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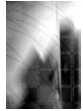
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## Abstract

In response to recent terror attacks, Western governments now involve private sector organizations in national security regimes in key strategic areas such as travel, communication and financial services. The UK's e-Borders programme is one such regime. Its goal is to collect and analyse passport and passenger data from all travellers entering and leaving the UK in advance of travel. Airlines and their supply chains are required to collect data from their customers and transfer it to the UK Border Agency for processing. Using documentary and interview data, this article develops the concept of 'remediation work' to characterize the impact of the regime on travel firms and their employees.

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**Introduction**

Following recent high profile terror attacks in Europe and elsewhere, national security has been high on the policy agenda. In key strategic areas such as travel and finance, governments have sought to gather information from private sector organizations about their customers to assist in the identification of risky individuals. Effectively, several economic sectors have been mandatorily 'deputized' into various national security regimes. The UK's e-Borders programme is one such regime. The programme requires airlines and their supply chains to collect passport and passenger data in advance from all travellers entering and leaving the UK. Front-line retail travel workers – workers in direct contact with customers in call centres or travel agencies – are tasked with collecting and inputting passport details into airlines' computer systems, which are then sent on to the UK Border Agency. The significance of these changes has been examined at state level (Adey, 2012) and in relation to travellers (Bennett, 2005), yet thus far no research has examined the implications for organizations and their employees. This examination is an important conceptual development in order that the schemes may be politicized from a labour perspective. This article draws upon literature addressing the private security industry and public private partnership and introduces the concept of 'remediation work' in questioning the regime's impact on employees (Bolter and Grusin, 2000). This concept characterizes the extra tasks national security surveillance imposes on front-line staff. With two components, 'transforming media' and 'reconfiguring resources', it is positioned as a new form of security work. The article begins by introducing the e-Borders programme as it currently stands before exploring the theoretical and empirical material.

**The e-Borders programme**

The e-Borders programme stipulates that all travel carriers collect and electronically transmit passport information to the UK Border Agency (UKBA) for all individuals travelling to and from the UK. Information must be transferred to the UKBA's 'National Border Targeting Centre' (NBTC) between 24 hours and 30 minutes before travel, which then uses the data to identify potentially risky individuals. Data are checked against watch lists and on high-risk routes, travel patterns are analysed to identify individuals suspected of being involved in dangerous activities. When concerns arise, police, immigration and customs officers are alerted. All information is then held for five years in an active database and another five years in an archive with access on a case-by-case basis. Although currently only air carriers are involved, by 2014 it has been proposed that all air, sea and rail carriers must comply (Home Affairs Committee, 2009). Compliance is policed with a system of criminal fines. Airlines, travel agents, tour operators and seat brokers are affected by e-Borders. They have had to implement systems and processes which enable passport data to be collected from customers and then transferred along the supply chain to the UK Border Agency (UKBA).

e-Borders was conceived in 2003 after several governmental initiatives to update and improve the UK's system of electronic border control. In November 2004, UKBA launched a pilot scheme called Project Semaphore on a number of routes into the UK. Following this pilot scheme the e-Borders 'roll out' began in 2009. Substantial challenges to the programme have arisen, the most pressing of which has been the legal challenge mounted by the European Commission which warns that e-Borders compromises European citizens' rights to freedom of movement (Whitehead, 2009). Belgium, France and Germany have also raised data protection concerns. Although the European Commission, the UK's Information Commissioner's Office and the Home Affairs Select Committee state European citizens have the right to opt out of providing data, at the time of writing, the UKBA insists that mandatory data collection is legal. The situation has not been resolved and rail and sea carriers are not yet investing in compliant systems. In future, air carriers will have to absorb the enormous costs of amending systems to incorporate the opt-out. Another problem arose in July 2010 when the government sacked the lead contractor, Raytheon, because of significant delays in delivery (White, 2010). IBM and Serco were then appointed; however, their contract only ran until the London Olympics in 2012. At the time of writing, a further contractor has yet to be appointed in spring 2013. Due to these problems, e-Borders has grown in political significance with debate featuring in successive Home Affairs Select Committee enquiries as the current government faces the growing criticism associated with its implementation.

Although the UKBA took account of the needs of the retail sector during the programme's regulatory impact assessment in 2005, problems arose following the appointment of the 'Trusted Borders' consortium: the team of companies charged with delivering the project. At first, the consortium consisted of US defence contractor Raytheon, responsible for the overall management of the project, along with Serco (infrastructure), Detica (data analytics), Accenture (business change), Qinetiq (human factors), Capgemini (business processes) and Steria (system interfaces). Raytheon was the preferred bidder because it already had completed similar projects for the US Department of Homeland Security. In 2009 the Home Affairs Select Committee published a strongly worded critique which stated, 'The lessons learned from the pre-cursor Semaphore project had not been fed through to the contractors responsible for the e-Borders Programme' (Home Affairs Committee, 2009: 9). Elsewhere it was speculated that the UKBA had been less strict with the consortium than it had on previous IT projects and it emerged that relations between the UKBA and Trusted Borders were strained (The Lawyer, 2007).

The specific problems faced by the retail travel sector began with the programme's infrastructure. Rather than developing a central information portal that could be used by everyone in the industry, Trusted Borders relied on airlines to collect passenger information and then pass it on, mirroring the approach taken in North America. This was possible for the larger national airlines, called 'legacy' airlines, which use Global Distribution Systems (GDSs) to manage their bookings. GDSs are computer interfaces that directly handle the booking systems of numerous airlines so that agents can book air seats independently of any other travel product. The three main GDSs changed their systems to enable travel agents to enter passport information on booking. This was then transferred directly to the airline and on to the UKBA. However, this service was not available to anyone selling retail travel products (see Home Affairs Committee, 2009: Evidence 2:

30) because retail travel companies charter aircraft to carry their passengers. Charter flights are not listed on GDSs as they are not available for independent sale. Legacy airlines effectively had their own centralized data collection point via the GDSs, but the retail operators did not. The retail sector had to make its own arrangements to transfer passenger information. New customer websites, self-service kiosks in airports and help lines were set up at the retail operators' expense to collect data from customers and make them aware of the new requirements. The Association of British Travel Agents Airline Group even investigated the feasibility of purchasing a centralized data collection point for the retail sector, but no appropriate service was commercially available.

Because of this situation, significant investment in internal systems and training was required. Further, the scheme also dictated that airlines gather passport data separately from customers while they were overseas, creating new datasets for inbound flights, rather than rely on the data collected from the same passengers on outbound flights. Creating new data sets for inbound flights was unnecessary for retail operators as exactly the same passengers would travel on inbound and outbound flights as part of a package deal so their passport data were already with the UKBA. This then meant that destination airports, which were often in less wealthy countries or were tiny islands and in some cases did not even have reliable electricity supplies, also had to invest in compliant systems. The cost of this investment was passed on to the airlines in increased landing fees.

In June 2009, industry representatives were invited to state their concerns to the Home Affairs Select Committee. TUI Travel's evidence argued that 'for UK charter carriers, e-Borders represents a £13 million a year cost to the industry against a £2000 a year saving in not giving out boarding cards' (Reals, 2008: 2). Similarly, the Board of Airline Representatives UK stressed that airlines needed to spend £450m over the first 10 years of e-Borders in order to make their internal systems compliant. Since then, the Home Affairs Select Committee has highlighted the wasted investment made by the industry in relation to e-Borders. Despite the travel sector capturing data in advance, passport data are still required to be captured at check-in. The information is being captured twice, thus removing any benefits of speed or efficiency that may have been offered to passengers (Home Affairs Committee, 2012).

It is unclear exactly why the retail travel industry was unable to strike a better deal as e-Borders unfolded. Key informants in the current research argued that they had strongly stated their requirements from 2007 onwards. They reported that Trusted Borders had ignored their needs and even told them to change their business models in order to comply, whereupon an atmosphere of rebellion arose. Interviewees speculated that a highly ambitious project, coupled with a fixed budget and an inflexible approach which prioritized a central database which would only receive information from airlines, was to blame. Indeed the shape of e-Borders is typical of New Labour's taste for centralized, all-encompassing databases. It emerged alongside the National Identity Register, the National DNA Database and the children's database Contact Point, each of which have been either abandoned or reformulated since the coalition government was elected in 2010. Such problems are not unusual, as Samatas (2011) powerfully argues in his analysis of the security systems bought in preparation for the Athens Olympic Games. The instability of Trusted Borders and poor communication between the travel industry, UKBA and the consortium have also promoted deep political wrangling. The

governmental spend, to date, is estimated to be £750m (£60m over budget) and the full roll-out of the programme is yet to be ratified. As will be demonstrated, front-line retail travel workers have emerged as lynchpins in the programme's operation.

## **e-Borders and customer service workers in the UK travel sector**

No research has been published to date which examines the impact of e-Borders on participating organizations and their employees. Nevertheless the programme's emergence reflects two phenomena currently shaping the governance of national security and the public sector in general from which its likely effects can be framed. The first concerns the outsourcing of security to the private security sector both in the UK and overseas. The second concerns the outsourcing of government services to the private sector in order that it be modernized.

The private security sector comprises a wide range of organizations which provide physical security services, technical sales, advice and training in military and civilian contexts. Its growth is attributed in no small degree to a number of pervasive national cultural, economic, political and social changes in recent years, many of which have also influenced the e-Borders programme (see Goold et al., 2010). Recent theory has highlighted how the security landscape now comprises a series of interlinked nodes through which governance is achieved (Johnston and Shearing, 2003). These nodes feature the aforementioned range of private security providers as well as government agencies, but e-Borders extends the security landscape to include non-security specialists, such as airlines and their supply chains. Loader and Walker (2010) highlight an enduring tension between the public good of maintaining security and private sector interests of profit-making. White (2011) outlines a dialectical relationship between these competing interests, arguing that firms need to internalize more public-spirited security values. This is particularly critical when employing private security contractors because they are not automatically publicly accountable for their actions: abuse, excessive force and discrimination could go unpunished (Baker and Pattison, 2012). The tension between public and private interests is observed throughout empirical studies of security work. Nalla and Hwang (2006) observe constant tensions over competency between private and public police forces in South Korea. Meanwhile Van Calster (2011) illustrates the difficulties shopkeepers have in incorporating government sanctioned anti-shoplifting responsibilities into their businesses in the Netherlands. The nature of security work itself is widely documented as having a reputational problem as it is poorly paid, de-professionalized and offers low levels of training and opportunities for collective organization (Thumala et al., 2011; Wakefield, 2003). Within the context of the e-Borders programme, it may be the case that its private sector 'nodes' are characterized by tensions which arise from conflicting public and private interests and that this tension plays out in the roles of front-line workers. Furthermore, following Wakefield (2003) and Thumala et al. (2011), the impact of additional security duties on the quality of work as it is experienced by front-line workers is certainly open to question.

Studies of public private partnership in the delivery of government services in Britain have uncovered some similar phenomena. Under the rubric of new public management, attempts to ‘modernize’ government services, particularly Best Value (BV) and Public Private Partnerships (PPP) mirror and in many ways legitimize the outsourcing of national security activities under e-Borders. PPPs rely on private sector finance, managerial expertise and innovation to modernize public services (Smith, 2012) as sections of government agencies are given over to private sector management teams to bring them up to date. Its critics point out that because many stakeholders are involved and because power is distributed unequally between stakeholders, the interests of the least powerful – in other words, labour – will be sacrificed in the interests of profitability (Flecker and Meil, 2010; Smith, 2012). ‘Hidden costs’ relating to the impact on workers are in danger of being overlooked (Grimshaw et al., 2002). Empirical work which examines the impact of partnership programmes on working conditions confirms these fears. Under BV, Roper et al. (2005) found that staff and their unions benefitted the least in terms of morale, job satisfaction and pay and conditions. Taylor and Cooper (2008) reported appalling working conditions in a prison run under PPP, accompanied by a downward pressure on wages, high staff turnover and understaffing. Smith’s (2012) study of the National Savings partnership with outsource.com also reported that work intensification and proscriptive performance indicators (where the new company was fined for failure rather than rewarded for success) put pressure on workers. Deskilling following job standardization to ensure employment flexibility in shared service centres has also been observed (Howcroft and Richardson, 2012). While this literature outlines how the private outsourcing of government services is in danger of degrading work, an interesting finding concerns how the public sector service ethos remains intact in affected workers (Grugulis and Vincent, 2009; Hebson et al., 2003). Therefore, in addition to a detrimental impact on working conditions, reverse tensions where a public sector service ethos challenges the dominant private sector view may well occur in organizations affected by e-Borders.

In sum, widespread concern for security in the wake of international terrorism, rising government debt and an approach to governance which relies on outsourcing to reduce costs have each shaped the emergence of e-Borders. Nevertheless there are also some key differences between the nature of the e-Borders programme, the private security sector and PPPs which are worth noting. The security work which occurs in the private security sector and is discussed in its literature relates to security professionals: contractors in Iraq or Afghanistan, private police, security guards, technology vendors and trainers. Those affected by e-Borders are not security professionals and as such the security work they do needs to be examined as it intersects with their everyday tasks. Similarly, while the e-Borders programme as a whole could be viewed as a public private partnership, there are some crucial differences which certainly challenge whether the relationship between travel firms and the UK Border Agency is a partnership. Involvement in e-Borders is mandatory – there is no tendering process – and the air carriers have little or no bargaining power to shape the outcome of the programme despite having been ‘consulted’ as part of its Regulatory Impact Assessment. While PPP and BV concerned replacing government services with private sector expertise, e-Borders



extends the power of the UK Border Agency as private sector organizations provide it with data. e-Borders is governed by threat, through criminalization and fines, rather than through Key Performance Indicators. In investigating the impact of e-Borders, it is thus critical to consider workers' experiences not only in relation to management structures but also to the government infrastructures that transcend individual travel firms. To this end, this article draws on the theory of remediation and introduces the concept of remediation work to examine the impact of e-Borders on the front-line retail travel worker.

## Remediation work

Remediation refers to the incorporation of one medium into another and was originally employed to analyse the significance of new forms of digital media. Bolter and Grusin (2000: 183) state:

As a digital network, cyberspace remediates the electric communications networks of the past 150 years, the telegraph and the telephone; as virtual reality, it remediates the visual space of painting, film, and television; and as social space, it remediates such historical places as cities and parks and such 'nonplaces' as theme parks and shopping malls ... cyberspace refashions and extends earlier media, which are themselves embedded in material and social environments.

When considering remediation one might initially think of popular examples such as the change in the format of commercially available music from CD to MP3 and its impact on the recording industry. But remediation is also at the heart of e-Borders. The scheme is premised on the digital capture of paper passports – in other words, their representation in a new medium – at or around the point of sale of the travel product and before travellers arrive at the airport. The UKBA views e-Borders as an improvement on older methods of collecting passport information because it enables advance screening of the travelling population against international watch lists and behavioural indicators of risk (MacLeod and McLindin, 2011; Vakalis et al., 2011). Passports have always been scanned in the airport but their upstream capture in the commercial setting is a new development. Effectively they are remediated in a different time and space and by different social actors.

Remediation theory states that the act of remediation refashions the networks of actors, resources and other media that produce it while simultaneously bringing them together (see also Bowker and Star, 1999). In e-Borders, data transfer is achieved using newly purposed information infrastructures that span organizational and state boundaries. Thus, the newly remediated passport has the potential to reconfigure existing social, political and material orders in the contexts that bring it about, including those that affect employees. New activities arise from the collection and transfer of passport data, which connect local working conditions, politics and meaning systems within the organization to the governmental and organizational information infrastructures that bring the regime into being. By ensuring that passport data are captured and transferred, front-line workers are the link between the customer interacting with his/her organization *as the consumer of a travel product* and the customer becoming inscribed into a government surveillance regime *as a potential threat to national security*.

Retail travel industry infrastructures have made e-Borders burdensome for front-line retail travel workers. Retail travel focuses on travel for leisure purposes and the main product is the package holiday. These products, sold by tour operators and travel agents, combine several different elements, such as flights, accommodation, car hire, excursions, insurance and other extras and can be bought in high street travel agencies or online. The airlines involved are 'charter airlines' and they are just one element of a complex travel product. Yet it is airlines that must transfer passport information to the UKBA. As tour operators charter seats on different airlines and as they have direct contact with the customer, it has become the responsibility of tour operators and travel agents to collect passport information on the airlines' behalf. Without the help of Global Distribution Systems the retail travel sector had to design their own ways to capture and transfer data under e-Borders. It was the nascent nature of these systems that made breakdowns likely because e-Borders had effectively re-constituted the point of customer contact as the point of passport data capture. Indeed an important double meaning of remediation work extends to activities of repair (Graham and Thrift, 2007) and some difficulty is expected when combining the information infrastructures of different organizations and the state. The data highlight that e-Borders compliance at an operational level is a highly contingent and emergent activity which bridges gaps and smooths over the joins between infrastructures, customers, organizations and the government. Remediation work is now explored empirically.

## Cases and method

This article draws on multiple data sources: 28 interviews were conducted. Nine of these were key informant interviews with regulators, executives and industry bodies. The other 17 were within-organization case study interviews with managers, supervisors and front-line workers. All the interviews were combined with field observations, media reports, government, regulatory and company documentation to produce the description of the programme featured in the first part of this article (Geertz, 1973). Data were selected from a wider project which also featured an industry survey of company adaptations to e-Borders. In the following pages, the results of a thematic analysis of interviews with front-line workers, their supervisors and managers, together with observations of their activities, explore the concept of remediation work (Boyatzis, 1998).

In order to examine the impact of e-Borders on front-line workers, the different points of sale/passport data capture were first defined. Since the rise of the internet, the retail travel industry's points of sale have expanded to include high street shops, telephone reservations call centres and websites belonging to tour operators, travel agencies and 'screen scraper' websites which display deals from across the sector. Access was negotiated to sites that represented each of these different points of sale. Site one: a customer services call centre of a large tour operator which also had a strong online presence and its own airline; site two: a large retail travel agency operating on the high street but also with online outlets; and site three: a small tour operation business and a small high street travel agency with only one high street branch.

Five workers from a customer service call centre were interviewed in site one. To comply with e-Borders, the organization produced a website on which its customers

were encouraged to enter their passport details after booking their holidays. A researcher observed a team of airline call centre workers over the period of one hour. Observations captured the relentless stream of simple e-Borders calls which comprised 80 per cent of the calls received. Six customer-facing employees were interviewed and observed from a branch as well as the head office in site two. As travel agents, they handled reservations for a wide array of tour operators, airlines and cruise companies. Travel agents needed to be familiar with each of these systems to advise their clients when to provide their passport details. A temporary worker was employed just to input API data into the operators' websites. This worker was observed for a one hour session and contemporaneous notes were taken. Six staff members were interviewed and observed in site three. Its retail operation faced the same difficulties as site two. However, its business travel operations were not challenged by e-Borders requirements as they already used a Global Distribution System. Both retail and business travel agents were observed for periods during a two-day field visit. Business agents demonstrated the ease and flexibility of a GDS for e-Borders whereas retail agents demonstrated the wide range of websites, additional documentation and checklists generated by the competing requirements of different operators and airlines.

Interviews were semi-structured, lasted an hour and focused on the impact of e-Borders on everyday working practices. Working practices were also explored: customer interactions, the technology used, expected work rates, modes of feedback and training and development opportunities were covered. Observation was conducted using a verbal protocol technique where employees were prompted to describe their actions as they worked or shortly afterwards. Although several visits were made to the sites to collect data, the pace and intensity of work limited the time spent with employees. Due to these limitations, interpretations of data derived from observations and interviews were triangulated with data gathered from textual sources and key informants. Data were coded and analysed using Nvivo software. Two coders generated the initial codes and the research team then refined and discussed the codes in a series of coding workshops. The central code was the 'impact' of the programme. Sub-codes referred to how employees' roles in the organization had changed or been adapted as a result. These data were used to explore the notion of remediation work, which is discussed next.

## Findings: remediation work

Remediation work has two components. The first concerns the act of *transforming media*, i.e. in this case the inputting of passport data into an information system. The second concerns *reconfiguring resources* to constitute a working infrastructure which enables the first component to happen: as Bolter and Grusin (2000) argue, a refashioning of reality accompanies remediation.

### *Transforming media*

The primary impact of e-Borders was that employees had to ensure that passport numbers and names were transformed into digital information which could be sent to the relevant airline and on to the UKBA. Because remediation work is a different activity to

that of their primary employment, its introduction represented a de facto work intensification. It comprised extra tasks for which workers were not rewarded, either formally or informally. In site one, problems arose when the customer was asked to enter their passport data into a dedicated e-Borders website. The website asked for a booking reference, customer names and the passport numbers of each customer. Customers entered the wrong booking references, they typed their names in the wrong format and when their input was rejected they panicked and called the call centre, where the front-line workers began to remediate. Workers took passport details from customers and completed the inputting while they were on the phone. Call centre workers were initially told that the call centre could expect 100 e-Borders related calls a week. However, they received 500–600 calls per day, most of which required them either to input information on the customer's behalf or to advise customers how to do so themselves.

From the outset, sites two and three took the responsibility of ensuring that the customer had provided their information in time. If they failed to do so, there was a danger the customer would go to a tour operator's website to input their data and get a better deal, losing the travel agency money. Inputting passport data added, on average, 15 minutes to every customer interaction. A branch manager in site two noted, 'I moan at them when they're not hitting their targets and they're going, "Well, I've got this pile of admin to get through".' In site three, employees commented that e-Borders had doubled their workload because of the amount of time spent chasing customers for their passport information and checking that it had been received and input in time. A site two employee explained:

We were adding a whole operational process into how we manage customers and indeed a whole operational cost associated with that, because we would effectively go onto the website as the customer, load their details on their behalf, meet the obligations that the tour operator needs, but actually have to go through a whole piece of work to make sure that we did it.

### *Reconfiguring resources*

The second element of remediation work concerns how employees reconfigured the available resources to embed e-Borders requirements into their working practices. Employees used existing technologies, procedures, materials and personal insights to ensure passport data were transferred. Three separate activities emerged through which this was achieved: *integrating*, *reassembling* and *pre-empting*. The data illustrate that resource reconfiguration was an uncomfortable process.

*Integrating.* The first challenge front-line workers faced was to integrate remediation work into everyday work procedures to reconcile their regulatory and business responsibilities. The interviews highlighted how e-Borders was almost a 'dance' where responsibility was passed between customers, employees and their supervisors. Employees and supervisors struggled to prioritize the performative requirements of their roles and commercial responsibilities with e-Borders. The integrating task illustrates how passport remediation begins to remediate the travel purchase process itself.

Site one's experience shows that e-Borders requirements sat uncomfortably alongside existing infrastructures and working practices. Employees' lack of control over call volumes, systems and customer sentiments resulted in demoralization in the face of high numbers of queries. As one supervisor commented, 'If you are taking 80 of the same thing, of course you're going to be demoralized.' To this end, managers at each site encouraged staff to treat e-Borders contacts as sales opportunities and to see something which was ultimately dull in a more positive light. Supervisors in site one told the call centre staff to ask frustrated customers about their forthcoming holidays and try to sell them extras, e.g. extra legroom seats or car hire. This supervisor explained:

I think it's a sales opportunity for them and I try and tell them in their call coaching sessions to sell ... A call is a call at the end of the day and we should be appreciative that we've got calls, because we've got a job.

However, because the calls were from frustrated customers and because there was sometimes little a worker could do to alleviate, for example, a system problem that was preventing the input of data, more tension and frustration resulted. A site one employee described how difficult these situations sometimes were:

All I know is that the passenger's shouting because they can't travel on Saturday because 'I can't put the details in and I'm going to cancel that flight' ... I didn't put that on there and I'm sure you can travel ... I understand you're shouting at me because you want to do it, but ... the NW174 files haven't downloaded into Links ....

Here the employee refers to systems over which the employees have no control. NW174 files contained booking data and took 24 hours to download into the database (called Links) which powered the e-Borders customer website. If customers attempted to enter passport information in that 24-hour period after booking their travel, the company's e-Borders website did not recognize their booking. Once the employee had explained this to the customer, there was little willingness on either side to explore sales opportunities.

Staff in site three saw e-Borders as a direct threat to their business and so responded by collecting unnecessary information from customers. They were keen to integrate e-Borders requirements as quickly as possible in order that they did not lose customers to competitors. The following comment of the agency's general manager highlights the threat of e-Borders to the business and how it has intensified the collection of passenger information:

I think we got to the stage where it was the more information you gather and put it on, then you can't go wrong with it because you don't want to be the one with the person without the information being refused travel.

Although different integration activities were observed in sites one and three, it is significant that one's future in the travel industry, either as an employee or as an organization, was invoked as a rationale for compliance in both instances. In site one, the supervisor

stated that one should be grateful for a job; and in site three the general manager strongly implied long term detriment to the business if a customer was refused travel. There was little room for manoeuvre.

*Reassembling.* To ensure passport data were transferred, existing and new resources were reassembled, effectively bridging the gaps between business and e-Borders infrastructures. This also invokes the double meaning of remediation: repair. This was particularly the case in sites two and three, the travel agencies. For them, e-Borders turned into a juggling act between the systems of different tour operators and airlines. Staff described this in detail, demonstrating their deep working knowledge of numerous operator sites and systems so that they could enter passport details.

The observation of site two's e-Borders temp highlights this aspect of remediation work. Sitting at a single desk in a large open-plan space she had devised her own way around existing corporate information systems, external websites, self-styled paper filing systems and tallies to manage a baffling array of e-Borders requirements. Extraordinarily calm, well organized and diligent she confidently fielded phone calls from panicking travel agents, homeworkers and customers who were struggling to enter their data, reel-ing off the requirements of different airlines by heart. The budget airlines accepted e-Borders data on booking and would refuse travel to those who had not provided passport detail in advance; some tour operators only accepted this detail within eight weeks of departure; others accepted it up to six months before the departure date; for one airline, a specific reference was needed; for another, if a passport number was not provided, the customer could not book a ticket at all. Passport information also had to be provided for each name on the booking, not just the name of the person who made the booking (known as the 'lead name'). The entirety of this temp's work involved inputting the passport information of different customers into different systems at the right time. The complexity of the work she undertook was typical of the way in which the everyday jobs of every retail travel agent had changed as a result of e-Borders.

Back office organization had changed too. Staff in site three had restructured their entire filing system to ensure that the customer had provided their passport information. As they used paper files, they devised checklists to keep track of customers' passport details. Each retail travel interviewee reported how their desks had become piled high with paper files because of the number of outstanding passport queries:

We have in our files, I can show you paperwork, in our files we would be thinking 'right passenger's booking form you're required to do that' and then we need to check that they've physically done it and write 'yes passengers have done it on such a such date' to keep ourselves right. So it's all about I suppose covering yourself.

The interviewee's use of the phrase 'covering yourself' indicates the increased levels of responsibility and even liability felt as a result of e-Borders.

*Pre-empting.* The final activity, pre-empting, involves the employees' deployment of their tacit knowledge of travel customer behaviour to second guess the customers' propensity to either ignore or misunderstand e-Borders requirements which were typically

described in the ‘small print’ of their bookings. Customers missed the e-Borders requirement in different ways: by misreading obvious instructions, by being too laid back about the importance of passport information or by not being an experienced enough traveller to know what to look for. In describing this phenomenon, interviewees in sites one and three also acknowledge that this is a source of extra work. In site three, sales staff were aware that customers were likely to ignore the small print and pursued customers relentlessly for their information:

We would need to be chasing them to make sure [they’d] done it because nine times out of ten a lot of people don’t read all the small print and with the confirmation you probably get about six pages of it. They probably look at the front bit and go, yes great gone.

Imploring passengers verbally was another way travel agents handled this duty. Staff at site three, already annoyed by the burden of e-Borders, were frustrated by the attitude of some passengers, given the extra work required:

It’s just more time and no money for it. And the annoying thing is with some passengers that maybe don’t travel very often they’re just like ‘Oh it’s okay I’ll bring the passport in one day, it’s nothing to worry about.’ But you can’t stress enough with some destinations, it has to be in, you’ve got to come in with it.

Workers in site one also reported that experienced travellers would enter their data correctly and follow the right instructions at the right time. Others, who one worker complained ‘didn’t use their head’, would phone them in a panic, prompted by the company website:

It’s quite clear enough for somebody that travels a lot and uses their head, but there’s a lot of people that it’s not clear for; even though it’s there in black and white – ‘please do this’ ... It needs to be bigger and it needs to be bolder. It needs to be really obvious, but I think the boldest bit is our phone number.

Whether passengers were unthinking, laid back, evasive or reluctant to provide their passport data, these scenarios demonstrate the lengths to which front-line workers went, as well as the frustration, anxiety and stress they reported experiencing, to ensure passport data were captured and transferred in time. As well as having to input data, employees worked to bring the customer, with their passport, to the right information system at the right time, while not damaging the interests of their employer or affecting their own outputs. These activities, as captured through the concept of remediation work and its associated activities, describe the operational burden of the programme and some of its hidden costs.

## Discussion

As the data illustrate, the e-Borders programme has placed increased workload and additional responsibilities on front-line staff in a tour operator and two travel agents in

the retail travel sector. These activities are characterized here using the term 'remediation work'. Remediation work refers to the additional duties associated with e-Borders and involves two elements: remediating passport information in a newly mobile digital form and bringing together existing resources to ensure that this occurs. This work was done for no extra reward to feed the UKBA's surveillance apparatus: remediation work points back to those infrastructures which enable it to take place. Indeed one of the concept's strengths is that it enables concrete work activities to be understood in a context which extends beyond the employer to other institutions via pan-organizational information infrastructures (Bowker and Star, 1999). e-Borders views airlines and their supply chains as an extension of the UKBA and as a source of surveillance data. A working compatibility was instigated by employees between a host of elements to capture and manage passport information. At times, this entailed bridging infrastructural gaps, inventing new processes and documentation and placating angry customers. Employees repaired misalignments in the infrastructure, enacting the important double meaning of remediation work, 'remedial' work, by enabling passport data to flow (Graham and Thrift, 2007). Thus, the activities of integrating e-Borders into business processes (integrating), bridging gaps between business and regulatory infrastructures (reassembling) and employing tacit knowledge of customers (pre-empting) arose, representing an intensification of work. This was particularly the case in site one (a tour operator), in which the workload was directly affected by a badly designed customer website, which has since been rectified. However, in sites two and three (retail travel agencies), the nature of front-line work has been permanently altered. Agents were required to gather and input data into a wide array of tour operator websites under the threat of losing the customer, revenues and, by extension, their jobs. Other infrastructural elements include national and international legal systems, industry practices, industry structures and systems, each of which had a constitutive effect on the programme as it was experienced by front-line workers.

'Remediation work' is an important new category of security work as the employee transforms the customer into the subject of a security regime by remediating their passport data. Customer-facing travel employees are not security specialists; they were utilized in a data gathering capacity by a national security regime via their employers which were deputized to it by law. Employees characterized the work as mundane, which resonates with published understandings of security work (Wakefield, 2003). The tensions invoked through 'integrating' remediation work, where employees tried to combine e-Borders data capture with their everyday work, also resonate with the dialectical relationship predicted between profit and public oriented security values by White (2011). While public sector employees have been observed to struggle with a private sector ethos many times (Grugulis and Vincent, 2009), this article demonstrates that the reverse is also true (see also Van Calster, 2011). Remediation work was viewed to obstruct job priorities, with anxiety and frustration resulting. Through 'reassembling', workers created a bridge between the customer as a customer and as a potential security risk, thus further highlighting the dialectic. Through 'pre-empting', the resolution of this tension was partly achieved as employees applied their tacit knowledge to help them deal with, as well as vent their frustration over, e-Borders requirements. Evidence was also presented which identified how remediation work represented work intensification,



resonating with studies of public private partnership which identify declining labour conditions as a problematic outcome of the process (Grimshaw et al., 2002; Howcroft and Richardson, 2012; Roper et al., 2005; Taylor and Cooper, 2008). Of particular salience are Flecker and Meil's (2010) observations that those with the least bargaining power gain the least from such activities: there was little or no room for negotiation of remediation work in any of the research sites. Customer-facing employees were the least powerful stakeholders on the edge of e-Borders infrastructures. Yet they played a pivotal role in enrolling the customer into a security relationship with the state as they purchased and consumed a travel product. It felt as if these employees were picking up the pieces after a stream of decisions in which the interests of their entire industrial sector, let alone employees within that sector, had been overlooked.

## Conclusion

This article addressed how developments in national security have affected the roles of front-line workers in the travel sector. Using remediation (Bolter and Grusin, 2000), as well as drawing on a significant body of work concerning the privatization of security and public private partnership, data have been presented which expose how surveillance-based regulation intensified the jobs of front-line retail travel workers and created a new type of activity: 'remediation work'. This is a conceptual innovation that facilitates understanding of the additional burdens placed on employees by security regulations such as e-Borders. Remediation work can be applied to numerous situations in which information is re-purposed and re-packaged for regulatory ends. Recent examples include the current UK government's Prevent strategy (Home Office, 2011), which calls for heightened vigilance in combatting terrorism by universities or city councils; and the Protection of Freedoms Bill which involves communications service providers. This category of work serves as an important vehicle through which the hidden costs of national security regulation can be foregrounded.

It is acknowledged that this article is an initial exploration into the growing trend of involving the private sector in national security and that further research is warranted. No previous empirical research on this issue has been undertaken. The current article seeks to conceptualize the observed impact on front-line workers and has done so within the limits of its data set as well as relevant research published to date. Further analysis at other relevant sites where customer data are securitized by front-line workers would be beneficial. Closer examination of the differences between different points of sale and at points in the supply chain may also be illuminating. Time, funding and access limitations meant that this was not possible in the current research. Indeed further research using this concept may reveal additional qualities of remediation work which occur. It would be equally valuable to observe consumer experiences of such matters both in depth and at scale. As the Home Affairs Select Committee (2009) has warned, e-Borders may infringe on passengers' rights to travel, yet the mechanics and implications of collecting their data prevail. The travel industry has been recruited and is implicit in the collection of data that has little or no legal fortitude. Despite this, the programme remains and front-line workers remediate passports under considerable strain in this emerging political economy of surveillance-intensive national security.

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