

Interacting forms of expertise in security governance : the example of CCTV surveillance at Geneva International Airport¹

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Abstract

The paper investigates the multiple public-private exchanges and cooperation involved in the installation and development of CCTV surveillance at Geneva International Airport. Emphasis is placed on the interacting forms of authority and expertise of five parties: the user(s), owner and supplier of the camera system, as well as the technical managers of the airport and the Swiss regulatory bodies in airport security. While placing the issues of airport surveillance in the particular context of a specific range of projects and transformations relating to the developments of CCTV at Geneva Airport, the paper not only provides important insights into the micro-politics of surveillance at Geneva Airport, but aims to re-institute these as part of a broader 'problematic': the mediating role of expertise and the growing functional fragmentation of authority in contemporary security governance. On this basis, the paper also exemplifies the growing mutual interdependencies between security and business interests in the ever growing 'surveillant assemblage' in contemporary security governance.

Keywords: Surveillance; airport; CCTV; expertise; security governance

Introduction

As national entrance gates of critical economic and symbolic importance, international airports are amongst the most iconographic sites of both the opportunities and the vulnerabilities of globalization (Salter 2008a). Consequently, airport security has been a critical issue for decades, from the first airplane hijackings in the 1930s and 1940s to the current context of the war on terror. The history of the airport, thus, is also the history of the security concerns, discourses and practices related to the aviation sector.

In recent years, the security issues at airports were not only forcefully reiterated by a series of dramatic incidents – from the 9/11 attacks to the alleged London aircraft plot in August 2006 and the 2007 attacks on Glasgow Airport – but also subjected to repeated academic scrutiny. Echoing the substantial increase of airport surveillance in the twenty-first century, a growing literature has sought to examine the modalities and challenges of security governance in the aviation sector (e.g. Lisle 2003; Salter 2008b) and to critically reflect upon the wider socio-political implications of the extended and re-designed filtering and screening of international mobilities *through* the airport (Lyon 2003; Salter 2004; Adey 2004a; Adey 2004b). Adding to this, a growing body of work has aimed to investigate the increased surveillance of micro-scale movements and behaviours of airport customers that occur *within* the publicly accessible shopping and arrival zones of the airport itself (Fuller 2002; Adey 2004a; Klausner, Ruegg and November 2008). On this basis, airports have been characterized not only as detached worlds of flows (Castells 1996) and of perpetual transit (Fuller 2003), but also as highly monitored places of consumption in their own right.

Yet, despite this increasingly developed body of research, there is still very little empirical evidence about the everyday surveillance practices and techniques through which passenger flows are screened and profiled at specific airports. Furthermore, little is known about the actors and interests involved in the gradual developments and adjustments of these monitoring techniques. The often rather general tone and research focus of the existing literature on the securitization and surveillance of ‘the airport’ thus often induces a kind of distancing from actual existing airports, which tends to further exacerbate the alleged ‘placelessness’ of the airport. In addition, although the existing literature has provided important insights into the airport as a multifaceted and increasingly powerful ‘machine for processing and controlling mobility’ (Fuller and Harley 2005: 43), in which ‘all movement is controlled, from the planes on the apron to the corralling of passengers in retail areas’ (Fuller 2002: 133), little critical attention has been paid to the actual shortcomings and failures of airport security (Bazerman and Watkins 2005).

Approach

This paper aims to address the important gap of empirical research on security governance and surveillance issues in the airport environment. More specifically, it provides an empirically-based examination of the multiple public-private exchanges and cooperation involved in the setting up and developments of CCTV surveillance at Geneva International Airport. Thus, the research approach which is pursued here is to focus on the micro-level,

locating the issues of airport surveillance in the particular context of a specific range of projects and transformations relating to the developments of CCTV at Geneva International Airport.

Conceptually, the paper is rooted in an STS-based line of thinking, as developed by Bruno Latour and Michel Callon amongst others (e.g. Latour 1987; Jasanoff et al. 1994; Vinck 1995; Callon and Law 1997; Callon, Lascoumes and Barthe 2001). Considering CCTV as a dynamic socio-technical construction which is constantly ‘in the making’, video-surveillance at Geneva Airport will be studied from the perspective of the processes of bringing the system into service, i.e. as the subject of constant research and development, requiring a whole series of micro-negotiations and micro-decisions taken by a large variety of parties. More particularly, the paper seeks to assess the role of different forms of ‘expertise’ (expert knowledge) in the distribution of ‘authority’ (the power to act and decide considered legitimate by the involved actors) in the installation and development of airport CCTV.

This emphasis on the notions of ‘expertise’ and ‘authority’ derives strong inspiration from Actor-Network Theory, and more specifically from Madeleine Akrich and Cécile Méadel’s (1999) detailed empirical investigations of the complex and contingent interactions between the actors, interests and domains of expertise involved in the planning, installation and development of particular surveillance systems. Following the proposals of Akrich and Méadel, the paper starts from the assertion that the planning, setting up and developments of CCTV at Geneva Airport cannot be explained by referring exclusively to the formal competences of the relevant airport and police authorities. Rather, these processes are the product of complex relationships, which are mediated by the interacting domains of expertise of a wide range of actors, from the user(s) and owner, to the technical manager and supplier of the system.

Yet, my aim is not only to provide isolated insights into the micro-politics of surveillance at Geneva Airport, but to re-institute this question as part of a broader problematic: the mediating role of expertise and the growing functional fragmentation of authority in contemporary security governance. The installation and developments of CCTV surveillance at Geneva International Airport will thus be studied as an exemplary illustration of a broader set of questions:

- What role are different forms of expertise playing in the making of security governance in the airport context, from the project stage to the daily uses and further improvement of specific surveillance devices?
- What does the ‘problematic’ of CCTV surveillance at Geneva airport tell us about the role of expertise in contemporary security governance?

My empirically informed investigation of the mediating role of expertise in the making of CCTV surveillance at Geneva International Airport thus connects neatly with the growing interdisciplinary literature about the shifting

modes of governance and authority in the late twentieth and early twenty-first centuries. This literature, based on the understanding of 'governance' in terms of 'authority' rather than jurisdiction (Lipschutz 1999: 260), or, in Ernst-Otto Czempiel's words, as the 'capacity to get things done without the legal competence to command that they be done' (Czempiel 1992: 250), has sought to challenge conventional notions of how the state exercises authority in an age of globalization. Hence, important insights have been gained into the role of professional experts, whose importance in contemporary modes of governance both from a general perspective (e.g. Streeck and Schmitter 1985; Czempiel 1992; Roseanau 1997; Cutler, Haufler and Porter 1999; Lipschutz 1999; Collins and Evans 2007) and from a specific security viewpoint (e.g. Dillon and Reid 2001; Amoore and De Goede 2005) cannot be overrated.

However, while the roles and impacts of the new public-private, local-national-global coalitions of authority in contemporary security governance have been acknowledged both in general and in the airport context more specifically, there is a pressing need to better understand the precise manner in which the various knowledges and practices of security merge (in consensus and conflict) within a particular micro-milieu, and the ramifications this has. Focussing on the example of CCTV surveillance at Geneva Airport, the following analysis is searching for answers to precisely this question.

Methodology

The paper draws upon rich empirical insights provided by a two year research project funded by the Swiss National Science Foundation (Ruegg et al. 2006). Based on two case studies – CCTV in public transport in Geneva and, as explored in this paper, CCTV at Geneva International Airport – the overall objective of the project was to examine the complexity of factors that contribute to the functioning and impact of the ever growing 'surveillant assemblage' in contemporary security governance (Haggerty and Ericson 2000). On this basis, and given the involvement of both social scientists and legal specialists in the research team, the project also aimed to provide empirically-based insights into the main regulation challenges in contemporary, security-related 'technopolitics' (Mitchell 2002: 43) and into the potential of legal rules available in order to regulate the growing use of surveillance technologies for security and control purposes.

As regards the study of CCTV surveillance at Geneva International Airport more specifically, eleven open-ended, qualitative interviews with the key actors, involved in the planning, installation, use and development of the airport CCTV system were conducted. Facilitated by strong, long-term relations and established terms of collaboration with political, police and airport authorities in Geneva, a series of preliminary meetings with senior members of

police at Geneva International Airport were held in 2003/2004. These meetings not only served to design and plan the main modalities of field work, but also to map the main police bodies and airport services involved in the history of CCTV at Geneva Airport. The key players in the development of CCTV at Geneva Airport were thus identified in consultation with senior members of police, and subsequently contacted in a first series of interviews in 2004/2005, including the current and former heads of airport police, the head of the airport police control room, two police CCTV operators, as well as representatives from both the airport's technical and legal services. The insights gained into the functioning and history of airport CCTV were further developed in a second series of interviews. For this purpose, additional parties were identified, whose roles in the installation and developments of the airport CCTV system were discovered in the first interview series (including system suppliers as well as local political authorities and commissions).

Interviews were based on a list of 15 key research topics and issues, which was submitted to each interviewee before the meeting. Thematically, this list was divided into three main parts: firstly, the risks and security threats at the airport, with a specific focus on the publicly accessible airport sections. Secondly, the objectives and uses of CCTV, as well as the role and integration of CCTV within the airport security system as a whole. Thirdly, the history of CCTV at Geneva Airport, focusing especially on the actor networks and decision-making processes involved in the planning, setting up and further developments of the camera system.

In addition, the modalities of everyday camera uses at the airport were studied during one week of observational research in the airport police control room, a methodological approach which will however not be explored in this paper. In order to give a strong focus to the paper's account, my empirical analysis that follows will be limited to the third thematic emphasis, covered by the conducted qualitative interviews (for a larger discussion, see Ruegg et al. 2006).

Content

The following analysis is divided into four main parts. The paper starts with a general discussion of the public–private coalition of interests in the installation of airport CCTV at Geneva. The following parts succinctly discuss the installation and development of CCTV at Geneva Airport from the airport police's perspective (1), the airport's management and technical services point of view (2), as well as from the private CCTV supplier's perspective (3). In this, emphasis is placed on the relationships between these parties, as well as on the interactions between their different forms of authority and expertise. On this basis, the paper concludes with a more general discussion of the current logics and problems of public–private interdependences in security governance.

A local coalition of interests in the installation of airport CCTV

In 1996, the first 13 police cameras were installed in the check-in and arrival hall at Geneva International Airport. Our interviewees agreed that at this time, the project was mainly legitimized as a necessary policing measure in the fight against the rising problem of petty criminality in the airport.

At the time we installed CCTV in the airport's public premises, a series of problems of petty criminality were apparent. The police said we neither have the means to increase human presence nor to install further technical equipment. Given the fact that the airport management was afraid of Geneva Airport becoming the meeting space for any sort of petty theft, negotiations had to set in: 'If we pay the equipment, would you be ready to put somebody behind the video screens?' I'd think that this was much more a matter of dialogue than an application of strict rules. Eventually, it was done like this and everybody was happy. (Senior member of technical service at Geneva Airport)²

What seems to be a minor episode in the account of our interviewee provides a series of significant insights into the procedures at work in the planning and setting up of CCTV at Geneva Airport. A key dimension of the emerging picture is that CCTV at Geneva Airport was born from a strong, locally-anchored coalition of interests between the police and the airport management. In our interviews, there was indeed no mention of any national coordination in the matter of airport CCTV at Geneva. Rather than being imposed externally, CCTV was developed in a series of internal exchanges and bottom-up planning processes. This conclusion is further confirmed by a legal notice dating from 1997, resuming the cantonally – not nationally – established legal conditions for the use of CCTV at Geneva International Airport (Etat de Genève 1997).

Yet, although the airport CCTV project was developed from a bottom-up initiative, the apparent absence of any coordinated, national approach in airport CCTV surveillance is a fact worth pondering. Interviewees repeatedly emphasized that since 9/11, security standards at the airport were dramatically increased and rigidified by the Swiss regulatory body of civil aviation.

The issue [of security] was always present. Yet, it is no secret to say that since 9/11, the position of the regulatory organs has been rigidified. Since 9/11, we are exposed to increased pressures. Security measures have been dramatically increased in terms of passenger, airport personnel and luggage controls. (Senior member of technical service at Geneva Airport)

In this light, there is good reason to assert that if CCTV surveillance had not been developed from the local level, it would have been imposed as a result of the rising external pressures after 9/11. How exactly these pressures

materialize in new or re-tooled airport surveillance can be illustrated by the example of the recently reinforced access control measures for airport employees at Geneva Airport.

The project of access control was demanded by the Federal Office of Civil Aviation [FOCA], telling us ‘You must improve your system of internal control’. Thus, we discussed different possible measures with them and eventually got our project validated. Clearly, there was also the question ‘What about biometrics?’ [...] The airport had asked the FOCA about this, saying ‘We do not really want to embark on biometrics now, what do you think?’ The FOCA then responded ‘Biometrics is not meant to be imposed at the moment. But be prepared to install it later on’. (Member, technical service at Geneva Airport).

Going back to the history of CCTV surveillance at Geneva Airport more specifically, we see that from the initial, locally-anchored negotiations between the airport authorities and the airport police, a hybrid situation of shared competences and authority in the CCTV system developed: the police operate CCTV, while the airport covers all relevant material and installation costs. This situation has remained unchanged throughout the numerous gradual adaptations and extensions of airport CCTV in recent years: since the first cameras were installed in 1996, the number of cameras increased to 20 in 2006, technical features have been extended (e.g. from analogue to digital surveillance) and old cameras have been re-positioned in order to improve the system’s performance.

Yet, despite the routinized collaboration between the airport management and the airport police in the matter of CCTV, the modalities of collaboration have never been the object of any formalized agreement or explicit legal notice. The study of the ties, exchanges and cooperation through which CCTV surveillance at Geneva International Airport has become practically operational must therefore rely exclusively on the empirical information provided by the numerous interviews conducted in our research.

Airport police: legal authority and practical expertise in airport security

Amongst other duties, the airport police, an entity of the cantonal police at Geneva, are commissioned with the ‘the securitization of the airport installations, official buildings, tarmac, runways, airplanes on the ground and of the airport territory’ (Etat de Genève 2001: Art 2). Naturally, this mission confers to the airport police strong legal authority in the installation, use and developments of the airport CCTV system. In our interviews, the airport police were indeed unanimously described as the only CCTV operating and using authority at Geneva International Airport.

Yet, to the police's legally defined position in connection with airport surveillance, a second source of authority must be added. On the basis of our interviews, we indeed see that in practice, the police's authority in the multiple negotiations and interactions relating to airport CCTV was above all conditioned by their long-term, locally-anchored experiences in airport security. For example, only the police could accurately decide where to locate and how to position the cameras in order to cover the most sensible and strategically important spots in the airport.

One day, we all met with some cameras, a trolley and a screen. Then, we installed this equipment, looking at the resulting fields of vision of the cameras. Based on our crime investigation department's information about thefts and other offences, we proceeded to do some detailed adjustments, in order to find exactly those places which corresponded with our needs. We did this with all cameras and for all places which we had determined before. (Head, airport police control room)

The previous quote not only highlights the strong impact of the police's *practical knowledge* upon the airport CCTV system. The episode of the cameras lying on a trolley and being pushed through the airport in search of the best installation points is indeed of more general value. Capturing one of the key moments in the installation processes of CCTV, it provides a symptomatic example of the role of experimentation in the setting up of the system. Furthermore, with the cameras lying literally in the centre of the circle of assembled key players in the development of the system (amongst which have been present not only the airport police but also the airport's technical service and the camera supply company), the example also powerfully reiterates the nature of airport security governance as a process of interacting forms of expertise, security conceptions, discourses and practices, which are fusing, blending and connecting momentarily around specific projects.

Returning more specifically to the question of the mediating role of the police's experiences and practical knowledge in the development of airport CCTV, it appears from our interviews that over time, most adaptations of the system were actually driven by practical needs, emerging from everyday surveillance practices by the police. To the police's authority, derived from their experience in combating crime in the airport, a second layer must thus be added, referring to the police's specific experiences in using CCTV. Driven by new, practically-anchored needs to adapt and further develop the existing CCTV system, the airport police were characterized as being very active in trying to find new solutions to facilitate daily surveillance practices, without however being able to change the system's modalities on their own.

Whenever we can, we are looking for new solutions. It is always interesting for us to know about new developments. However, on our level, we are

neither the manager of the airport nor do we pay for the system. Therefore, we are mainly observing. If we are interested in one particular system, we may report to the airport management, who will then decide whether or not to go further and get additional information about the cost etc. Perhaps, this will lead to something, which we will be able to integrate. (Head, airport police department)

Yet, the police's practical experiences, as one of the main driving forces of the system's evolution, are not only anchored locally, but must be viewed along with the experiences of other police departments – both nationally and internationally, both in the airport context and elsewhere – which were strongly valorized in connection with the developments of CCTV at Geneva airport.

We pay attention to everything that's written and discussed. [...] We're obviously in permanent contact with the airport police in Zurich. Zurich Airport being much more important than Geneva, we consider that if there's a system with very good results in Zurich, it will also be successful in our case. (Head, airport police control room)

Overall, it thus appears that for numerous legally and practically, locally and nationally defined reasons, the police are playing an extremely important role in the matter of airport surveillance. At the same time, however, the police's authority in the airport CCTV system is also subject to important limitations: the police use CCTV, but do not pay for its installation or material costs; the police know the airport environment from a security point of view, but not from the perspective of the airport's technical installations and configurations; the police discover new needs to adapt and to further extend the CCTV system, but do not know the newest technological solutions on the market. It is to these limitations that I will turn my attention in the following.

The airport: financial power and technical expertise in the airport

Contrary to the police's legal authority and practical legitimacy in the developments of airport CCTV, the airport management accumulates its force of authority upon the system on a financial level. *De facto*, developments, improvements or extensions of the system must be formally addressed to and acknowledged by the airport authorities. Thus, the airport's role is not only to finance, facilitate and organize CCTV, but also to control and if necessary to restrict any developments considered inaccurate or too expensive.

However, if we look more specifically at the processes, practices and relationships through which the airport CCTV system has been technically adapted, developed and geographically extended over time, we see that in practice, it is not so much the airport management itself but rather its technical

service, which is playing the role of a ‘gate keeper’ for any CCTV-related police demands. In this, the technical service’s position is defined by the *technical expertise* which is required to install, connect and manage the airport CCTV system. Neither the police nor the airport authorities have the competences and abilities to deal with the complex technical configuration of the airport, as a burgeoning socio-technical universe in constant transformation (Pascoe 2001). In respect to the decision-making processes about airport surveillance, it thus appears that competences are shared amongst the users of the system (the police), the owner of the system (the airport management) and the technical managers of the system (the airport’s technical service).

We are contributing a lot to the installation of the system, namely because of our knowledge about the airport. Thanks to our experience, we know much more than anybody else about the possibilities to install such-and-such a camera at such-and-such a place. We can also show how to connect cameras, which is very important for the cost estimation of the system, for there are all the same several kilometres between different airport zones. (Senior member of technical service at Geneva Airport)

Furthermore, the airport’s technical service plays an important role in the relationships with external CCTV suppliers, with whom it is in direct and permanent contact. These relationships with external business companies, as well as the technical service’s frequent interactions with counterparts from other airports, further contribute in strengthening its position in dealing with CCTV. Following from this, and in addition to the already mentioned police network, a second type of national/international network can be identified which is strongly influencing local decisions about CCTV at Geneva Airport.

I share information above all with technical counterparts at other places. These exchanges are mostly informal ‘I’ve seen such-and-such a thing at such-and-such a place, do you know this?’ ‘Yes, I know, what do you think about it?’ There are also some people asking to see us and discuss about our system. From time to time, we are approached to show what we have done here. (Senior member of technical service at Geneva Airport)

From this position, the technical service is likely to both actively and passively manage and coordinate the provision of new CCTV equipment. Its position is most active whenever it reviews and selects offers for new cameras or technical solutions which are born of its own expertise about CCTV technologies on the market. Its position is more passive whenever it regulates police demands which are born of pragmatic needs and associated with daily surveillance practices. In this sense the technical service is both the product and the producer of knowledge and practices, related to the conceptualization, management and use of CCTV.

The supplier and designer of the system: technical expertise in CCTV

When it comes to the application of new surveillance technologies, the role and technical expertise of private enterprises in boosting, presenting and selling new surveillance technologies, or supplying services to improve the already existing system, is of crucial importance. Yet, despite some occasional glimpses into the world of high-tech surveillance and big business (Davies 1996; Walton 2001), there is to date little empirical evidence of the increasingly important role of private companies in providing technologically-based solutions in matters of public safety and counter-terrorism policies. For example, very few academics have provided critical accounts of how exactly the alliances between users, owners and suppliers of security technologies are working on an everyday basis or of how exactly specific features and devices of surveillance are being advertised and promoted by private business companies, specializing in the instalment, use and management of surveillance technologies (Lyon 2004; Stevens 2004). The following analysis of the private technology supplier's role in the developments of CCTV at Geneva Airport thus also aims to contribute empirical evidence to this important research lacuna.

In our research, several interviews with suppliers of CCTV technology were conducted. On this basis, and following an earlier analysis of twelve internet sites of CCTV supply companies in Switzerland (November, Ruegg and Klauser 2003), three categories of overlapping roles or rather 'poles of competence' can be observed at the CCTV supply level: *producers*, *distributors* and *designers* of CCTV systems. At Geneva Airport, a combination of these roles can be examined, for example, in connection with the installation of additional airport surveillance cameras on the occasion of the 2003 G8 Summit in Evian, near to Geneva. The supply company of these cameras was founded in 1980 by two experts in radio-tv electronics, one of whom agreed to be interviewed for this research. Associated with several *CCTV producers* (manufacturers whose products relate to security or surveillance systems on the market, from camera lenses to automatic face or behaviour recognition software), the company's role at Geneva airport both consisted of providing the hardware and software of the system (*CCTV distributor*) and providing services and expertise related to the management and installation of the system (*CCTV designer*).

A closer look at the history of CCTV at Geneva Airport shows clearly that the airport management has always had a marked preference not just to purchase CCTV material but to buy specialized services, expertise and strong client relationships, provided by a highly qualified designer of CCTV systems.

The airport decided to commission a considerably well-experienced company in the field of CCTV, in order to install not just anything. From the first presentation, we thought that these products were of a reasonable price and of very good quality. They absolutely kept up with our needs. The

company which was applied by the airport showed very good references from former installations at other places. (Ex-head, airport police and initiator of airport CCTV)

Thus, from the first installation of CCTV equipment at Geneva International Airport, the technical characteristics and positions of the cameras have not only been discussed between police and airport representatives but have also been largely influenced by the experiences and *technical expertise* of private CCTV suppliers.

When we first meet with suppliers, we may speak about some specific issues of our project. This may then result in a second phase of negotiations. In this case, the supplier might tell us ‘I can do what you want but this will cost you four times as much as another solution, which still satisfies 80 per cent of your needs’. This level of negotiation not only typically runs into collaboration with the supplier, whose expertise is bigger than ours, but also includes the final user of the material. To rely on the supplier’s experience is very important for us. (Senior member of technical service at Geneva Airport)

These comments strongly reflect the existing interdependences between the police’s practical knowledge and experiences in dealing with everyday security and surveillance issues, the technical service’s expertise in the socio-technical configurations of the airport and the CCTV designer’s expertise in surveillance technology.

The airport police want us to evaluate the CCTV system in order to improve its performance, let’s say. [. . .] On the level of the cameras’ vision, we are more or less doing what we want. It is rather on the level of the existing networks for the transport of CCTV images that we need somebody else. We generally do not touch these networks. (CCTV supplier at Geneva Airport)

Regarding the supplier’s technical expertise in specific surveillance devices, and its resulting importance in the fabrication of technologically-based security governance more generally, we also see a third national/international network (of expertise in surveillance technologies) whose role in local decisions in surveillance matters cannot be underestimated.

Besides organizing a lot of exhibitions, we are ourselves visiting a lot of international fairs. There are exhibitions in Germany, in Birmingham in the UK, in the US, in Japan . . . That’s how we discover new products. [. . .] We need a lot of time to discover and learn to handle new products, for every new solution, one has yet to know how to make it work. (CCTV supplier at Geneva Airport)

On the one hand, police and airport representatives repeatedly underlined the high value of CCTV designers’ services, in order to further develop and

improve the system's performance. Furthermore, contacts and exchanges with suppliers of surveillance technologies were described as an important source of information in order to be kept up-to-date with newly available surveillance technologies on the market. On the other hand, however, information from CCTV suppliers was characterized as remaining on a very general, technical level without being directly related to the local characteristics of the airport, which were largely unknown and ignored by these companies. Suppliers of surveillance technologies were often said to travel from door-to-door, presenting and selling more or less standardized solutions for supposedly similar security threats.

Recently, somebody came here from a security specialist in Paris, who's representing several manufacturers of CCTV equipments, in order to present two new camera systems. This person is selling door-to-door a whole series of establishments. In the morning, he was at the airport, in the afternoon, he was meeting somewhere else. He organizes presentations everywhere. (Head, airport police control room)

Potential clients are thereby defined not in relation to any locally-anchored social, cultural or legal specificities, but by the predefined and standardized equation: specific type of space = specific range of possible applications of surveillance technologies. In other words, ambulant, de-territorialized security professionals are trying to present and sell new technical equipment not because Geneva International Airport would present any specific circumstances or risks, but simply because it is an airport. This approach to risk not only contributes to the standardization of technically-based responses to risks in places with similar functions, but also pushes forward the development of new international pressures and 'established' security models ('how to deal with risks in the airport sector'), which are increasingly influencing local decisions. This claim can be further confirmed by looking at the interviewed supplier company's quest for responsibility and autonomy in designing 'its' own CCTV system.

Good clients have confidence in us, they are correct in business matters. Bad clients only want to find the cheapest solution. In security matters, the cheapest solution is always too expensive if it doesn't work well. [...] Fortunately, I can do without these bad clients. But we had to manage our company in this sense. (CCTV supplier at Geneva Airport)

Surveillance, in this sense, tends to become a commodity which is above all distributed by market forces (Garland 1996) and driven by commercial interests that are surrounding and feeding off the contemporary co-production of security governance between public-private interests. In this, we can follow Holden's and Iveson's analysis of the

'nomadic army' wandering the planet in search of consultancy fees and places to save, 'parachuting in' to localities with plans and designs and then moving on to the next place – almost as if they float free without any connection to any kind of territory [. . .] Most importantly, it is not their localness that gives them legitimacy, it is their expertise. This is in stark contrast to the construction of citizenship practice as neighbourhood participation. Instead, they participate *through* the local and trade in their designs on the urban. (Holden and Iveson 2003: 66)

Conclusions

The paper has provided a series of empirically-based insights into the interacting sources of authority and domains of expertise in the planning, setting up and developments of CCTV at Geneva International Airport: the airport police's legal authority (1) and practical experiences in airport security and surveillance (2), the airport management's financially grounded authority in the camera system (3), the airport technical service's expertise in the complex configurations of the airport environment (4), as well as the system supplier and designer's technical expertise in the employed surveillance devices (5). To this list, in view of the described post 9/11 increase in the pressures upon airport security, the role of national or international regulatory bodies – such as the Swiss Federal Office of Civil Aviation – could also be added (6), although strictly speaking its role appeared to be largely absent in the setting-up of airport CCTV.

On this basis, the paper not only reiterates the fundamental need to conceptualize security governance to be constantly 'in the making' (Latour 1987), i.e. to consist of a myriad of micro-scale projects, negotiations and decisions between various actors, whose positions are defined by multiple, mutually interdependent domains of expertise. My analysis also provides a much needed account of the growing functional fragmentation of authority in contemporary modes of governance, which has been described repeatedly – yet often in rather general terms – by a wide body of literature (e.g. Cutler, Haufler and Porter 1999; Lipschutz 1999: 264).

By many authors, the fragmentation of authority in contemporary security governance has been related to the expanding role of private business companies in security matters. While this development can be observed on various grounds and for various reasons (e.g. Wood and Dupont 2006; Rigakos 2002), the discussed example of airport CCTV surveillance above all points towards the technical expertise required to manage the growing complexity of high-tech surveillance systems, which is likely to give the authority of private specialists more weight. In the case at hand, it indeed appears that there has been a gradual transfer of authority from the users of the system (the police) via the

owner (the airport authority) and technical manager (the airport's technical service) to the external designer and seller of the system. Furthermore, the explored case study indicates that all these actors are sustained by different national/international networks – whose role for local decisions in surveillance matters cannot be underestimated – and driven by various, more or less commercially motivated objectives: from the police's and airport management's coalition of interest in the airport as both a secure national entrance gate and as a commercially attractive shopping zone, to the CCTV supplier's business interests in selling security technologies.

Of course, many particularities from the explored case study might differ in other airports, in other national contexts or in connection with other means of surveillance. Case by case, surveillance schemes are varying significantly in terms of the involved actors, strategies, interests, instruments etc., in which regard the role of legal regulations must be considered to be of major importance (Gras 2004). Yet, and in accordance with the growing literature on security governance, it may be asserted with reasonable confidence that the provided insights into the fragmentation and privatization of authority in the installation and developments of CCTV surveillance at Geneva Airport are likely to be of more general, hence exemplary value. By way of conclusion, it is worth pointing towards two general sets of issues, which are arising from the almost 'natural', yet largely unquestioned increase of public-private inter-dependences in contemporary security governance.

A first series of issues at stake is related to the question of how exactly the increasing weight and scale of private authority in matters of public safety might in fact change the very ways of dealing with contemporary security issues. In this respect, the example of CCTV surveillance at Geneva Airport has shown that the required technical expertise confers to private 'distributors' and 'designers' of surveillance systems a unique 'capacity to get things done without the legal competence to command that they be done' (Czempiel 1992: 250): from the first installation of CCTV equipment at Geneva International Airport, technical characteristics, the cameras' positions as well as their location in the airport have not only been discussed between police and airport representatives but have also been largely influenced by the experiences and technical expertise of the chosen private CCTV supplier. Yet, the paper has also shown that CCTV suppliers are themselves firmly embedded in international networks of expertise, from which they learn about the newest technical solutions in security matters. Designers and distributors of surveillance systems must thus be understood not only as the producer, but also as the product of new technological challenges and trends in contemporary security governance.

In addition, interviewees repeatedly emphasized the widespread procedures of 'ambulant sellers', travelling from place to place in order to advertise and present standardized solutions for supposedly similar security threats.

Although such companies are in most cases not explicitly involved in the setting up and developments of existing surveillance systems at Geneva Airport, they implicitly shape potential future demands by promoting the latest, internationally ‘established’ security solutions.

Looking at current trends towards the ever more complex assemblage of various forms and functions of surveillance (e.g. Haggerty and Ericson 2000; Graham 2004), there is indeed good reason to assume that the technical expertise of private business companies is likely to become ever more important in future years. Private ‘knowledge brokers’ in security governance (Ericson 1994) might not only tend to complement – but to truly challenge – the police’s traditional position in security matters. It is thus of fundamental importance to further investigate the wider socio-political effects of these developments and to critically reflect upon the potential impacts of the security business on the fate of individuals and societies.

Secondly, investigating the growing fragmentation and privatization of security governance is not only of importance in order to study the role and impact of private interests and expertise within contemporary, technically-based surveillance strategies, but also to critically address a series of legal regulatory issues in contemporary security governance. At Geneva Airport, the only existing legal notice on airport CCTV was established in 1997, prescribing a series of general conditions for the use of the camera system (Etat de Genève 1997). Yet, the CCTV system’s proportionality has never been truly evaluated nor has the original legal notice ever been amended, despite the important developments and technical adaptations of the system. As one of our interviewees has put it:

We’ve informed the general public about CCTV. But we haven’t been concerned much more with the legality of CCTV or with any particular precautions to take. I’d say we’re working really in response to the occurring reactions. We’re a bit reactive in this domain . . . There wasn’t any formal complaint so far, therefore, we’ll continue like this. (Senior member, technical service at Geneva Airport)

In addition, it is important to remember that from the first installation of the cameras, the developments of CCTV surveillance at Geneva Airport were mediated by an informal coalition of interests rather than by formalized terms of collaboration. Both the partnership between the airport management and the airport police, and the almost ‘natural’ engagement of various specialists in the setting up and development of the system, remained largely unquestioned and unregulated.

From the perspective of the main regulatory challenges in contemporary, security-related ‘techno-politics’ (Mitchell 2002: 43), this lack of explicit legal regulation is rich in meaning, for it appears strongly that in practice – within the complex interactions between various actors, interests, strategies and

domains of expertise – the legally significant question ‘which party is concerned?’ seems ever more difficult to answer. The question ‘how and to what ends surveillance systems are set up, adjusted and further developed’ is hardly any easier to answer because, again, the Geneva case study points out that it is hardly possible to clearly separate the great number of socio-technological mediations through which daily surveillance practices are co-produced and co-developed between public and private interests. Consequently, the growing multiplicity and complexity of technically-based surveillance strategies makes it ever more difficult to hold the various public and private actors, which are involved in specific surveillance projects, truly accountable (e.g. Cutler, Haufler and Porter 1999: ix–x).

Given the rapidly growing market of new communication and surveillance technologies world-wide, there is thus a desperate need to move beyond generalized and deterministic discourses about the role of surveillance to ‘pave the way for a better future’ (Videotronic AG 2003), and to look in rich empirical detail at the complex ways in which different surveillance measures are being promoted, sold, installed, further developed and regulated. Even if the lack of enquiry in this research field is somewhat understandable, given the confidentiality of information about security operations especially in the airport context, questioning these issues is long overdue.

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Notes

1. This article develops upon empirical results from the research project ‘Vidéosurveillance et risques dans l’espace à usage public: représentations des risques, régulation sociale et liberté de mouvement’, financed by the Swiss National Science Foundation (Ruegg et al. 2006). This

research has been conducted by Jean Ruegg, Valérie November, Francisco Klauser, and Alexandra Felder (social sciences) and by Alexandre Flückiger, Laurence Greco and Laurent Pierroz (legal research group).

2. All quotations are translated from French to English by the author.

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