

A Politics of Redeployment: Malleable Technologies and the Localisation of Anticipatory Calculation

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Introduction

The instituting of new emergency preparedness measures through legislation such as the *Civil Contingencies Act* (2004) brought about major renegotiations in the operation, rationale and organisational shape of emergency response in twenty-first century Britain. As noted across literature, key to these changes was the transformation of emergency response into an armature of anticipatory governance (Anderson, 2010a; Amoores, 2013). Although far from fully encompassing their entire set of responsibilities, Fire and Rescue Services (FRS) and the Police and Ambulance services were charged with preparing and intervening in the present to secure emergencies of the future. This anticipatory turn, as many have indicated (e.g., Anderson, 2010b; Aradau and van Munster, 2011), was initially oriented at managing large scale emergencies whose potentiality came to occupy the post-9/11 security landscape. Known by their possibility in the future, emergencies like terrorism and natural disasters were to be managed at least in part by emergency responders through action in the present.

Becoming anticipatory involved a temporal renegotiation in the modes of intervention used to secure events understood by their catastrophic potential. Anticipation built the capacity to govern large catastrophes in advance of their unfolding. An increasing amount of literature, furthermore, scrutinises how these modes of intervention were developed in conjunction with forms of calculation, which understand, comprehend and capture catastrophes as so many risks

1. Large scale events were to be known in the same way as they were to be acted upon; by their potential in the future.

A month before the *Civil Contingencies Act*, the *Fire and Rescue Services Act* (FRS Act) was introduced into British Parliament. The *Fire and Rescue Services Act* implemented some very similar changes as the *Civil Contingencies Act*. A reaction to the same set of catastrophic and large scale events, the FRS Act re-problematized the operation of the FRS. It instilled within the FRS a strategic architecture organised around anticipation, consolidated around a three-pronged approach to security consisting of prevention, protection and preparing response. The new strategic architecture not only shaped the FRS' contribution to response at the time of a large scale catastrophe, but renegotiated the service's response to the emergency event they attend to daily: fire. Echoing the *Civil Contingencies Act*, not only was fire to be governed in anticipation of its occurrence, but was also to be known and calculated by its futurity and risk.

Comparison of the two Acts demonstrates that the emergence of risk governance has not only been applied to make sense of, and attend to, large-scale events. The organisational and epistemic transformations, which have produced the contemporary FRS, suggest that practices of risk governance take flight and find new fields of application within more banal types of emergency. As a term encompassing a variety of governing agents, O'Malley (2004) argues that the security apparatus is flexible and adaptive to an expanding array of events which fall under its purview. Recent literature (e.g., Adey and Anderson, 2012; Collier and Lakoff, 2014) has additionally proclaimed that multiple renditions of emergency prevail across this apparatus to make sense of future events. Encompassing a multiplicity of organisations, the security apparatus is thus characterised by processes of appropriation, localisation and redeployment, by which similar techniques will be used to govern an array of different emergencies whose only sure similarity is their apprehension as risks.

But what enables and facilitates the flexibility of the contemporary security apparatus? In this Chapter, I show how calculative devices circulate and travel to new contexts. I focus on how, under the flexible dynamic by which one organisation adopts governmental practices already prevailing across a wider apparatus, lies another process of redeployment. The re-deployment that I focus attention on here

pertains to the digital risk calculation technologies, which allow risk governance practices to rise to the fore at disparate sites across the security apparatus.

Characterised by, but not limited to, a myriad of digital technologies, algorithmic code and data, the emergence of 'information society' (Lash, 2002:2) has proven crucial to contemporary securitisation, whether adjudged to have opened up entirely new calculative logics (e.g., Amoore, 2013) or to have reworked prevailing forms of calculation (Daston, 1988). New forms of surveillance, monitoring and software are designed and become dis-embedded from specific sites and can be appropriated by heterogeneous sets of users towards a multiplicity of ends. As de Goede (2012) describes, for example, data acquired through credit checking agencies not only create credit histories of consumers, but go on to identify potential terrorists. In this Chapter, credit checking data is also shown to be used to identify populations most vulnerable to fire risk. In part, the instantiation of anticipatory forms of governance is thus conditioned and facilitated by the free floating nature of some digital forms like data and software.

Before bringing about new forms of governance, such technologies must undergo processes of localisation, whereby they become re-oriented toward the specific governmental goals of particular security authorities. Throughout the Chapter, by localisation I mean processes by which universally available digital agents, like data and software, are appropriated by, and transformed to adapt to, new organisational contexts and spaces. Specifically, I outline and critically discuss processes by which software and data acquired by the FRS are transformed to construct, and to ultimately manage, fire as a risk. I examine two processes that condition the localisation of risk analysis technologies and their re-deployment in the FRS; data sourcing and the practice of new forms of risk calculation. I demonstrate that these processes of technological redeployment are vital to the broader adoption of anticipatory governance practices in the FRS and the re-application of such practices to the quotidian event of fire.

The capacity of organisations within the security apparatus to take upon new modes of operation is indebted to the flexibility and malleability of digital technologies. When describing databases vital to counter-terrorism security, de Goede (2012)

argues that the flexibility of software instigates questions about where the authority to govern lies across and between domains of public security and the private space of software developers. Do universally available technologies merely aid the development of new modes of governance for established agents of security or does the authority to govern begin to spread across a wider set of organisations, including private data collection companies and software designers? I address this question in the conclusion, suggesting that rather than a shift from public to private domains of authority, the public intersects with the private in new ways.

Fixing data circulation in the form and matter of data mobility

To enable and engender a new risk-based, anticipatory approach to the governance of fire, over the last decade a digital infrastructure has gradually formed in the FRS. The primary task of this digital infrastructure is to generate accounts of fire risk on a number of different aesthetic registers. The projections made inform strategic decision-making on how to intervene upon fire before they occur. The risk projections that are generated by this digital infrastructure facilitate and condition the appropriation and practice of anticipatory governance in the FRS.

In order to understand how calculations are undertaken and projections are generated, the digital infrastructure needs to be approached and conceptualised as an assemblage. This infrastructure needs to be acknowledged in its composition through a vast range of materially heterogeneous human and non-human entities, from digitalised data, fibre-optic cables, hardware, software to mundane organisational routines, experiential knowledge and various interfaces between human analysts and computers. Calculation and risk projections arise out of their situatedness within, and reliance upon, multiple mundane processes, which are constantly ongoing in the digital infrastructure and which entangle heterogeneous agential forces that inhabit the infrastructure. The calculative prowess of the digital infrastructure thus operates, as John Law (2002) would describe, through 'fractional coherence', in which the singular function of a technology is produced through multiple related processes which surround the technology. In the case of the Fire and Rescue Service, then, the singular functionality of individual software, whose

commercial licence has been purchased by the FRS, will depend on the overall multiplicity of the digital infrastructure within which it now operates. The possibilities and hopes that appropriating new software opens up for the FRS will only be realised through processes of localisation, which call forth and enrol different elements of a wider digital infrastructure into relations with the new software.

Not to be ignored are processes in which data used for calculation are collected. As I will go on to show, however, data cannot be considered singular in its material form. In other words, data are not only embedded in digitalised codes which are subject to computer processing. Neither are data, as suggested in recent literature (Ruppert, 2011; Beer and Burrows, 2013), passive in their agency. That is to say, data are not subjected to the whim of human analysts and technologies. The agency of this materially heterogeneous entity called 'data' is manifest in their effect on the digital infrastructure. Crucial to the deployment of new technologies, data underpin the expansion of the digital infrastructure and, in so doing, help to arrange and enact new forms of anticipatory governance.

Broadly speaking, the digital infrastructure of the FRS is brought into being by the relations forged between the different agential forces and materialities enrolled in its composition. The relations found between different agents, as has been noted in literature on the rise digital cultures (e.g., Beer, 2009), are both static and circulatory. For example, 'export' and 'import' functions cut across and coordinate the space of the FRS digital infrastructure. These functions could be pin-pointed on a map. Lines could be drawn outlining the connection between one software package and another package. However, the relations 'import' and 'export' functions enact are also witnessed through the movement of data these functions permit and the overall ordering of data circulation across the infrastructure. Relations within the digital infrastructure are thus brought to life by the mobilisation and circulation of data. In turn, how data moves is pivotal to the deployment of new digital technologies and thus ultimately to forms of anticipatory intervention.

The terms data mobilisation and data circulation, however, cannot be treated as synonymous. A number of scholars explicitly state (Adey, 2006; Salter, 2013) that circulation and mobilisation express different forms of motion. Circulation accounts for the curves and trends moulded and re-shaped through routine movement

happening in a specific space. The order of movement. Mobility, on the other hand, serves to designate the differential capacities of agents enrolled in circulation. Mobilisation refers to the enablement of a thing's movement. Mobility and circulation are not mutually opposing categories. Mobility works within and shapes circulation. Interventions take place to mobilise certain phenomena within circulatory curves to achieve particular effects.

The acquisition of software and its redeployment for new purposes in the FRS is a matter underpinned by how data get mobilised. Take, for instance, the case of credit checking data and its associated analysis software Experian MOSAIC. The data accrued, and the software designed to analyse the data, was initially used by the credit checking company Experian to profile populations in terms of consumer behaviour. The data and software was then sold to companies to inform target marketing campaigns. In the FRS, however, the database is used to establish risk profiles of those most vulnerable to fires. These risk profiles will inform the targeting of Home Fire Safety Checks (HFSCs), whereby FRS personnel visit houses to install fire alarms and educate about fire safety. The enactment of MOSAIC databases through HFSCs allows the FRS to prevent fires from occurring.

To become pertinent for risk profiling, lifestyle data that MOSAIC provides needs to be integrated with data on the spatial distribution of fires in the past. Import functions need to be established between MOSAIC and those databases that hold data on the geographical coordinates of previous fire incidents. On a computer screen, MOSAIC shows the distribution of lifestyles across a region in Britain. The region itself is articulated by the serialisation of occupations, ages, ethnicities alongside non-conventional demographic categories, such as where preferences for specific forms of entertainment prevail or the distribution of smokers. Superimposed onto this map is imagery which locates the occurrence of fires over the last three years. Through the integration of data, MOSAIC injects lifestyle variables within the causality of fire risk.

At the very heart of the functionality of MOSAIC in the FRS is thus the mobilisation of data and the establishing of circulatory regimes in which data are enrolled. The mobilisation of data, which enables the adoption of generic analysis technologies

and their redeployment for specific governmental goals in the FRS, takes place under specific conditions. One such condition revolves around the similitude of data by their form. Uploading data on the spatial location of previous fire incidents is possible on the premise that such data are computable within MOSAIC software. In this case, data on previous incidents of fire must simply be digital. That which conditions the enrolment of data in mundane processes of technological redeployment or, in other words, mobilises data within broader circulatory regimes, is the form that data take.

The question of the material form of data and its capacity to mobilise and circulate has a rich lineage as Vismann (2011) shows. Discussing the consolidation of legislative power in Ancient Rome, she examines in depth the form that legislative files take. In particular, she discusses how scrolls were replaced by codices as devices for recording laws and precedents. This substitution, as Vismann (2011:32) observes, took place for many reasons:

The advantages of codices are, quite literally, there for everyone to see. The new reading posture offers readers an escape from the defenceless position of having both hands attached to the text. The emperor Domitian, for one, was unable to ward off his murderers because he was holding a scroll. Reading a codex requires one hand only- or a fist. The ability to quickly leaf through a text in both directions in search of a specific item is another obvious advantage of the codex ... The possibility of adding further layers to the loose leaves prior to their binding frees codices from the purely diachronic recording logic of scrolls ... By virtue of these optimized features – random access, up-to-date writing, ease of binding, storage and rearranging – codices gradually replaced scrolls as “functional texts”.

It is not only that form affects the mobilisation of specific data within wider circulatory regimes. Instead, following Vismann’s observations, the form that data are shaped into, and what data come to inhabit, are matters interwoven with processes of accumulation by which governmental power can be both consolidated and can transform itself. The codex thus allows new leaves to be added. In the FRS, new data are continually sourced and new forms of technology, such as MOSAIC, are acquired. To be useful, however, it must be possible to fold this new data and technology into wider circulation processes of the FRS digital infrastructure.

Through regimes of circulation, data of the same forms are enrolled and integrated with one another.

Although similitude in form conditions and organises data integration processes, the material form of data cannot be treated as fixed. In its integration and mobilisation together, heterogeneous data will take on whole new forms. I will return to this point in the next section, where I discuss the new modes of calculation that the acquisition of technologies like MOSAIC enable. Maintaining focus on mobilisation and circulation in this section, it is more immediately important to state that not all data bear a digital form. The heterogeneity of data forms under integration raises important points of consideration in terms of the relationship between mobilisation and circulation. Not only does mobilisation within broader regimes of circulation allow for an exploration of what is mobilised and what is not, but also, through these two categories of movement, I explore what data are seen as mobilised and what data mobilisation is made invisible. Data circulation and mobilisation processes, which enable the redeployment of technology, are enwrapped here in a politics of absent-presence, by which data without digital form aid strategic decision-making, but outside of digital visibility and potentially outside of the laws of digital accountability, such as the 1998 *Data Protection Act*.

In the case of MOSAIC, data acquired through the integration of potential lifestyle distribution with fire location history is understood by analysts as an insufficient base for analysis. As gathered through interviews with them, the foundation for analysis offered by this data integration is perceived as “too wide in scope and not targeted enough”² to generate risk profiles. As the analyst went on to state, lack of depth makes possible the problem of rendering invisible those most vulnerable to fire. An example of this was offered hypothetically by one analyst when during an interview I was asked to imagine

a little old lady... living on a street on her own. It's a fairly affluent street, the houses are relatively new ... that person would be tagged with the profile of that entire street. But the little old lady sleeps in the dining room because she cannot get upstairs.

Through this analogy, the analyst argued that data that know populations at the level of broad categories cannot focus on particular activities that might amplify one's vulnerability to fire.

The problem cited by analysts works to justify the insertion of other data into risk profiling analysis. Specifically, data on fire location history and potential lifestyle distribution will be integrated with data concerning past instances in which individuals have died from fire. Produced from fire investigations, this data offer an account of the lifestyles of victims of fire. Qualitative in its expression, data deriving from fire investigations do not take the same form as other data used and thus complicate processes of data accumulation, which underpin the redeployment of MOSAIC in the FRS.

Another path of data circulation in the redeployment of MOSAIC thus reveals itself when considering the use of fire investigation data. Heretofore, algorithmically computable data enmesh through establishing import functions between databases. Deriving from another database, fire fatality data will not be integrated digitally with other data, but will instead be deployed by analysts to enhance the depth of analysis. Paper charts, for instance, which detail how many of those who have died from fires in the past were smokers, offer an insight not only into where specific lifestyles exist, but what makes these lifestyle dangerous. Alongside their manifestation in digital form, data of other forms enable the localisation of MOSAIC and its application for the specific purpose of profiling those most vulnerable to fire risk.

Fire fatality data, although taking a different form, are mobilised into and integrated with broader data circulation regimes that enable the redeployment of MOSAIC in the FRS. This is possible because the FRS digital infrastructure, as noted above, cannot be understood as merely composed of hardware, software and other technological components. Rather, human agents contribute to affect processes by which risk analysis is made possible in the FRS. As evident in this case, the mobilisation of fire fatality data is dependent on analysts' intervention.

What becomes mobilised within data circulation and enables the redeployment of technologies results from the interplay between materially heterogeneous agents

within the FRS digital infrastructure. As indicated earlier, however, the matter of the form that data take does not only allow for inquiry into what is mobilised within broader schemas of circulation. Instead, the mobilisation of data of different forms suggests that technological redeployment is also complicated by the question of what data are seen to be mobile and what are not.

The integration of fire fatality data into risk profiling analysis is vital to the success of MOSAIC's localisation into the FRS and gauging vulnerability to fire. Pertaining to specific individuals, however, the use of fire fatality data raises important issues around its use in risk profiling. The appearance of such data within the MOSAIC software would threaten to breach data privacy laws to which the FRS are subject. But fire fatality data are not integrated in the same way as other data used for risk profiling. Neither does the mobilisation of fire fatality data take place within and through circulatory regimes in which other data are enrolled. Although present in the construction of risk profiles, fire fatality data are absent from digital circulation processes that provide the basis for MOSAIC redeployment in the FRS. Fire fatality data are mobilised, but do not take the same form as other data. Through the mobilisation of data, which bear different forms, the FRS can evade legal complications arising from the use of fire fatality data.

The redeployment of technologies in and across the contemporary security apparatus, by which techniques of anticipatory governance extend their grasp over an expansive array of emergencies, opens up new pathways for critical exploration. This section has focused on how technological redeployment is shaped by mundane organisational processes that revolve around, and are engendered by, data. Broad data circulation processes within which data mobilise are vital to the malleability of the contemporary security apparatus. Critical evaluation of circulation processes rests on understanding data as a materially heterogeneous agent, whose form conditions the extent to which, in this case, authorities can gauge the vulnerability of populations and target anticipatory forms of intervention. The ability to appropriate and redeploy technologies does not rely merely on the mobilisation of heterogeneous data forms however. Rather, exploring data circulation and mobilisation also opens up space for insight into what data are seen to be used by those governing and what data are rendered invisible. The question of what is seen

as mobile and what is not can lead to important questions around what legal issues technological redeployment opens up for organisations like the FRS. In the next section, I examine how technological redeployment is facilitated not only by how data moves and what form data take, but by what logics of calculation it engenders when harnessed by governing bodies seeking to manage the future.

The temporal fixing of calculative imaginaries

The conditions of possibility for the redeployment of technologies are in part coordinated by a politics of mobilisation and visibility, which characterises data as they live in local contexts of the contemporary security apparatus. The mobilisation and accumulation of data, however, are not the only processes that actualise the redeployment of technologies for the purposes of the FRS. The functionality of the codex, to return to Vismann (2011), is evident in its re-engendering of the temporality by which data can be processed. A “purely diachronic logic” (2011:32) is supplemented by a variety of new temporal arrangements with the emergence of the codex.

In the last section, I showed how the mobilisation of data was intimately bound to the issue of the form data take. However, means by which the form of data can be described go beyond their commonality or dissimilarity as digital artefacts. The data referred to above included data on the potential lifestyle characteristics of populations and their integration with data on past fire locations. One kind of data takes digital form and another exists in paper charts and in the experience of analysts. However, data can also be differentiated by its temporal reference to the past, present or future. In other words, data bear different modes of temporal address.

The temporal heterogeneity of data cannot be understood as an obstacle to technological redeployment in the FRS. Rather, the integration of different temporalities is foundational to the act of risk analysis. Analysing the future, rendering risks visible through calculation in the present, is an onto-epistemic performance, which relies upon and seeks to exploit the different temporal registers of data. In her discussion of data derivatives, Amoore (2013:52) argues that new

modes of calculation that work with, rather than being adverse to, the uncertainty of the future amount to arraying relations between “an amalgam of disaggregated data”. For Amoore; “new temporal arrangements for managing the uncertain future” (2013:61) are enacted and performed by the integration of heterogeneous data and the forms of calculation enabled.

To return to the example of risk profiling, the futures presented through analysis are underpinned by different configurations of the relations between data. At a rather rudimentary level, the analysis that MOSAIC permits could be undertaken through a simple correlation between two different temporal moments that data integration has made possible. Previous fire distribution could thus be compared against potential lifestyle distribution. This correlative analysis permits analysts to infer whether previous fires have anything to do with lifestyle. Although an important foundation to build analysis upon, this simple correlative temporal fix that MOSAIC actualises will not suffice to inform the construction of risk profiles. Demonstrating this correlation through MOSAIC, the analyst narrated a disjuncture between potential distribution of lifestyle and previous fire location. On the lifestyle map MOSAIC presents, the location of fires cut across areas of multiple different lifestyles, making the vulnerability of particular lifestyle groups to fire a matter of ambiguity.

The problem named by the analyst is only recognised as such because of the strategies of intervention that risk analysis will inform in the FRS. Targeting on the basis of previous fire locations would be justifiable if the FRS itself sought to react to fire in its known previous distribution. To do so, however, would be to belie the hope that MOSAIC and lifestyle data embody; a hope that this technology and these data hold within them the capacity to secure the future in the now. Enacting governance in anticipation of fire requires that previous fire location data need to be mobilised in analysis in a way that identifies fire in its future proclivity as a risk. As a technology redeployed to practice a new governing rationale premised on potential, the calculations MOSAIC performs must be based on temporal configurations, which hold that past fire incidents render a location vulnerable to future incidents.

Engendering anticipatory forms of governance requires new temporal arrangements to coordinate the calculative practices by which fire risk is made sense of. Simple correlation between the past and future is not sufficient for knowing future fire risk. Neither is such correlative reasoning, in turn, sufficient for informing the targeted deployment of preventative resources. In the case of MOSAIC, instead, what is known as over-representation analysis will take place. On an Excel spreadsheet, the population of the region is aggregated into lifestyle groups. Alongside this aggregation appears the amount of fires that have occurred within this lifestyle group. Vulnerable lifestyle characteristics will be identified where fire's percentage exceeds the percentage proportion of a particular lifestyle group.

Over-representation analysis creates and performs a new temporal relation between disparate data that have been integrated. Data which capture the potential lifestyle of populations and data on past incidents of fire are not treated as two separate, albeit inter-related, entities offering correlative insight. What over-representation analysis does, instead, is play on the capacity and value of different data to be inhabited by each other. Through over-representation analysis the two forms of temporal registers that data in this instance address are moulded together.

The result of this enmeshing of heterogeneous data is the formation of a whole new temporal register, which both affects how the emergency of fire is imagined and calls forth and facilitates new forms of government. The temporal register constructed works to project into the future, but in a way that is harboured in, and anchored by, past experience. In other words, the temporal fix established through the mobilisation of data in over-representation analysis is but one way by which to capture the risk of fire by its *emergence*.

To capture the emergence of fire, the forms of calculation enacted in the FRS must operate on the basis of contingency. Specifically, the re-problematisation of fire governance under an anticipatory logic means that fire must be known by its quotidian patterns, but only insofar as to gauge where, why and how such a rigid pattern might fail. Rather than looking for correlation which speaks of continuity, calculative techniques deployed under anticipatory forms of governance must seek to emphasise the possible breakage of normative order. Data on potential lifestyles thus serves to disrupt and render precarious fire trends; trends visualised through

fire location data. Through analysing it in relation to lifestyle distribution, the stabilised trend of fire distribution has an aleatory event written into it. Lifestyle calculation seeks to throw a spanner in the works, or, more appropriately, a smoking cigarette of those who belong to a lifestyle group associated with smoking that is left on a sofa. The emergent character of fire is invoked through arranging data bearing different temporal modes of address to one another. Data on potential lifestyles are used to render contingent fire trends acquired from data on fire incident location in the past.

The redeployment of technologies through which the localisation of anticipatory modes of governance is facilitated has been treated in terms of the new forms of calculation new technologies open up. The differential temporal address of data has been pivotal to my examination. I have shown how the temporal heterogeneity of data mobilised is not a problem for the localisation of anticipatory governance measures to the banal risk of fire. Rather, this temporal heterogeneity is vital to the relational ontology that engenders risk projections. Forms of calculation, as Amoore (2013) shows, are underpinned by array relations made between data which bear disparate temporal referents. The relations performed through analysis of data generate new temporalities, which intersect between past and future to envision the potential emergence of events. In the last section, I consider my observations regarding technological redeployment and the localisation of governance in relation to broader shifts in the governing rationale of the UK Fire and Rescue Service in the twenty-first century.

Conclusion: entrepreneurial agents of security

In an age where data and calculative technologies attain an increasing influence in practices of governance, a politics of technological redeployment shapes and conditions authorities involved in an anticipatory security apparatus, whose application incrementally extends to new domains. Software, hardware and data are malleable and subject to localisation to meet specific governmental ends. In other words, such digital entities must undergo transformation to adapt to new organisation sites and spaces before facilitating the enactment of new modes of governance. Critical accounts of data-driven governance, as I have suggested in

this Chapter, must examine the mundane organisational routines, practices and processes that facilitate technological redeployment. In the case of the FRS, redeployment instigates new flows of data circulation and calculation, which, in turn, shape practices through which the FRS acts upon futures yet to occur.

The broader context within which processes of technological redeployment are posited extend to the very ordering of the wider global information network itself. Being actualised through universally available software and data, the conditions of possibility for the development of new modes of governance depend in no small part on the dis-embedded nature of data flows and the technologies that orient these flows across space. The harnessing of these devices in the FRS is certainly wrought, as has been shown here, by legal and ethical complications. The ramifications of drawing upon dis-embedded data flows seem to be shared by other organisations; as the case of the NSA PRISM programme and its implications suggests (e.g., *The Washington Post*, 7 June 2013).

But the similarities between the NSA PRISM programme and the case of the FRS go further. In both instances, ethical complications arise where questions attend to where data come from, the form that data take, how data are made sense of through calculation and how data are mobilised in actualising an emergent future. But the reliance of the FRS upon open global data flows and commercially available technologies raises another question; a preliminary response to which I will conclude with. In relation to the processes of technological redeployment described above, the question is where does authority exist across this network of informational flows and calculative devices that provide the grounds for security in the twenty-first century?

In her book *'Speculative Security'*, Marieke de Goede understands this problem of where authority lies to be best comprehended through the notion of public-private assemblages (2012:86-89). Accounting for the multitude of relations which necessarily prevail across and between governing agents where security takes an anticipatory turn, the public-private assemblage has many consequences for any critical analysis of power-laden calculative devices. This public-private assemblage could be used, for instance, to trace the movement of data within a nexus of informational flows and intersections that reconfigure global space-time.

The affordances of the public-private assemblage also extend to opening up for critique the possibility of role confusion between public and private agencies enrolled in this assemblage. In the case de Goede (2012) elaborates upon, the private concerns and interests of banks entangle and influence public law enforcement issues, where data on monetary circulation are used to track people suspected to be potential terrorists in the war on terror. The question the public-private assemblage can instigate here does not merely revolve around the matter of where authority lies but how the interests of different related actors impose on one another and what the result is for how those governing rationalise and justify the operations they undertake.

As has been documented, processes of technological redeployment in the FRS are enveloped within, and indeed facilitate, a wider organisational change, whereby the FRS has become anticipatory in its operation. But redeployment is also pivotal to another operational shift in process in the FRS; a new governing arrangement referred in the UK as localism. In a manoeuvre, which resonates profoundly with Foucault's (2007) notion of governmentality, where power is diffuse and nestles in disparate sites, *The 2011 Localism Act* draws the FRS further away from centralised control and into local control. As the then Minister Greg Clarke (2011) stated, a key motivation for localism at the time of the Act introduction was the supposed eradication of bureaucracy in government:

For too long, central government has hoarded and concentrated power. Trying to improve people's lives by imposing decisions, setting targets and demanding inspection from Whitehall simply doesn't work. It creates bureaucracy (Clarke, Department for Local Communities and Government, 2011:2).

But the effects of localism on the FRS could be read in an entirely different way. Detaching the FRS from central government more than ever before, the Localism Act situates responsibility for the existence of fire governance more fervently on each individual FRS in the country. A situation is created through localism in which, as Paul Du Gay writes, "organisations are to be made more responsible for securing their own future survival and well-being" (2003:673).

With the ushering in of the *Localism Act*, the FRS is necessarily forced to become more entrepreneurial. The FRS must be seen to earn its central budgetary subsistence, rather than simply receiving it. To do so, the FRS must justify its continuing existence through showing the ongoing prevalence of fire risk. In addition, the FRS must be able to evoke the consequences should their budgets be cut dramatically. Consider the following from the County Durham and Darlington Fire and Rescue Services Consultation for their 2014/15 Community Protection Plan:

The option of reducing frontline services would inevitably not only impact on emergency response but also significantly reduce the capacity of the organisation to deliver prevention and protection activities, which have been a major contributor to the reduction in emergency incidents we attend (County Durham and Darlington Fire and Rescue Service, 2014:14).

With the becoming entrepreneurial of the FRS, the potentiality of fire and fire risk itself becomes the fundamental commodity, which is continually sold and resold to central government. Risk projections and the capacity of the FRS to govern the future are reliant, as the discussion in this Chapter suggests, upon technologies acquired from a host of sites and redeployed for the purposes of the FRS. The malleability of risk analysis technologies works to facilitate and condition the entrepreneurial spirit with which the FRS is infused after localism.

In the case of localism legislation and its resonance in the FRS, the notion of public-private assemblages can be envisioned not only as a scale across which authority moves or throughout which authority exists at different degrees of intensity. Apparent with localism is also the internalisation of an entrepreneurial spirit in the FRS; one conventionally reserved for private business. Calculative software and data are vital to the life of this new intersection between public and private that localism instigates. Such technologies offer visions of the future by which risk is not only governed, but, by acting to justify the existence of the FRS, sold.

A politics of redeployment does not only refer then to the creation of new modes of action, which derive from the sourcing of new data or adding to the pre-existing risk calculus. Nor does it refer simply to the manipulation of technologies to engender

change in the multiple sites of the security apparatus. Rather, it also means to declare the effect of new calculative technologies upon emergency responders in reshaping how their responsibilities are rationalised and their continued existence is ensured.

References

- Adey, P. 2006. 'If mobility is everything then it is nothing: towards a relational politics of (im)mobilities'. *Mobilities*, **1**: 75-94.
- Adey, P. and B. Anderson. 2012. 'Affect and security: exercising emergency in UK civil contingencies'. *Environment and Planning D: Society and Space*, **29**:1092-1109.
- Amoore, L. 2009. Algorithmic war: everyday geographies of the War on Terror. *Antipode*, **41**(1):49-69.
- Amoore, L. 2013. *The Politics of possibility: risk and security beyond probability*. London: Duke University Press.
- Amoore, L. and M. de Goede (eds.). 2008. *Risk and the War on Terror*. London: Routledge.
- Anderson, B. 2010a. 'Preemption, precaution, preparedness: anticipatory action and future geographies'. *Progress in Human Geography*, **34**:777-798.
- Anderson, B. 2010b. 'Security and the future: anticipating the event of terror'. *Geoforum*, **41**(2):227-235.
- Aradau, C. and R. van Munster. 2011. *The politics of catastrophe: genealogies of the unknown*. London: Routledge.
- Beer, D. 2009. 'Power through the algorithm? Participatory web-cultures and the technological unconscious'. *New Media and Society*, **11**(6): 985-1002.
- Beer, D. and R. Burrows. 2013. 'Popular culture, digital archives and the new social life of data'. *Theory, Culture and Society*, **30**(4):47-71.
- Civil Contingencies Act 2004*.
- Collier, S.J. and A. Lakoff. 2014. Vital systems security: reflexive biopolitics and the government and the bio-politics of emergency. *Theory, Culture and Society*. (Last accessed 27 October 2014).
- <<http://tcs.sagepub.com/content/early/2014/02/02/0263276413510050.full.pdf+html>>

- County Durham and Darlington Fire and Rescue Service. 2013. *Integrated Risk Management Plan 2014-2015 Consultation*.
- Daston, L. 1988. *Classical probability in the Enlightenment*. Princeton: Princeton University Press.
- de Goede, M. 2012. *Speculative security: the politics of pursuing terrorist monies*. London: University of Minnesota Press.
- Department for Communities and Local Government. 2004. *A plain English guide to the Localism Act*.
- Department for Communities and Local Government. 2004. *Fire and Rescue Services Act*.
- Du Gay, P. 2003. 'The tyranny of the epochal: change, epochalism and organizational reform'. *Organization*, 10(4):663-684.
- Foucault, M. 2007. *Security, territory, population*. Basingstoke: Palgrave/Macmillan.
- Lash, S. 2002. *Critique of Information*. London: Sage.
- Law, J. 2002. *Aircraft stories: de-centring the object of techno-science*. Durham: Duke University Press.
- Office of Public Sector Information. 1998. *The Data Protection Act*.
- O'Malley, P. 2004. *Risk, uncertainty and government*. London: Glasshouse.
- Ruppert, E. 2011. 'Population objects: interpassive subjects'. *Sociology*, 45(2):217-233.
- Salter, M. 2013. 'To make move and let stop: mobility and the assemblage of circulation'. *Mobilities*, 8(1):7-19.
- The Washington Post*. (7 June 2013). *U.S., British intelligence mining data from nine U.S. Internet companies in broad secret program*. (Last accessed 27 October 2014). http://www.washingtonpost.com/investigations/us-intelligence-mining-data-from-nine-us-internet-companies-in-broad-secret-program/2013/06/06/3a0c0da8-cebf-11e2-8845-d970ccb04497_story.html
- Vismann, C. 2011. *Files: law and media technology*. Stanford: Stanford University Press.

Notes

¹ For a comprehensive overview see: Amoore L. and M. de Goede (eds.). *Risk and the War on Terror*. London: Routledge, 2008.