ICTs and the European Union's Evolving Border Surveillance Architecture: A Critical Assessment

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Abstract

Since the 1990s, ICT initiatives have been an increasingly central feature of the European Union's border security policy. One set of initiatives has sought to fortify the EU's external perimeter while another set creates new frontiers beyond this geopolitical boundary. Recently, the European Commission signaled its renewed commitment to this two-pronged approach with the release of its Border Package. This paper makes two arguments. First, this two-pronged approach has done little to deter identified border threats. **Moreover, there are good reasons to believe the implementation of the Border Package may not rectify this situation**. Second, the approach has contributed to a border management regime that is having an increasingly divergent impact on the mobility and life chances of different groups and populations. It is argued that the EU's recent proposals **may well intensify** this effect if implemented.

Keywords: ICTs, Surveillance, Border, Security, European Union

Introduction

Since the mid-1990s, border security initiatives have proliferated in the European Union (EU). Inclusion of a broad spectrum of information and communication systems (ICTs) has been a central and enduring feature of these initiatives.[1] ICTs have been incorporated in a least two ways. First, they have been rolled out to "harden" or fortify security at the EU's external border. This border is comprised of airports within the EU that have direct connections to non-EU locales, the myriad land and sea ports-of-entry located on the EU's outer perimeter, and the swaths of space between these ports-of-entry. The development of the Schengen Information System (SIS) exemplifies the strategy. Since 1995, border guards have been able to check incoming travelers against this transnational network of pooled databases, denying entry to those who receive a "positive" hit. The Spanish government's Integrated System of External Surveillance (SIVE) is also designed to buttress the perimeter. Rolled out in 2002, this maritime border surveillance system combines a variety of fixed and mobile detection technologies to deter or help detain illicit border crossers in and around the Strait of Gibraltar and the Canary Islands. More innovatively, a second strategy has involved deploying other kinds of ICTs to create frontiers beyond the EU perimeter. Specifically, this

[1] In this paper, the ICTs of interest are the various socio-technical configurations used to gather, process, store, exchange and disseminate information for the purpose of controlling the movement of individuals and conveyances. These ICTs include systems that originated in the military realm such as heat sensors, motion detectors, radars, and long-range and night-vision cameras. They also include the computerized systems that facilitate the automatic exchange of information on individuals traveling to the EU and the various clusters of database and biometric technologies that are designed to identify travelers with certainty.

strategy has sought to "push out" from the EU's ports-of-entry by deploying anticipatory measures aimed at extensive pre-inspection and sorting of individuals intending to travel to the EU. For example, immediately after the 9/11 attacks in the United States (US), the EU Council proposed the Visa Information System (VIS), a program that will use database and biometric technologies to pre-screen and verify the identity of in-bound travelers. VIS is slated to be operational in 2012 (Commission of the European Communities, 2008, p. 3).

Recently, the EU Commission signaled a renewed commitment to this two-pronged approach with the release of its Border Package, *Preparing the Next Steps in Border Management in the European Union* (2008). The Package recommends deployment of various "state-of-the-art" ICTs to both fortify and de-territorialize EU border controls. For instance, it calls for the creation of a satellite-based surveillance system that will keep watch on remote borders for "suspicious" movements by boat or vehicle and an electronic travel authorization system that will obtain personal data from non-EU travelers through a pre-departure online check. The Commission intends to follow up its Border Package with the presentation of legislative proposals by 2010 (Guild, Carrera & Eggenschwiler, 2009, p. 2).

According to its proponents, the two-pronged approach is vital to reconciling the tension between two potentially colliding policy imperatives. While the first imperative involves the ramped up commitment to security and stiffer external border controls, the second concerns the perceived need to maintain and even increase the velocity of legitimate traffic entering the EU, with its attendant pressure for more permeable borders. Thus, EU Commissioner, Franco Frattini (2008), argues that the two kinds of ICT-based strategies are needed "*to be one step ahead [of] the increasingly better organized networks of terrorists and criminals who have discovered the lucrative tracking in human beings, drugs and weapons. Innovative and effective border controls have to strike a difficult balance between ensuring the free movement of people across borders and guaranteeing greater security of Europe's citizens*" (p. 1). The claim is that the two-pronged strategy will enable government actors to effectively distinguish between "low risk" and "high risk" individuals and so expedite the speedy movement of legitimate transnational flows while denying territorial access to terrorists and other "undesirables."

At the heart of the two-pronged approach is the assumption that information is crucial to enhancing security and control. More specifically, it assumes government actors can progressively annihilate the risk of terrorism and other perceived security problems if they can harness the latest technological developments to gather, process, analyze and share the right bits of information about particular individuals. This perspective equates information with knowledge, the antithesis of uncertainty, a source of transparency and knowledge (see Winseck, 2002).

This article critically assesses this perspective and the proliferation of ICT-based border security initiatives it has informed. More specifically, I seek to answer the following questions: To date, have these initiatives significantly enhanced the authorities' ability to deter or block the illicit border-crossing activities of those deemed a threat to the security of the EU? How likely is it that the implementation of the EU Commission's Border Package would improve on the security record of the previous initiatives? How have these initiatives impacted different actors and groups, particularly in terms of their life opportunities and transnational mobility? Will the Border Package intensify these impacts if implemented?

Mode of Inquiry

Assessing the efficacy and social implications of the EU's ICT border initiatives can be viewed as a case study on the interaction between technology and society. Technological determinism continues to be a widely held perspective on the relation between technology and society, whether in academic, public or policy forums, despite being subject to a wide range of critiques (e.g., Slack, 1984; MacKenzie & Wajcman, 1999; Wyatt, 2007). The perspective views technical innovation as driving society. That is, the relationship between technology and society is regarded as linear and mono-directional. From this perspective, the questions posed above would be approached by detailing the technical characteristics of the various clusters of ICTs before moving to unravel their consequences for the capacity of EU agencies to control illicit border-crossing activity. That is, conclusions about the border security implications of the deployment of these ICTs would be derived from an examination of their intrinsic or "in-built" properties (see Shields, 2005, p. 23; Van der Ploeg, 2003, p. 91).

The problem with technological determinism is that it reduces the complex relationship between technology and society to a simple story about the power of technology. That is, technology's power "*is so strongly assumed that, rather than being the object of study, it tends to prescribe research practices and theoretical reasoning*" (Lodziak, 1986, p. 2). With respect to the task at hand, such a fixation on the relevant ICT-based surveillance technologies is likely to obscure the roles that various social, political and economic forces and contexts have played in shaping the deployment, use, and resistance to the EU's evolving border surveillance architecture. As a corollary, the approach would provide little or no help in assessing the roles these ICTs are playing in relation to these forces and contexts.

This paper adopts a mode of inquiry that recognizes and foregrounds the fact that ICTs are "*always embedded in a social landscape, which precedes, shapes and contextualizes and continues after any specific technological innovation*" (Livingstone, 2002, p. 17). This approach is concerned with contextualizing the relevant technologies within the historically and culturally specific conditions of their deployment use. As Livingstone puts it, "*[s]uch analysis, through its stress on a multiplicity of*

contextualizing processes, is intended to effectively undermine any simple account of the supposed impacts of technology on society" (p. 17). When applying this perspective, one quickly confronts a practical question – which of the "multiplicity" of contexts are most relevant to the analysis? According to Livingstone (2002), it is the researcher's in-depth engagement with "*the balance of research in the published literature*" that suggests the relevant contexts (p. 18).

For the purposes of this paper, the relevant literature suggests the analysis map the deployment and use of the EU's ICT-based border initiatives in relation to the following contexts and processes: the elimination of the EU's internal borders in the interest of facilitating greater mobility of capital and labor within the EU and the parallel move to build a strong and secure external border (e.g., Pellerin, 2005); the contradictory logics involved in wishing to open the expanding EU space to legitimate global commercial flows while seeking to accommodate powerful political forces that seek greater closure of the external border in the name of security and safety (e.g., Aas, 2005; Hampshire, 2009); the post-Cold-War re-conceptualization of EU's border security agenda, a reframing that prioritizes the denial of territorial access to non-state actors such as suspected terrorists and unauthorized immigrants (e.g., Bigo & Guild, 2005); the routinizing of "states of emergency" and "exceptional circumstances" after the 9/11 attacks and the bombings in London and Madrid (e.g., Lyon, 2003; 2007, p. 119). These contexts and processes, and the interplay between them, have "called forth" distinct strategies of border governance that rely heavily on an array of ICTs. While one strategy seeks to seal particular parts of the EU's geographic perimeter, particularly between ports-of-entry, a second seeks not to seal but to tame the border by designing information-intensive systems that permit the preemptive sorting of incoming flows into "good" and "bad" mobilities, a process that may occur well beyond the territorial border (e,g., Walters, 2004, 2006).

As noted above, this paper is centrally concerned with the efficacy of the EU's ICT-based border initiatives. An empirically open-ended examination of surveillance and its effects requires a conceptual approach that is sensitive to the possibility that surveillance systems may be unworkable or subject to subversion: "*…just because a surveillance system has been installed does not mean it will have the effects desired by its installers, for both technical and human-social reasons*" (Lyon, 2007, p. 70; see also Gilliom, 2001). Marx (2003) argues that "*when individuals feel that surveillance is wrong, or that they are unfairly disadvantaged by it, it will often be challenged. Systems may also be challenged for reasons of self-interest*" (p. 372). Here Marx is pointing to one instance of a more general phenomenon which Giddens (1985) calls the "dialectic of control". In this view, all strategies of control "*call forth counter-strategies on the part of subordinates*" (p. 11). Sensitized by these insights, the following analysis pays particular attention to the strategic interactions and struggles between the EU border agencies deploying surveillance technologies and the clandestine actors the agencies seek to deter, block, or apprehend. An examination of these

contestations and their outcomes not only provides a basis for assessing the efficacy of the EU's ICT-based border initiatives, it may also contribute to our understanding of an important context that is shaping the evolution of these initiatives. This is because resistance to surveillance measures may be used a rationale for developing and deploying further surveillance counter-measures (Lyon, 2007, p. 67).

ICT-based border security initiatives

Governments have long been concerned with selectively restricting territorial access (Anderson, 1996; Andreas, 2003). They have set up border controls to deter armies, to tax trade and to exclude "undesirables." Although border controls have been a constant in the modern era, there has been significant variation in border control priorities. As Andreas (2003) notes, "*Although military defense and economic regulation have traditionally been central border concerns, in many places states are retooling their border regulatory apparatus to prioritize policing*" (p. 78). This policing objective involves blocking "*territorial access to…clandestine transnational actors…defined as nonstate actors who operate across national borders in violation of state laws and who attempt to evade law enforcement efforts*" (p. 78).

These remarks certainly apply to border control developments in the EU context. The importance of military borders declined with the end of the Cold War and their economic significance diminished with the introduction of the Schengen *acquis*, a development that led to the disassembling of internal borders between most EU[2] member countries in order to ease the flow of capital and labor. At the same time, EU policy makers have increasingly framed transnational phenomena such as people smuggling, terrorism and drug trafficking as profound security risks (Bigo, 1994). Since the early 1990s, this perception has contributed to the emergence and steady growth of an EU-level system of border policing regulations, rules, and capabilities that exists "above" the apparatuses of the Member States (Bigo & Guild, 2005; Guild & Bigo, 2009, p. 8). It has also fuelled the development of a border security policy that is designed to exclude organized criminals, unauthorized immigrants and terrorists from the Schengen space.

As earlier alluded to, the deployment of various ICTs to both fortify and externalize the EU external perimeter has been a hallmark feature of this security policy. The following discussion of this two-pronged approach is organized around developments in the pre- and post-9/11 eras. This narrative structure reflects the fact that the 9/11 attacks was a pivotal event that led to a significant intensification of decision-makers' commitment to the two-pronged approach. With respect to each period, I begin by outlining the ICT-based initiatives concerned with strengthening perimeter security between ports-of-entry (i.e., non port-of-entry initiatives) and then discuss measures and proposals that seek to bolster port-of-entry controls and/or disperse these controls beyond the EU's external perimeter.

[2] Ireland and the United Kingdom opted out of Schengen's border control arrangements.

The pre-9/11 era – non port-of-entry initiatives

The Schengen Agreement of 1985 and the Schengen Convention of 1990 provide the foundation for the EU's border management regime. Implemented in 1995, these treaties link the functioning of a European internal market to the elimination of internal border controls between the member countries (Mass, 2005). The treaties also stipulate provisions for tightening the EU's common external border in response to anxieties that a border-free Europe would be "swamped" by an influx of unauthorized immigrants, human traffickers, drug smugglers and terrorists. These "undesirables" became the objects of a variety of exceptional surveillance and control measures in the 1990s (Bigo, 1994). One of the most visible initiatives involved the ratcheting-up of policing and ICT-based surveillance at particular "hot spot" non port-of-entry crossing sites.

For instance, immediately after the reunification of Germany, its border with Poland became the site of increasingly intense policing. The number of border guards climbed from 400 in 1991 to 3,300 by 1996 in response to a sharp increase in the illicit flow of migrants and drugs from the former Soviet bloc countries (Andreas, 2000, pp. 119-120). The guards made increasing use of an array of surveillance technologies. For instance, the German Federal Border Police rapidly increased the number of mobile identity document readers at the border, doubling from 300 in 1997 to 600 in 1998. Motion sensors were deployed along the border and border guards received night vision equipment to combat illicit border crossings (Andreas, 2000; Koslowski, 2006a).

During the same period, the Straits of Otranto, a narrow body of water between Italy's Adriatic Coast and Albania, was widely perceived as a key transit corridor for illicit drugs and would-be migrants from Albania and beyond. By targeting this illicit traffic, the Italian government lived up to its Schengen obligations and appeased those EU members who often complained that Italy's border controls were too "lax" (Andreas & Nadelmann, 2006, p. 180). Naval ships and aircraft equipped with thermal cameras and "forward looking" infrared systems were dispatched to the Straits and Israeli-developed "anti-terror" radar systems were deployed along the Adriatic Coast to detect clandestine crossers (Albahari, 2006, pp. 8-9; Lutterbeck, 2006, p. 62).

Similarly, on the other side of the Mediterranean, the Spanish authorities viewed the Strait of Gibraltar and the Spanish enclaves of Ceuta and Melilla on the northern Moroccan coast as major crossing points for migrants from Morocco and sub-Saharan Africa. Soon after Spain joined "Schengenland" in 1991, the EU pressured the Spanish government to forge more restrictive border controls. In 1995, construction began on surrounding the enclaves with double-layered ten-foot high fences augmented with optic and acoustic sensor devices, watchtowers and surveillance cameras (Andreas, 2000, p. 135; Carling, 2007a, p. 324). Paralleling this development, the Spanish authorities deployed patrol ships with electronic detection

equipment and helicopters with infrared cameras and high-powered spotlights to guard the 10-mile Strait (Andreas, 2000, p. 131). In 1999, the Spanish government announced the construction of the Integrated System of External Vigilance (SIVE). Billed as the most technologically sophisticated coast control system to date, SIVE was initially composed of various networks of fixed and mobile radars, and infrared and video cameras that could ostensibly detect and intercept small vessels in the Strait (Carling, 2007a, p. 325; Lutterbeck, 2006, p. 67). As Alscher (2005) describes it, "*as soon as a ship – or even a small [boat] – leaves the Moroccan coast and reaches the 9-mile radius of the SIVE radar stations, it appears on the surveillance monitors of the commando unit at Algeciras. If the boat is suspected [of transporting] undocumented migrants, high-tech cameras focus on it and even show how many persons are on board*" (p. 25).

The pre-9/11 era – port-of-entry initiatives and beyond

The Schengen regime also requires that member countries harmonize and tighten checks at the EU's external ports-of-entry. To this end, the EU rolled out the Schengen Information System (SIS) in 1995. The security agencies of the Schengen States feed this EU-wide data network with information about persons from "third countries"[3] that are to be refused entry to the EU. Personal information stored in SIS includes name, known aliases, distinctive physical features, sex and nationality (Hobbing, 2003). It also contains information on lost or stolen identity papers. Border guards on the external perimeter access SIS to check travelers' identity papers and deny entry to those who receive a positive "hit." By 1998, the system had approximately 8.6 million entries (Balzacq, 2008, p. 84). This number soared to 22 million by 2007. The overwhelming majority of person-related entries (1.1 million in 2007) are on third-country nationals (Hobbing & Koslowski, 2009, p. 6). According to Guild (2001), the grounds for excluding these individuals are "*based on what they did or what they represented while they were [previously] within the territory*" (p. 17). For example, the authorities may believe these individuals committed criminal offences or failed to comply with immigration regulations or deportation procedures (Garside, 2006, p. 3).

The Schengen treaties also required member countries to formulate common rules regarding visas. While the use of SIS at the external border seeks to exclude individuals based on those "*who had received sufficient notoriety in any one member state*," the common visa regime focuses on excluding those "*who have not yet been identified as an individual risk to any state but who might be one*" (Guild, 2001, p. 17). To this end, in 1998 EU authorities developed visa lists that, on the basis of nationality, categorized or profiled persons as more or less likely to be a risk. Individuals originating from a country on the "black list" are required to obtain visas from an EU-member country consulate before traveling to the Union. Currently,

[3] A "third country" is any country that is not a Member State of the EU.

134 countries are on the list. Commenting on the list, one group of commentators note: *"[one of] the most striking features is that, with the exception of Brunei, all of the Muslim and most of the poor states are on [the] list. All African states are listed as well as most of the Caribbean and the less prosperous states in Latin America and Asia*" (Geisen, Plug & Van Houtum, 2008, p. 82).[4] Consular authorities run checks on the SIS list of excluded persons to help determine which individuals within this suspect group do not constitute a threat and therefore should receive visas. This sorting process is supplemented by information held by consulates on specific persons (e.g., criminals). Certain categories of individuals are also screened out (e.g., the unemployed, those with no regular income, those who cannot demonstrate they have the requisite amount of money to sustain a visit to the EU). In short, for those who require a visa to travel to the EU, "*the border of the Union starts within their own territory…*" (Guild, 2001, p. 32). Similarly, Hobbing (2003) notes, "*the involvement of the consular authorities in the 'filtering process'… represents a system of 'remote control' in avoiding unwanted migration flows*" (p. 11).

The post-9/11 era – non port-of-entry initiatives

Since 2001, the EU's ICT-based border control initiatives have intensified, both in terms of reinforcing the borderline and dispersing border controls beyond the external perimeter. The 9/11 attacks and the subsequent bombings in Madrid and London provided the authorities with opportunities for some of this intensified border work (Baldaccini, 2008; Bigo & Guild, 2005; Coleman, 2007). The EU's ongoing eastward enlargement also shaped the timing and location of some of its more recent border intensification practices. In much of the justificatory discourse for this intensification direct connections have been made between terrorism, security, migration and borders. As Neal (2009) puts it, this discourse reiterates "*the assumption that sources of insecurity must come from 'outside' and the immigrants to the EU are a major source of insecurity*" (p. 339).

Non port-of-entry border fortification has continued to occur along the EU's southern perimeter as a growing number of individuals risk their lives to cross the Mediterranean. While much of this has occurred in an around the Strait of Gibraltar, border patrols have also been strengthened around Malta and the Italian islands of Sicily and Lampedusa (Dulffer, 2007; Styan, 2007, pp. 1177-78). The fences surrounding the Spanish enclaves of Ceuta and Melilla in Morocco have also been repeatedly fortified. For example, in 2005 several hundred migrants sought to scale the fences. While many crossed successfully, over a dozen migrants were shot and killed by Moroccan forces. In response, the Spanish authorities further bolstered the borders by increasing fence heights, deploying automatic tear-gas dispensers, and erecting a third

[4] A list of countries whose citizens require/do not require visas to enter the EU can be found at http://www.auswaertiges-amt.de/diplo/en/WillkommeninD/EinreiseUndAufenthalt/StaatenlisteVisumpflicht.html

barrier outside the existing double fences "*equipped with state-of-the-art infrared cameras, sensor pads, and sound detectors*" (Ekine, 2007; see also Carling, 2007a).

Spain's maritime surveillance system, SIVE, alluded to earlier, was initially deployed along the northern coast of the Strait of Gibraltar. As a result, the flow of would-be immigrants shifted to areas of the Spanish coastline that were under less surveillance. In response, between 2004 and 2006, the Spanish authorities extended SIVE to the entire Andalucian Coast and some of the Canary Islands in the Atlantic Ocean (Carling, 2007a, p. 326). By the end of 2006, the number of unauthorized migrants landing in those Canary Islands without SIVE coverage increased markedly; the Spanish authorities claimed the number of unauthorized immigrant arrivals had increased six-fold over the 2005 level (Carrera, 2007, p.12). The authorities presented this state of affairs as a "*massive invasion of illegal immigrants*" requiring an "*urgent European solution*" (p. 12). The EU responded by mobilizing its recently created border agency, FRONTEX (the European Agency for the Management of Operational Cooperation and the External Borders of the Member States of the European Union). In the first phase of its operation (HERA I), the agency focused on interviewing the unauthorized migrants to determine their country of origin in order to facilitate expulsion. The second phase (HERA II) "*consisted of facilitating technical equipment for border surveillance*." This surveillance equipment was installed on patrol boats and planes provided by various EU countries. The goal in this phase was to patrol the water separating the Canary Islands from the coasts of Mauritania, Senegal and Cape Verde. If deemed necessary, vessels were intercepted in the territorial waters of third countries so that unauthorized immigrants could be quickly returned to their point of departure. In addition, planes flew over the coast and deep into African territory in an attempt to deter migrants from making the journey to the EU (Vaughan-Williams, 2008, p. 68). While HERA I can be "*considered…conventional borderwork at traditional border sites associated with the….'edges' of sovereign territory*," HERA II contributes to the growing externalization of the EU's border; it is a form of "pre-border" surveillance that occurs hundreds of miles from Europe (pp. 67-68).

The EU's ongoing enlargement has also led to a re-bordering of its eastern perimeter. With the addition of 10 countries in 2004, the EU's eastern flank now stretches from the northern Baltic states of Estonia, Latvia and Lithuania through Poland to Slovakia and Hungary. As a condition of entry, these countries were required to reinforce their eastern borders. Referring to the boundary between Poland and Ukraine, Van der Ploeg (2006) observes "*The rusty old watchtowers on the Ukrainian side that were once used to guard the border between the Soviet Union and the Eastern bloc countries are…once again in use. Electric fences and trip wires have been installed and the EU provided other high-tech items: … night-vision goggles, and thermal cameras*" (p. 181). In other locations, for instance the border between Slovakia and Ukraine, mobile infrared trucks patrol the boundary and a network of fixed cameras and motion detectors has been

installed to deter or catch unauthorized immigrants and human traffickers. Vans with computers connected to SIS also patrol the frontier area "*allowing the police to check the ID of suspicious people they pick up on the road*" (Nicholson, 2008).

The EU Commission's recently announced Border Package calls for the creation of a European Border Surveillance System (EUROSUR). If realized, the system will make use of "state-of-the-art" technologies such as satellites, unmanned aerial vehicles and radar – all integrated into one comprehensive network – to provide "*surveillance information on [the] external borders and the pre-frontier area on a more frequent and reliable basis*" (European Union, 2008a). To begin with, EUROSUR would be limited to the Mediterranean Sea, the Southern Atlantic Ocean (the Canary Islands) and the Black Sea. As a first step toward this goal, a series of "integration and demonstration projects" are planned for the region in 2010. These will aim "*at improving the technical ability to detect, identify and track small boats used for illegal immigration and related cross-border crime*" (Commission of the European Communities, 2009a, p. 7). A second phase would extend the system to the entire maritime domain of the EU (European Union, 2008a). FRONTEX is slated to have a key role in coordinating the EUROSUR system, serving as a procurer of satellite imagery and facilitating the sharing of surveillance equipment such as unmanned aerial vehicles. It will also serve as a hub for information and intelligence exchange between the Member States' authorities responsible for maritime border surveillance (Commission of the European Communities, 2009a).

The post-9/11 era – port-of-entry initiatives and beyond

In addition to the border work that has focused on the spaces between ports-of-entry, the EU has sought to augment its surveillance database infrastructure. In 1996, the EU Council proposed to develop a second-generation SIS (SIS II) in order to accommodate a larger number of member countries due to EU Enlargement (Broeders, 2007, p. 81). Immediately after the 9/11 attacks, new demands emerged to implement SIS II. Beyond expanding the system's capacity, the goal is to develop a new architecture that would enable the collection, exchange and storage of biometric data such as fingerprints and facial images. The current SIS is confined to processing alphanumerical data only. Reportedly, searches of SIS "*can come up empty due to simple errors in spelling or transcription of a name, or persons using an alias*" (Coleman, 2007, p. 76). Ostensibly, the addition of biometric data "*presents a solution to the system's technical weaknesses in identifying persons*" (p. 76). According to the EU Council, the "functionality" of the next generation SIS needs to be extended to fight terrorism and crime: "*The idea of using SIS data for other purposes than those initially foreseen and specially for police information purposes in a broad sense, is now widely agreed upon and even follows from the Council Conclusions after the events of 11 September 2001*" (quoted in Balzacq, 2008, p. 85). With this in mind, changes have been made to the original

provisions of the Schengen Convention in order to expand the number of authorities that have a right to access SIS (Coleman, 2007, p. 76; Balzacq, 2008, p. 85).

In short, in addition to being a border control tool, SIS II will probably be an investigation system for crime detection purposes. This potential "function creep" is a matter of considerable concern for some. As Baldacinni (2008) puts it, "*…the consequences of being registered in the SIS for third-country nationals will in the future not be limited to refusal of entry into the Schengen area. Once biometric searches are enabled, those…third-country nationals…will form part of a suspect population whose data will be trawled through for the purposes of police investigation*" (p. 39). The development of SIS II has been plagued by technical difficulties. As a result, it will not be operational by September 2009, the latest in a string of missed deadlines (Commission of the European Communities, 2009, p.9).

Immediately after 9/11, the EU Council also moved to upgrade the common visa program by launching the Visa Information System (VIS), a "*network for information exchanges concerning the visas issued*" (quoted in Hobbings, 2003, p. 5). VIS, which will collect, store and facilitate the exchange of biometric identifiers such as digital fingerprints and photographs, will operate on three levels – beyond, at, and inside the external perimeter:

> *VIS shall improve the administration of the common visa policy, the consular cooperation and the consultation between central consular authorities in order to prevent threats to internal security and 'visa shopping', to facilitate the fight against fraud…at external border checkpoints and within the territory of the Member States, to assist and identify the return of illegal immigrants…* (Commission of the European Communities, 2005a).

At the first level, visitors requiring visas to travel to the EU will provide biometric data at a member country consulate. Since all other member country consulates will have online access to this information, the hope is that those who are rejected by one country's consulate will not be able to try their luck at other country consulates. More specifically, all member country consulates will be able to access information on previous applications and the reasons for rejection (e.g., a SIS alert on the applicant, failure to prove the possession of sufficient means for subsistence during the intended stay). At the second level, the "trusted" visa travelers will provide the same biometric information on arrival at the EU's external perimeter in order to verify they are the same individuals who were granted visas. At the third level, VIS will supposedly make it possible to identify visa recipients who overstay. That is, the plan is that alerts will be automatically generated when travelers' visas expire. Even if these migrants discard or lose their identity papers, the prior collection of biometric identifiers will permit the authorities to determine their identity. In this way, "*VIS will…function as a system of re-identification for illegal aliens who traveled legally into the EU, but try to hide their identity when apprehended*" (Broeders, 2007, p. 86).

It is projected that VIS will connect 12,000 VIS users and 3,500 consular posts worldwide. This projection is based on the estimation that the 27 member countries will handle 20 million visa requests annually (Broeders, 2007, p. 86). Reportedly, the EU Council has decided that consular posts in North Africa and the Near East will be the first to collect biometric data given travelers from these regions are perceived as high risk (Baldaccini, 2008, p. 40). As with SIS II, the implementation of VIS has been delayed due to various difficulties. As noted earlier, it is now claimed VIS will be fully operational in 2012 (Commission of the European Communities, 2008).

After the London bombings of 2005, the EU Council called for law enforcement access to VIS and greater interoperability between VIS, SIS II and currently existing systems such as EURODAC, a database that stores the fingerprints of asylum seekers. As the EU Commission noted, "*In relation to the objective of combating terrorism and crime, the Council now identifies the absence of access by internal security authorities to VIS data as a shortcoming. The same should also be said for all SIS II and EURODAC data. This is now considered by the law enforcement community to be a serious gap in the identification of suspected perpetrators of a serious crime*" (Commission of the European Communities, 2005b). Recently, the Commission proposed the creation of an EU agency for the operational management of SIS, VIS and EURODAC, arguing that the current situation "*does not allow the full exploitation of the synergies between these systems…*" (Commission of the European Communities, 2009b). Plans to interlink these information systems and provide police access have only deepened the earlier stated concerns of some that politician and bureaucrats will want to use these systems for goals other than their initial purpose. Specifically, the worry is that the millions of third-country nationals whose personal data are recorded in these systems, will be a suspect population for various criminal and terrorists investigation (Baldacinni, 2008, p. 49; Broeders, 2007, p. 87; Hayes, 2009, p. 71).

To reduce unauthorized immigration (including the number of "overstayers") and to contribute to the fight against terrorism and organized crime, the EU Commission's recent Border Package calls for the development of an entry/exit system for both third-country national subject to a visa requirement ("visa nationals") and third-country nationals who presently do not require a visa to travel to the EU ("non-visa nationals") (Commission of the European Communities, 2008). As Commissioner Frattini (2008) puts it:

> *If it is to meet its purpose in full, the entry-exit system should record movements of visa holders and non-visa holders alike and be applied consistently to all external border crossing points. The system should use biometrics to ensure a precise match between entry and exit records for each individual. Where non-visa holders are concerned the use of biometrics will also make it possible to identify undocumented persons within the Schengen area. This fills another gap in our existing tools. Policies authorities will have a mobile devise [sic], which will enable police officers to take*

> *fingerprints on the spot. In a few seconds, the police will retrieve the data of any third-country national who has crossed Europe's external borders, thereby catching anyone who has lied about his/her residence status.*

Given VIS will supposedly deploy in the near future, the logic for applying the proposed entry/exit system to visa nationals is unclear. That is, since the plan is for VIS to "*use biometrics to ensure a precise match between entry and exit records for each individual*" the proposed entry/exit system would simply replicate the same biometric data. For this reason, "*there seems to be no particular reason to establish an entry-exit database separately from VIS, as regard visa nationals*" (Peers, 2008, p. 2). The development of the entry-exit system will involve setting up a new EU-wide database that stores the following information on third-country nationals: data on the time and place of entry, the length of stay authorized, the biometric data of the people registered. The data base will produce alerts to the relevant authorities regarding individuals who have overstayed (Guild, Carrera & Geyer, 2008, p. 2).

The Commission also plans to encourage the adoption of US-style "pre-clearance" programs to facilitate travel for "low risk" travelers, whether they are subject to a visa requirement or not (Guild, Carrera & Geyer, 2008). To enroll in these programs, individuals will undergo a pre-screening process on the basis of various vetting criteria, including checks against watch-list databases. Selected individuals will have a "reliable" travel history and hold biometric passports. On reaching the EU border, the enrolled traveler would be able to cross quickly without the intervention of border guards: "*A machine reads the biometric data contained in the travel documents or stored in a system or database and compares them against the biometrics of the traveler, accelerating border checks by creating automated separate lanes replacing the traditional control booths*" (European Union, 2008b). The plan is that EU citizens would also be able to use the "automated" gates if they are in possession of a biometric passport.

The Border Package also envisages extending "remote control" measures to third-country nationals not requiring a visa. The Electronic System of Traveling Authorization (ESTA) will supposedly allow national authorities within the EU to make individual assessments of each passenger before he/she embarks on a flight to Europe. Frattini (2008) outlines the probable process: "*Each person exempted from a visa obligation will be required to log on to a given internet site to ask for permission to travel. If the person is a bona fide traveler, he/she will receive a number very rapidly. The same number will then be given to the border guards of the country of destination. If the internet is not available, the person can ask the travel agency to run the procedure before issuing the air ticket.*" Presumably the *bona fide* status would be determined after the aspiring traveler to "Schengenland" is checked against various watch lists.

The Efficacy of the EU's Two-Pronged Approach

As the section above indicates, EU authorities have significantly intensified their commitment to a high-tech two-pronged approach to border security in recent years. On one level, they have drawn on ICTs to construct longer, denser and more sophisticated barriers along the EU's external perimeter. On another level, these authorities have, in different ways, used ICTs to move the locus of border control away from the geopolitical borderline. In this section, I suggest there are good reasons to believe this evolving border architecture is doing little to control identified "border threats." I begin with an evaluation of the efficacy of non port-of-entry initiatives and then move to discuss the effectiveness of those measures and proposals that seek to fortify port-of-entry controls and/or diffuse these controls beyond the EU's external perimeter.

Non port-of-entry controls

Estimating the number of migrants who enter the EU illegally is inherently problematic as illicit crossings are very often undocumented and unobserved. It follows that any description of the extent of clandestine border crossing has to rely on certain indirect methods. Figures on border apprehensions are often used as a basis for estimating the extent of unauthorized entries (assuming a presumed ratio of intercepted to total unauthorized entries) (Jandl, 2004, pp. 141-142). Adopting this approach, one study estimated that the number of illicit entries into the EU rose from less than 50,000 in 1993 to more than 400,000 in 1999 (Heckmann & Wunderlich, 2000). Using a similar method, Widgren (2002) calculated that there were 500,000 illicit entries in 2001 (cited in Jandl 2004, p. 150). More recently, Addo (2006) concluded: *"Europe has been losing its war on illegal immigration. According to various EU estimates, around a half a million illegal immigrants still enter the European Union annually, even after years [of border control measures]…."*

Having said this, there is some evidence that the number of clandestine crossings slowed in 2009. Frontex (2009), the EU's border agency, concludes that this development is due not to enhanced border enforcement but rather to would-be migrants postponing their decision to enter the EU because of the current economic downturn and consequent lack of job opportunities. "*Paradoxically,*" the agency reports, "*enhanced border management probably keeps in Member States a number of illegal immigrants who would have otherwise left. Increased border enforcement at external borders represents a clear disincentive to return, given that possible re-entry would be riskier*" (p. 4).

Other estimates of illicit border crossings focus on particular areas of the external perimeter. For example, assessing the effects of the EU's policing and high-tech border work in the Mediterranean, Lutterbeck (2006) notes:

> If the number of interceptions is taken as indicator of the actual extent of *irregular immigration, then it can be noted that as far as Italy is concerned, there has indeed been a decline in*

> *apprehensions of undocumented migrants along the country's southern border after 1999…: after the peak of almost 50,000 interceptions was reached in 1999, the figure dropped to about 14,000 by 2004. However, if it is taken into account that almost half of the would-be migrants caught in 1999 were Albanian Kosovars fleeing the crisis in Kosovo, then this decline is much less pronounced. Moreover, one can hardly speak of a sustained downward trend, as still in 2002, almost the same number of undocumented migrants was apprehended as in 1999…. In Spain, on the other hand, no such decline in apprehensions can be observed… the number of would-be immigrants intercepted along the country's Mediterranean borders has continued to rise unabated since the mid-1990s, without any signs of the trend reversing* (p. 74).

Not only is there little evidence that the EU's campaign to restrict non port-of-entry access has succeeded in deterring illicit border crossings, the intensification of policing and surveillance has fuelled the emergence of increasingly sophisticated human smuggling organizations (De Haas, 2008, p. 1311). This is exemplified by the evolving modes of clandestine migration across the Straits of Otranto. In the early 1990s, when border patrols were relatively lax, migrants used various makeshift boats to make the crossing. However, from the mid-1990s onward, as Italian border patrol activities became increasingly intense, and a growing amount of radars and other high-tech equipment were deployed, would-be migrants turned to Albanian smuggling gangs "*which have been operating speedboats – usually extremely fast low-lying rubber dinghies…equipped with two outboard engines – to cross the Straits*" (Lutterbeck, 2006, p. 75).

The ramped-up policing and surveillance in the Mediterranean has also diverted migratory flows towards other, typically more dangerous routes. While the Italian authorities finally "plugged" the Straits of Otranto in 2004, "*practically in parallel to the dying out of this route, new routes across the Mediterranean towards Italy have emerged.... [I]n particular Sicily…has become the main entry point into Italy.... [B]etween 1998 and 2004, the number of irregular migrants intercepted in Sicily jumped from 848 to some 14,000, or from 0.0 per cent to more than 98 per cent of all apprehensions along Italy's southern borders*" (Lutterbeck, 2006, pp. 75-76; see also Leone, 2007; Monzini, 2007). Since many of these would-be migrants are transiting through and sailing from Libya, the Italian government is now supplying the Libyan government with patrol boats and surveillance equipment to patrol its coast (Anon., 2009).

As discussed earlier, a similar diversion effect has been evident along Spain's southern borders as would-be migrants increasingly eschew the heavily monitored Strait of Gibraltar and instead seek to reach Spain via the Canary Islands. The extension of SIVE to the Canary Islands has resulted in technical and organizational changes on the part of smugglers. As in the case of the Straits of Otranto, smugglers now use faster boats. They also evade the Guarda Civil by arriving in groups of several boats and fanning out when they approach the coast (Carling, 2007b, p. 5). Smugglers have accepted the increased likelihood of

being detected and apprehended. As Carling (2007b) observes, this fact changes the nature of the "game":

> *When it is understood that the boat will be intercepted, different incentives come into play for migrants and smugglers. The migrants being smuggled are increasingly Sub-Saharan Africans who are more difficult for Spanish authorities to return to their countries of origin than is the case with Moroccan migrants. The sub-Saharan Africans thus have less to lose by being apprehended. For the smugglers, sending migrants off on their own means avoiding the risk of arrest. Knowing that the boat will be lost is an incentive to build it cheaply, and not having to carry fuel for the return trip allows space for even more migrants…* (p. 5).

Carling raises the critical point that even if SIVE proves effective in apprehending unauthorized migrants this is largely beside the point:

> *SIVE… is merely one link in the chain that constitutes a migration control strategy…. After being apprehended, migrants must be processed on a case-by-base basis. If they seek asylum, their claims must be evaluated. If the outcome is negative, or if there was no asylum claim in the first place, Spanish authorities must ascertain the migrants' nationality in order to have him or her returned to the country of origin…. Spanish efforts to return to sub-Saharan African transit migrants to Morocco have largely been unsuccessful…. Under Spanish law, migrants can be detained for up to 40 days in reception centers. If they cannot be sent home within this period, they are released. These migrants are issued an expulsion order that bars them from working, but many remain in Spain or other European countries, and some have eventually obtained resident permits due to regularization…. Consequently the merits of SIVE become largely irrelevant* (p. 5).

To summarize, the relationship between EU border agencies and clandestine border crossers is characterized by an escalating "dialectic of control" (Giddens, 1985, p. 11). That is, as border agencies deploy ICTs and other resources to detect, identify and block unwanted individuals, many of these individuals develop counterstrategies to work around or undercut these border control efforts. These counterstrategies often draw on or produce what Bommes and Kolb (2002) refer to as "foggy social structures." These social structures (e.g., people smuggling practices and operations) emerge "*from efforts by individuals and organizations to avoid the production of knowledge about their activities by making them either unobservable or indeterminable…*" (cited in Engbersen & Broeders, 2009, p. 868). In response, authorities point to the production of this "fog" as justification for a new round of "state-of-the-art" border surveillance initiatives that promise to tame the border. Action provokes reaction (see Andreas 2000; Bort, 2002, p. 207; Lutterbeck, 2006; Zielonka, 2002, p.1).

It is this dynamic that has led to the EU Commission's call for the development of the EUROSUR system. While we certainly cannot know the outcome for sure, the historical record provides reason to believe the system may do little to stanch the flow of illicit border crossings. At the same time, it may well lead migrants to take more dangerous routes and pay increasingly high prices to people smugglers. The escalating dialectic of control described above is not unique to the EU context. For example, observers of the US government's high-tech approach to fortifying its border with Mexico provide compelling evidence of the same dynamic (Andreas, 2000; Cornelius, 2006; Payan, 2007; Shields, 2009).

Ports-of-entry controls and beyond

If and when the EU's biometric database architecture (e.g., SIS II, VIS, the Commission's proposed entry/exit system) become operational, it should increase the risks for unauthorized immigrants seeking port-of-entry access to the common market zone. The same is true for those travelers who overstay the duration of their visas. Whether the architecture will exclude or expel more of these individuals than before is more open to question. Broeders and Engbersen (2007) tentatively conclude: "*One might expect that the larger part of the irregular immigrant population will turn to…the option of avoiding the 'identity routes' of visa and asylum applications when traveling into Europe*" (p. 1605). That is, many would-be migrants may turn to the increasingly sophisticated people smuggling organizations that ply their trade in the spaces between ports-of-entry. If this occurs, people smuggling will become more of a "growth industry" than it already is (p. 1605). As for those who overstay, the authors argue that the likely effect of increasingly interoperable databases and restrictive controls on employment will "*be an even steeper descent of irregular migration into the underground and an increase of the dependency of illegal aliens on intermediaries (criminal and noncriminal)…."* (p. 1605).

EU authorities also highlight the counterterrorism capacities of systems like SIS II, VIS and the proposed entry/exit system. The underlying assumption is that terrorists will be flagged during the course of watch-list checks supported by biometrics. This is a highly problematic assumption. Those who participated in the Madrid bombings had valid visas and were equipped with legitimate residence permits or identification cards. Given their backgrounds, there is no reason to believe SIS II, VIS or the entry/exit system would have flagged these individuals. And since these systems are premised on the fact that sources of insecurity must come from outside the EU, they would have been irrelevant in the case of the London bombing as all four perpetrators were citizens of an EU member country (Baldaccini, 2008, pp. 31-32).

Significant elements of VIS and the Commission's proposed entry/exit system are modeled after the US-VISIT program, the US government's entry-exit program (Hobbing & Koslowski, 2009). A brief consideration of the performance of the US-VISIT program buttresses the conclusions above. Implemented

in 2004, US-VISIT collects biometric information (i.e., digital photographs and fingerpints) on foreign visa applicants at US consulates. At this stage, applicants' identifiers are compared to listings on government watch lists to identify and weed-out those "high risk" individuals who will not be provided visas (Hobbing & Koslowski, 2009). When approved visitors arrive at US ports-of-entry, officials capture the same biometric information and examine it to ensure the person seeking entry is the same person to whom the visa was issued. At port-of-entry, the US-VISIT also screens non visa-nationals – their passports are scanned, they are checked against watch lists and digital photographs and fingerprints are collected. Their biometric data is also checked against government databases (Hobbing, 2007). At the outset, the goal was also to use US-VISIT to detect overstayers (like VIS and the EU's proposed entry/exit system); armed with biographical information and biometric identifiers gleaned at the pre-entry and entry stages, the authorities would supposedly be able to pursue the overstayers. Recently, however, Congress chose to deny funding for this exit layer due to financial, legal and technical difficulties associated with the program (Castelli, 2008). By the end of 2005, US-VISIT screening procedures were in place at all 284 air, land and sea ports-of-entry in the US. By early 2008, the program had collected biometric data and other information on more than 113 million travelers entering the country (Hobbing & Koslowski, 2009).

Commenting on the US-VISIT program, Koslowski (2006b) argues: "*It is doubtful that 'established terrorists' known to intelligence agencies will willingly provide the biographical and biometric data that may lead to their apprehension, while 'potential terrorists' who have no criminal record and minimal contacts with terrorist organizations will not generate a hit on the watch lists that are checked by US-VISIT…*" (p. 5). The fact of the matter is the US-VISIT program would not have caught the perpetrators of the 9/11 attacks – all of whom entered the US with valid passports and visas. Most had no criminal record of any sort – background checks would have turned up negative because most were not suspect lists. As Steve Fischel, a senior US Consular official, puts it: "*There's absolutely no way any highly educated, experienced consular official would have denied those visas in light of the known facts. They didn't break the pattern in any way. There is nothing that set them aside from legitimate, qualified travelers*" (quoted in Alden, 2008, p. 104). To date, the US Department of Homeland Security has still to announce that US-VISIT has stopped a single suspected terrorist from entering the country (Hobbing & Koslowski, 2009).

Human Costs and Unequal Mobilities

The EU's "hardening" of the external perimeter has indirectly contributed to the production of significant human costs. For example, the ongoing "*fortification, militarization and informatization*" (Van der Ploeg, 2006, p. 178) of the EU's southern border has funneled unauthorized migrants to increasingly dangerous

parts of the perimeter. As a result, many migrants have died while trying to enter the EU. Figures on the number of deaths are incomplete as an unknown number of corpses are never found. Typically, estimates are based on press reports and reports from private or public sector organizations working in the field of immigration. Spijkerboer (2007) notes that during the 1990s, when sea patrols in the Straits of Otranto increased, the number of migrant deaths also increased: "*To make interception at sea by the authorities more difficult, departures were arranged for when weather conditions would be particularly bad, especially during winter. The practice of unloading passengers into the sea without lifejackets near the cost began as an attempt to evade apprehension…. This led to a large increase in the number of accidents…people being mangled by propellers and drowning*" (p. 134). A Spanish rights organization estimates that some 4,000 people drowned in the Strait of Gibraltar between 1990 and 2003 (De Haas, 2008). Looking at the entire external perimeter, United for Intercultural Action (2009) reports that between 1993 and 2009 more than 13,000 deaths have been associated with the building of "Fortress Europe." The agency argues that most of the documented deaths "*occur between Africa and Spain…around Malta and on the way to Italy. Many people drown in the sea before arriving on European shores." The organization concludes: "These deaths can be put down to border militarization, asylum laws, detention policies, deportations and carrier sanctions. They are linked to the carrying out of decisions taken on [the] highest political level: the Schengen Treaty…and EU border control programs*."

According to the EU Commission one justification for the proposed EUROSUR program is that it will "*reduce the death toll of illegal immigrants*" (Commission of the European Communities, 2008). The evidence cited above suggests that more surveillance and monitoring at the external perimeter may do little to curb the number of deaths. Indeed, by pushing would-migrants toward more dangerous routes and practices, the program may increase the likelihood of death for many. Moreover, the problem may be compounded by the diversion effects of SIS II, VIS and the Commission's proposed entry/exit system. As noted above, these measures may well push many migrants to join the ranks of those opting to enter the EU somewhere between ports-of-entry.

The Commission's claim that EUROSUR will reduce the migrant death toll is largely based on the notion that the proposed surveillance system will deter unauthorized entry. This proposition assumes migrants' decisions are based on a straightforward cost-benefit analysis and therefore increasing the individual cost or difficulty of clandestine border crossing will lead to a reduction in border-crossing attempts. This assumption is probably flawed. As Hernandez-Carretero (2009) puts it:

> *One possible explanation why migrants may not be discouraged by…border enforcement would be that they do not make migration decisions on the basis of risk assessments. For example, believing that all is determined by a divine will may…make the notion of risk irrelevant and*

> *perhaps lead people to downplay the consequences of their own choices. An alternative explanation would be that even though risk assessments are part of migration decisions, migrants might sometimes consider the risks worth taking in light of the available alternatives: many of my informants explained that while they recognized that unauthorized migration to Europe by sea was an enterprise fraught with risks, they were willing to confront them in order to seek overcoming socioeconomic stagnation that characterized their life in Senegal* (p. 9).

Cornelius and Salehyan (2007) arrive at similar conclusions regarding Mexican migration to the US. Since 1993, repeated efforts at fortifying the US-Mexico border (by deploying more manpower, surveillance technologies and fences) have increased the physical risk and the financial cost of unauthorized immigration. Yet, as in the case of the EU, tougher border controls have had remarkably little influence on the propensity to migrate illegally to the US. After surveying hundreds of returned and first-time migrants, the authors conclude that the perceptions of danger and/or difficulty of crossing the border clandestinely are far outweighed by economic and family-related incentives to migrate.

While the "hardening" of the EU's border security approach is intended to block cross-border mobility, the effort to "offshore" port-of-entry border controls is designed to preemptively deny the mobility of some while facilitating the cross-border movement of others. The resulting system is one of highly unequal access to the EU. The EU's visa regime plays a particularly important role in this system. Non-visa nationals, who come mostly from predominantly rich, white countries, are regarded as "low risk" and desirable. These travelers encounter the EU border for the first time at check-points on the external perimeter. At these locations, border officials have the discretion of choosing which travelers may be inspected more closely. By contrast, the visa obligation denotes suspicion, mistrust and fear towards all nationals from the "black listed" countries (countries whose populations are primarily poor, black and/or Muslim). A traveler from these countries must negotiate various obstacles to obtain a visa (e.g., travel to the consulate; queue, possibly for hours; undergo database checks and face-to-face interviews; demonstrate adequate financial resources to sustain a visit to the EU). The issuing consulate or embassy can deny visa applications without providing an explanation (Neumayer, 2006, p. 79). When an individual is granted a visa, this can be considered "… as an exception to the exclusion. It is a reestablishment of confidence in an individual notwithstanding that his or her country of nationality is one which as a whole has been designated suspect (Bigo & Guild, 2005, p. 236). Of course, this may not prevent the visa holder from being subject to further scrutiny when he or she arrives at border checkpoints (Pallitto & Heyman, 2008, p. 319).

In essence, the EU's visa regime is heavily weighted against members of particular races and religions, and the economically challenged; their mobility is either blocked or it is much slower and more arduous relative to the mobility experience of non-visa nationals. With respect to those who are blocked, Bigo (2005) asks:

> *So, what about all those people who are prisoners of the local and cannot benefit from the time-space compression of the world because they are too poor to be good tourists? What about the desire of the so-called third country nationals to visit Europe and the world? They are considered a threat, as potential immigrants, even if they do not envisage staying and have their own life in their own country of origin* (p. 63).

The soon-to-be deployed VIS program may well reinforce the inequalities associated with the EU's visa regime. The program only applies to nationals of "black list" countries (Hobbing, 2007), taking for granted the highly suspect "paradigm of suspicion" (Shamir, 2005) that underpins this regime. The program is simply intended to enhance the sorting and blocking functions of the visa regime; it seeks to ensure that those deemed "unwanted" are not able to work around the system by means of document fraud or "visa shopping", for example.

If implemented, the EU Commission's Border Package would impact the EU's border management regime in at least two ways. First, ICT-based border surveillance would extend to all travelers to the EU. For example, under the proposed entry/exit system non-visa nationals as wells visa nationals would be required to provide biometric data at EU ports-of-entry. Moreover, the planned Electronic System of Travel Authorization System would mandate that non-visa nationals log on to a given internet site to ask for permission to travel to the EU.

Second, the implementation of the Commission's proposed pre-inspection systems or "registered travel programs" for "low risk" travelers may lead to the increasingly differential treatment of travelers as they move within a growing network of border checkpoints. As noted earlier, the criteria for labeling someone "low risk" in these programs would include factors such as a reliable travel history (mainly no previous overstays), evidence of sufficient financial means, holding a biometric passport containing fingerprints, and successful visa applications. As this list makes clear, only those third-country nationals who have previously travelled to the EU and stayed for a while would be eligible to enroll in these voluntary programs: "*There is no obvious way in which a third country national who has never been to the EU could obtain that status*" (Guild, Carrera & Geyer, 2008, p. 2).

A brief examination of the US experience with voluntary pre-inspections programs sheds light on how these systems can generate stratified mobility patterns. First implemented in the mid-1990s, the US government's Secure Electronic Networks for Travelers' Rapid Inspection Program (SENTRI) permits enrolled automobile drivers to use dedicated commuter lanes that bypass the normal inspection process. To

enroll, applicants submit to an extensive law enforcement interview and background check. They also pay significant application fees (up to $400 at the US-Mexico border) (Pallitto & Heyman, 2008, p. 322). A digital copy of the applicants' fingerprints is taken and, along with their biographical information, checked against an array of criminal and terrorist watch-list databases. Those who conform to the "low risk" profile use a radio frequency identification card to pass through checkpoints without stopping for inspection. SENTRI is in use at various US-Mexico border crossings and there is a similar program, NEXUS, on the US-Canadian border. The US and Canada have also deployed a NEXUS program for air travelers. Aimed at frequent cross-border business travelers, the program allows pre-screened travelers to be processed with little or no delay. This version of NEXUS adds a further biometric layer of surveillance by requiring participants to undergo iris scans at self-serve kiosks to verify their identity (Shields, 2009; Sparke, 2006).

The mobility effects of these pre-clearance systems are clear: "*Only border crossers who pay substantial fees and have significant positive contacts with the state qualify for this opportunity for 'freer' movement*" (Pallitto & Heyman, 2008, p. 323). International mobility is swift and untroubling for those frequent border crossers willing to subject themselves to background checks and pay the fee to acquire membership in the fast lane. This inequality is often graphically visible: "while other vehicles wait in line, perhaps for hours, [SENTRI] travelers speed past in a minute or less" (Pallitto & Heyman, 2008, p. 323). In essence, pre-inspection provides the enrolled travelers with *de facto* entitlement to a smooth border-crossing experience. By contrast, border mobility is slower and more restrictive for those who are unwilling or unable to join these "kinetic elites" (Pallito & Heyman, 2008, p. 13). At least in the case of the NEXUS air program, the mobility inequalities produced tend to reflect and reproduce class inequalities: "*Those not registered (and not biometrically recognized) are designated as greater risks and their freedom of movement is therefore restricted. This form of classification self-selects for class status as well, because those who travel by airline on a regular basis are likely to be business travelers or others with greater financial means; thus, freedom of movement and freedom from suspicion will be conferred more often on higher-income, rather than lower income persons*" (Pallitto & Heyman, 2008, p. 324; see also Sparke, 2006).

In short, the EU is in the process of constructing what Walters (2006) refers to as a "firewall" around its "zone of prosperity." While elements of this firewall are designed to seal off the spaces between ports-of-entry, other elements (e.g., the visa regime) seek to distinguish between "trusted" and "treacherous" mobilities (Curry, 2004). Currently, the result of this two-pronged approach is a system of highly unequal access to the EU, one that reinforces race-, religion- and class-based inequalities. The implementation of VIS and the various ICT-based programs proposed by the Commission could produce an increasingly stratified pattern of mobility ranging from the relatively small number of highly privileged individuals who

have been pre-cleared to speed across borders to those who must visit a foreign consulate to demonstrate they deserve to be classified as a trusted traveler to those who risk their lives in small overcrowded boats attempting to cross the Mediterranean Sea while trying to elude the latest form of electronic surveillance.

Conclusion

The dream that the EU's external perimeter can be controlled through a high-tech two-pronged strategy that yields "total information awareness" appears flawed and dangerous. The proliferation of ICT-based border initiatives has not enhanced the capacity of the authorities to reduce the flow of undocumented migrants nor does it seem to hold much promise in thwarting the entrance of non EU-based terrorists. These initiatives have, however, succeeded in creating significant resistance. In doing so, they have "*served to highlight the extent to which control is never simple or one-dimensional. Just as more information can often mean less knowledge...more control can also often mean less. More intensive control fosters a more intensive search for ways to avoid it*" (Mulgan, 1991, p. 4). While the stated aim of reducing illicit cross-border flows may not have been achieved, the human cost of the EU's technology-centered approach to taming the border falls unequally on those individuals and populations that have become the object of deep suspicion. Some of the EU's technical "fixes" have been complicit in driving clandestine border crossers to more dangerous routes and modes travel, increasing the probability of injury or death.

The EU's high-tech border work has not worked as advertised because it addresses the symptoms rather than the causes of very separate problems, namely undocumented migration, terrorism and forms of organized crime such as illicit drug trafficking. More specifically, the EU's two-pronged approach is concerned only with deterring or interdicting "undesirable" cross-border flows. There is little serious interest in identifying and confronting the distinct forces responsible for generating and channeling these flows. These forces include the supply-push/demand-pull dynamics that propel the flow of undocumented migrants, the root causes of terrorism and the factors that fuel the demand for illicit drugs. In short, these problems have different origins, involve different processes and, therefore, require different strategies. Ignoring this fact, the EU authorities conflate the perceived threats of immigration, terrorism and crimes like drug trafficking. One upshot of this is that recent ICT-related border initiatives actually contribute to the symptoms they are supposed to resolve. For example, people-smuggling networks have become increasingly sophisticated in response to recent border surveillance programs. Moreover, there is the possibility that non EU-based terrorists may use these enhanced networks and techniques to enter the EU at some point in the future.

Despite its failure to "secure" the perimeter, the effort to simultaneously "harden" and externalize the border may well be a political success. Regardless of actual efficacy, the promotion of expensive and high profile "state-of-the-art" technology initiatives serves to demonstrate the government's strong moral resolve and commitment to those segments of the public who are concerned about various "external threats." AS Bigo (2002) argues, "*the proliferation of border controls, the repression of foreigners, and so on, has less to do with protection than with a political attempt to reassure certain segments of the electorate longing for evidence of concrete measures taken to ensure safety*" (p.2). Advocacy of technology "fixes" also taps into the almost religious notion, particularly prevalent in the West, that technology, understood as an unalloyed positive and transcendent force, is capable of solving almost any problem (Andrejevic, 2007, p. 17; Lyon, 2003, p. 85).

Heavy reliance on a technical solution to border control also plays well with most policy makers, government agencies and industry contractors – the proliferation of ICT-based border security initiatives expands agency remits and budgets and generates lucrative government contracts. Indeed, many of these actors have every incentive to play up or exaggerate the risks posed by infiltration from "the outside" (Bigo & Guild, 2005, p. 258). This discourse helps create unease and social anxiety that the ICT-based border initiatives are then meant to mollify. At the same time, embracing "technology fixes" deflects attention from the need for serious reflection on the adequacy of current approaches in policy domains such as immigration control, foreign policy and drug policy. Consequently, the status quo and the institutional interests that benefit from it are reinforced – no far-reaching reform is required. To paraphrase the eminent communication policy expert, William Melody (1973, p. 170), the persistence of technology determinism among policy makers and bureaucrats has a devastating effect because it narrows the scope of public policy making to encompass only changes within the established institutional structure.

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