie of the internet is that you can pretend to be the crowd, such as by engineering an apparently spontaneous mass

protest.

3. There is an unprecedented concentration of money in one small valley in California, bigger even than Carnegie and Rockefeller. Compounding this is the fact that the nature of the tech industry lends itself to mono- or duopoly. New technologies are also seeing the rise in a new class of activists and private citizens known as hacktivists, numbering about 500,000 worldwide. There has been an astonishing change in transnational crime over recent years, with the territorial nature of law enforcement not keeping pace.

4. As well as being an agent of social change, technology is also one of social understanding. Our capabilities of understanding are changing, and we are all becoming more legible. The reality however is that technology has evolved extremely fast, at a pace that humans have not been able to keep up with; we only have the capacity to deal with a finite number of people and sources.

5. In intervening in networks, the FCO tries to make some behaviours and events more likely, and others less so. It is not about helping, rather about encouraging behaviour that is already out there. Information people receive online is distinct, and so are the behaviours they adopt as a result.

6. A way to understand networks is as an aggregation of interactions, forming into clusters that are not centrally directed. In understanding them it is important to browse from one person to the next, and also understand the structure. It is necessary to have a grasp of both the number of people in the network, and the number of relations in the web of that network.

7. Another key operation for networks is the changing of what people encounter and see. Traditional gatekeepers have been swept away and replaced by these networks, which act as online reputation systems in a way that were not possible before. Networks are however still links between real people. The key in understanding networks is to combine the skills brought to bear by the data scientist, and the insight of the subject matter expert. This is not just a matter of network analytics, which is just one tool, but rather a matter of bringing all sorts of information together and finding out what that garners in the round. Data is 20% analysis and insight and 80% wrangling.

8. There are ways that the FCO might leverage networks, but it needs to ask itself several questions at the outset. What might be learnt? How informed is the FCO already? What might it do to prepare? What are the risks? Moreover, it needs to demonstrate the benefits and be in line with the main priorities of the organisation. This means starting small with pilot projects and measuring impact. The FCO needs to start on day one and not stop because it will lose the capability should efforts be neglected.

9. In building on pilots, the FCO will need to find the non-obvious influencers. Diplomatic Service skill and expertise may be able to help find, for example, the person closest to the Cabinet Secretary; this insight is what it brings to the table. Vitally, and perhaps counterintuitively, aiming for the periphery is not necessary bad when looking to reach a network. Going straight to the centre will often result in bouncing off.

10. Having spotted who is desirable to reach through social media analysis, lessons can then be learned from head-hunters, for example, who are agile in switching channels. Networks for Embassies abroad would once have been purely expatriates. The group discussed whether there should be ‘UK fan clubs’ of sorts bestowing special ‘privileged access’, consisting of contacts who share British values. Within this there is a need to avoid creating a ‘creepy’ database. In addressing the GREAT campaign, the group asked whether it is possible to run campaigns that reach out to specific networks in the FCO orbit.

"What does the FCO need to know to be an educated customer? What can be outsourced and what needs to be done in house? To best look for the signal in the noise, a good scientific research question will produce the best results; it is the context around a topic that produces results"

Fusing insight and information from new data sources

11. BBC Monitoring is part of the World Service group, with most of its staff based overseas and covering media in over 100 languages, a particular specialism being the former Soviet Union. Knowledge of a geographical 'patch' and expert insight is still invaluable; results often come down to human skill. Monitoring is split broadly into two stages; firstly, scanning the horizon and looking for the new, and secondly, verifying and assessing. As a rule of thumb, the less detailed an identified piece of visual media is, the more suspicious. Its tools include speech to text translation, off the shelf data mining and modelling instruments, and a custom build console to bring in 200 simultaneous video streams; all useful ways of seeing almost immediately what things are bubbling up. It is important to be mindful of which social media platforms are utilised in different environments, for instance Telegram is prevalent in Iran, even as high as the Supreme Leader.

12. Crimson Hexagon has its origins with Harvard professor Dr Gary King, who developed the algorithm on which the platform is based at the World Health Organisation. The bottom line is not about cracking a code, but cracking the amount of data. There are significant utilities in the public sector, and an analyst using the tool can tap into the nuance and derive meaningful conclusions. Many clients are corporate, though everyone is a player in this field and the analysis goes beyond monitoring their brand. The platform enables you to go into a search and discovery phase, with the idea that you then graduate to machine learning algorithms. Most languages are catered for, even Klingon, and it is not necessary to roughly segment data; there can be nuances. So far analysis has just been text based, however Crimson Hexagon is now working on image and logo analytics, even looking at emotions on faces. This illustrates the direction in which the industry is moving.

13. Not everyone needs data science skills, but as an organisation the FCO needs to be data literate. At present the organisation is only just scraping the surface, meaning it needs to start with the fundamentals. What purpose does data serve? Is data being used to help it do what it does better, or as a business transformation exercise? The general feeling was that it is mostly the first. However, if it is not the second the FCO may be consigning itself to the dustbin of history. Does HMG have to be at the cutting edge? The answer is yes, as if not it gets left behind. Proctor and Gamble were cited as the gold standard in this area and convening a workshop with them was suggested as a positive step.

14. Training, both formal and informal, would be an obvious starting point to improve FCO skills. The Diplomatic Academy is a good vehicle for this, and a module on data science applications could be created. The way data is used in London is different from in Posts, as are the benefits. Recently, some tools used in London have been supplied overseas but have not worked. The organisation needs to keep learning; training will help with information overload. The FCO does not necessarily need to seek out new data sets and can instead mine its own data archives. A plea was made not to keep thinking about rigid structures, databases, and what to do about data as a product of the Internet of Things; priorities must be to define the parameters of analysis, embrace data overloads and release serendipity of insight.

15. In organising the data science capacity in the FCO, the mistake would be to put data analysts 'in a box'. Mainstreaming is key in order to prevent the rest of the organisation from thinking of them as different and separate. A positive way to proceed would be to place data analysts within directorates to foster mutual understanding with policy leads, and perhaps also consider some secondments from BBC Monitoring. It is felt that the intelligence community is a leader in the data science area, and so exchanges with them could also be beneficial. FCO funding of interdisciplinary research and research council collaboration was considered, as was a UK open source centre, and formal partnership with the Turing Institute, potentially utilising FCO servers.

16. In addressing outsourcing, it was felt that this could be appropriate for an initial gathering, but that it may not be desirable for computer companies to have insight into FCO questions and data sets. For example, it was agreed that the future fusion of service information would have to be in house. This process is not always inseparable, however, and external teams could be cleared to come on board. A stable pool of non-government data providers would be a useful development, both for ease of access and so as not to replicate available capability.

"What does the FCO want to do and what does it want to forecast?"

Forecasting and analytics

17. The Good Judgement Project is an attempt to formalise and investigate the human component in forecasting and analytics. Forecasting is a skill and ability that can be taught with teams of forecasters better than with individuals. The environment in which analysts are working makes a big difference and a little cognitive bias training will also improve the quality of the crowd; calibration on accuracy helps individuals improve. Proficiency in accuracy can be more useful than regional expertise, and can be transferable across regions. Aggregation and updating forecasts with current data is also important, as is forging a dynamic relationship with forecasters and a greater weighting to those who have been more accurate elsewhere.

18. How do we understand the consequences of our actions, and indeed the implications of different choices of action? In utilising data analytics, patterns from the past can be used to predict the future, and in modelling complex adaptive systems and emergent behaviour companies such as Improbable can recreate these systems in their entirety. In running simulations, technology has been a problem in the past due to its limitations of scale. Lots of systems, for example cities, do not get complicated until they are scaled up. Improbable's tool, SpatialOS, has been used to model Cambridge, enabling authorities to identity possible failures in critical infrastructure. The power of the particular type of model is the different layers (mobile, traffic, power and so on) and cascading consequences between those layers, running different situations in parallel.

19. There are security and risk implications here, firstly with cloud storage and then the insight into networks that may be gained by nefarious actors from your own discoveries. One way to manage the first concern currently being pursued is to work with clients using private cloud storage, and the point was raised in the latter instance that better understanding of your own network should be desirable, enabling you to better secure it.

20. The FCO was advised against simply purchasing proprietary tools, and instead urged to take advice in advance. It was also recommended to keep doing what the FCO does well; an algorithm is not a magic bullet. A balance of both data centred analysis and model applications would be positive. By way of practical applications, the FCO should start small with an appetite to fail fast. Tactical applications should be avoided; it should stick to large events for example elections, and focus not on forecasting an event but on the responses and impacts.

21. A Diplomatic Academy unit for forecasters could be part of a data science module. Utilising an internal FCO marketplace of political futures could also be a worthwhile initiative, stress testing the emerging country forecast. A cadre of internal superforecasters with an FCO accreditation was floated as a possibility, with personal recognition from the DG as a carrot. The FCO should use availability of numbers in the organisation and even incorporate this as part of the business model.

Influence and impact - ensuring effect

22. The way people get information has changed. Forums and media have evolved since even since the 1990s, with a massive privatisation of media ownership. In addition, due to the internet an ordinary person can now perceive that they are contributing. There was a debate as to whether the actual content has changed and over the historical

uniqueness of the moment, especially in identity based violence.

23. Predicting identity based violence is not necessarily a problem, as generally the indicators are visible. Rather, disconnect occurs when trying to establish what to do with that data and what action is to be taken as a consequence; i.e. the upstream is not following down. Communications and information can reduce the threat of violence in the space around media and entertainment, also boosting public engagement in development, health, and other issues. There is a role for big data analysis here and there are case studies available of gold standard activities. For instance, the HIV/Aids storyline in EastEnders during the 1990s change attitudes in the UK and created a space for dialogue. This approach has been used by BBC Media Action in Burma with The Tea Cup Diaries.

"The role of gatekeepers, the FCO among them, is eroding but the challenge is not as insurmountable as it appears"

24. Hackathons have been a useful tool to facilitate interaction between diplomats and tech experts in the Dutch context. Observation shows technologists seeing a problem with a clear line to a solution, and policy makers taking a different approach. Hackathons not only familiarise diplomats with technology, but any strong ideas generated can also be scaled up for use in an MFA. Promoting and growing technological competence within MFAs can be facilitated by social media use, diplomatic codes, enthusiastic interns, active demonstration of capabilities, and the seeking out of like-minded people in the organisation. Much of this is bottom-up organisational change and achieved through informal networks, fostering the creative commons and a spirit of experimentation.

25. Gatekeepers have been washed away, and networks are taking their. The full free network world is not really happening and instead we are seeing echo chambers and silos. Underlying human heuristics are a significant factor here; homophony and huddling together. We also instinctively go out to prove our assumptions and have innate cognitive bias, looking for higher standards of information that disproves our view. On top of this are algorithms as curators seeking personalisation and information on the customer/user. The combination of these two phenomena leads to the creation of echo chambers. Humans are remarkably partisan when it comes to political opinions. An echo chamber is a certain type of network, one with no immediately apparent end or beginning; like a washing machine of personal opinion.

26. Echo chambers matter because if the same world view is being reflected back at an individual, this excites a group extremity shift. There should be a deep concern here over the polarising of opinion to the extent of thinking an opponent is evil. This is driving problematic behaviour online, for instance anti-Islamic tweets. How to get out of echo chambers needs to be part of the FCO conversation.

27. A discussion was had on what data science can and cannot do for FCO policy making. Crafted and targeted messaging is a useful force multiplier, but not a silver bullet. As the FCO looks to build in data augmentation there are ready-to-use tools available. The approach taken needs to be genuinely interdisciplinary, with data scientists and policy makers working together. There was a call to 'diplomatise data scientists' and indeed this should be applicable vice versa; the two need to speak each other's languages, and importantly, speak towards each other. At the moment there are probably 4 to 5 people doing data related work at the FCO, so there is plenty of scope to scale up without it becoming an overly dominant activity. Particular departments/aspects of the FCO or identifiable streams of work should be identified that would lend themselves to such collaboration. There is already access to the capabilities within the FCO, and around government, to run some pilots. These should be bite sized and project based, and not hung up on scale.

Using data in campaigns – a case study

The Trump campaign 2016

28. This is characterised as the death of creativity and 'guess work', and with data sets available to SCL for 250 million Americans, messages can be individually tailored. Individuals are fragmented across many different channels requiring such a targeted

"With 3am tweets to contend with, the 2016 strategy had to be responsive to developments rather than doing too much crafting of the message ahead of time"

approach. What does this mean for the national conversation? In 2016 digital advertising exceeded all other platforms combined. Salman Rushdie said that Twitter is a vomit of invective, and now the vomit has voice. Data miners are at the vanguard now.

29. Daesh is an exemplar of understanding the online space, with tools of organisation ruthlessly used. We are all now journalists and commentators in this aggressively propagandised world, which has spawned the phenomenon of fake news.

30. Nowadays, there is less ability to control the narrative, so the choice is whether to feed the beast or ignore it. Trump understands this and has bypassed the 3 Ps (push, pull, and profile) of marketing communication. This throws up enormous issues about privacy and the use of big data to target individuals. There are differing views of, for example, Google in the US (spooky) and the UK (creepy). Targeting and knowledge gathering is seen as more sinister in the latter context.

31. One cannot make a candidate data driven, but informing the campaign and candidate with as much data as they need is achievable, helping them to strategize in sometimes counterintuitive ways. The most relevant campaign prior to this by way of data use was Obama in 2008. 2012 saw data driving some campaign processes, but it was used extensively in email fundraising in 2016. Results show, counterintuitively, that a high volume of terribly formatted emails was the most effective strategy by way of donation frequency.

32. San Antonio was the digital base for the Trump campaign, set up 5 months before the election. This had to start from scratch, gathering data and demonstrating effectiveness. Mapping the support landscape was key, with the next step to segment the data for partisanship, prioritising efforts on voters seen as open to persuasion. Once segmented, advertisements were run on any and all platforms with the data completely refreshed every week. The continual cycle was characterised as: Research, Monitoring, Segmentation and Digital.

33. There had to be lots of communication between data and campaign people in a very frank and honest way which led to the development of many tools. Every day a fresh battleground 'path to victory' was produced. Though polls were consistently against Trump, the early voter turnout showed a large increase in the rural vote. Modelling this increase across all demographics suggested there was a possibility of victory. This triggered a surge of activity and visits to key battleground states.

34. There was a reservation of judgement by some as to both the unique nature of this approach, and the quantifiable impact of data on the US election. Work to quantify this impact is in train.

Conclusion

The forum name and theme fit with the high emphasis put on data use by the FCO. As the Chief Executive of the Civil Service has said, data is at the heart of a 21st century government. The ambition is for the FCO to become a cross Whitehall leader, which the meeting reflected. Discussions helped inform the FCO's ongoing work on its Data Strategy, and the diverse views expressed will add to its effectiveness.

At the start of the forum the challenge was set out through a number of questions. How should the FCO use information in the information age to build networks? What does a modern diplomatic service look like and how do we get there? How can the new tools available be harnessed? There were a number of key themes to take away, falling under three headings:

- How the FCO pursues its diplomatic objectives must change; it must adopt a new interdisciplinary approach in the data space.
- The FCO needs to learn both from itself and others.

- The FCO should maintain and nurture the network established during the forum.

The fundamental aim of diplomacy in the information age is twofold; to hold on to the skills and expertise that have made the UK's diplomatic service so revered over such a long period, while exploiting the new opportunities and tools available.

Thomas Hoare
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