D.1.1. State-of-Art Review of Scholarly Research on Security Technologies and Their Relation to the Societies Which They Serve

Security technologies and society.

A state of the art on security, technology, borders and mobility.

INEX D.1.1. (INEX Partner 3 C&C, Workpackage 1), November 2008.

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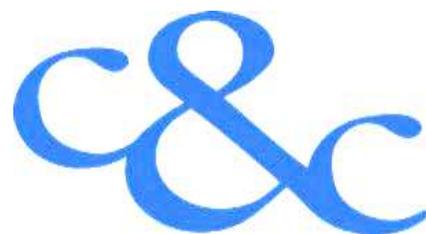Philippe Bonditti

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Acronyms

AFSJ	Area of Freedom, Security and Justice
CIRAM	Common Integrated Risk Analysis Model
CFSP	Common Foreign and Security Policy
CIS	Customs Information System
EBF	European Biometric Forum
EDA	European Defence Agency
EDPS	European Data Protection Supervisor
EOS	European Organisation for Security
ERA	European Research Area
ESDP	European Security and Defence Policy
ESRAB	European Security Research Advisory Board
ESRP	European Security Research Programme
ESSTRT	European Security: High Level Study on Threats, Responses and Relevant Technologies
ESTA	Electronic System of Travel Authorisation
EUROSUR	European Border Surveillance System
FIS	Frontex Information System
FP	Community Framework Programme
ICT	Information and communication technologies
OCCAR	Joint Organisation for Armaments Cooperation
PASR	Preparatory Action for Security Research
SIS	Schengen Information System
UAV	Unmanned Aerial Vehicle
VIS	Visa Information System
WEAG	West European Armaments Group
WEAO	West European Armaments Organisation
WEU	West European Union

Introduction

1. The present paper constitutes the first deliverable of WP1 'Ethical premises and consequences of security technologies' of the INEX programme. It is intended as a state of the art of the existing literature on the issue of security technologies and their relations to European societies, with a specific focus on the question of borders and mobility. The literature review is complemented by a set of insights gathered through research conducted by the WP1 team over the first 8 months of the INEX programme. It is also put into relation with the broader focus of INEX, namely the discussion on the so-called 'internal/external security continuum' in Europe, its ethical and political implications.

2. **Security practices at the EU level are increasingly mediated by a growing range of technological devices** (Bigo, Bonditti and Olsson, 2008). Technologies are called in under two major claims: firstly, that they allow for a greater efficiency of security agencies and services; secondly, that they are necessary to match the alleged ever-growing sophistication of wrong-doers, to enhance the capacity of EU security agencies and services to counter them, and thus to make EU citizens safer. Security technologies have accordingly been singled out as a core priority for the EU's industrial and research policies, with important effects as regards both legal frameworks and funding (Preuss-Laussinotte, 2006b). In February 2004, the European Commission launched a 'Preparatory Action for Security Research' (PASR), through which the Community contributed some 44 million euros to a selection of pilot projects and network-building activities undertaken by European companies in the field of defence and security (Bigo and Jeandesboz, 2008). A 'Security' theme has been initiated within the current Seventh Community Framework Programme (FP7), for which a total of 1,4 billion euros has been earmarked over the period 2008-2013.

3. **Borders and circulations, in this perspective, have constituted a major focus for the developing use of, and investment in, security technologies in Europe.** The EU-wide databases currently in activity[1] all deal with movements across borders (mainly persons, but also commodities or means of transportation for CIS). Two major databases will come on line in upcoming years, namely the SIS-II and VIS, which will also deal with these matters and hold personal data; further proposals, which have not yet been decided upon, include an EU register for travel documents and identity cards, as well as an EU entry/exit system and Electronic System of Travel Authorisation (ESTA) for third-country nationals travelling to the Union (Geyer, 2008). One of the major recent proposal issued by the European Commission regarding security, and heavily reliant on information and communications technologies (ICT), is the development and deployment of a European border surveillance system (Eurosur).

4. In the process, however, **little attention has been paid to the ethical and political implications of security technologies.** For instance, out of the 39 activities funded under the PASR, only one focused on the issue of individual freedoms and rights in the context of technology-intensive security practices. The call issued by the European Data Protection Supervisor (EDPS) in April 2008 that '[p]rivacy and data protection requirements need to be highlighted and applied as soon as possible in the life cycle of new technological developments' (EDPS, 2008: 2), has so far been largely ignored by the EU institutions, European defence and security companies, research institutions and Member States alike. Underpinning this lack of interest seems to be the assumption that technology is value-neutral: technologies are considered as tools to be mobilised in the pursuit of efficiency for the purpose of countering 'new' dangers, risks and threats. While attitudes toward technology

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[1] I.e. Eurodac, the Customs Information System (CIS) and the Schengen Information System (SIS).

can be ambivalent (e.g. in the case of technologically-induced 'vulnerabilities'), in the last resort, technological systems tend to be considered as a 'salvation tool' (Bonditti, 2005). Furthermore, it seems that the concerns of policy-makers, politicians, but also of security and technology professionals lie more in the improvement of technological applications in the light of 'new threats', the management of an European 'industrial base' with regard defence and security, and the assumed reassurance that this might bring to EU citizens, than in the actual implications that such developments might have in terms of privacy, but also of social justice, the repartition of risks, discrimination and exclusion.

5. Such a stance is all the more problematic **as the contemporary orientation of existing and developing security technologies strongly leans towards the 'monitoring of the future'**, *i.e.* the privileging of pro-activity, prevention and profiling stance in the management of insecurity, to the detriment of the practices of criminal investigation and criminal justice, including the presumption of innocence, the right to a private life and so forth (Bigo, 2007). These orientations in the use and development of technologies for the purpose of managing insecurity threatens to render obsolete the existing modalities for guaranteeing individual freedoms and rights in the EU. It thus becomes crucial to acknowledge the notion that technology is not value-neutral. Questions have been raised, in this respect, on the implications of the complexity and intensity of the use of security technologies for practices of security and surveillance. Scholars routinely evoke notions such as that of a 'surveillance society' (Security Studies Network, 2006) and a 'culture of control' (Garland, 2001) to characterise practices of social ordering in contemporary societies in Europe and North America, and their evolutions in the light of ICT-related developments.

6. While these suggestions provide an overview of the general trends underpinning the development of, and recourse to, technologies in the management of insecurities, **we nonetheless need to take stock of the differentiated uses of technological systems by the various *metiers* of security**, particularly between the field of defence and the field of policing. Despite the development of, and investment in, so-called 'dual use technologies' which can be used both for military and civilian activities, and the growing reference to 'security technologies' intended to encompass both war- and crime-fighting, there seems to remain an important differentiation between these two domains. Furthermore, even when similar technological systems are put in use by the military and the police, these usages are nonetheless framed by differentiated doctrinal considerations – e.g. for so-called 'non-lethal' weapons (Bricet des Vallons, 2007). As regards ICTs, there seems to be in this regard a degree of convergence – a shared emphasis, for instance, on computerised systems, databases, and the 'networkisation' of operatives, as well as on the importance of intelligence-driven activities. This, however, should not be taken to imply that there is a full merger of the practices and *metiers* of security. In this respect, we argue that the notion of the 'security continuum', which constitutes the conceptual background of the INEX project, should be critically assessed.

7. Three points should then be highlighted as regards our understanding of technology:

   ➢ **Technology is a social practice** (Franklin, 1999): artefacts are socially shaped (MacKenzie and Wacjman, 1985), and therefore the designing of specific technological systems as well as their uses should be studied in relation to a political and social context.

   ➢ **If technology is a practice, then we need to look at the 'practitioners' of technology**, and at the processes through which specific technological systems are researched, developed, adopted and operationalised. 'Practitioners' of technology include in particular the actors from the private sector and the companies which develop and sell technological systems.

➢ **If technology is a practice, then, it is not neutral.** Specific assumptions about politics and society are inbuilt in technological systems, and, accordingly, they have social and political effects. Therefore we need to look into the ethics and politics of technological research and development, as well as in the ethical and political implications of the uses of technologies, particularly in a field such as security and surveillance, which is so sensitive for individual freedoms and rights.

8. The following sections provide an overview of the literature in relation to these issues, combined with preliminary empirical findings of WP1 of the INEX programme. The first one provide conceptual elements with regard the question of the relationship between security and technology, together with insights on the activities associated with the EU in this area. The second section of the paper discusses security and technology in relation to the question of borders and mobility. The third section provides an overview of the ethical and political stakes of the contemporary uses of security technologies in Europe. The last one, finally, sketches out research directions that WP1 researchers will look into in the upcoming two years.

Security technologies: conceptual overview and EU activities

Security technologies: new technologies, new practices – new paradigm?

9. As mentioned above, **a widespread belief in political and academic circles today is that the use of new technologies will improve security of territories and populations.** Consequently, in pursuit of security, significant budgets have been allocated to new technologies in Europe and in North America for many years now. The association between new technologies, particularly ICTs, and security, has been differently integrated by various security agencies. This has resulted in a heterogeneous use of technology: on the one hand, the military uses technological tools to diminish the size of its equipments ('miniaturisation'), to improve its power/effect ('technology as a force multiplier') and its precision, or for identification and location purposes. On the other hand, civil intelligence services, police and customs use technological tools to improve data collection and data analysis (Gandy, 2002) but also for identification of individuals and authentication of identity documents. All of these actors see in the use of technical tools (primarily informatics/computing), the triple benefits of precision, advantage of location and savings of time. They assume that these benefits will almost automatically lead to a higher effectiveness/efficiency in the pursuit of their respective institutional missions and/ or individual tasks.

10. The massive resort to technical tools deepens a broader mutation: the networking process in which the security agencies of modern states seem to be trapped. This networking process is neither linear, nor homogeneous. It is in fact organised around two poles: military and civilian. In the first one, one can observe doctrinal reflections on the reformulation of war making (Shaw, 2003) and the perceived necessity to transform the armies (Der Derian, 2002) which can be both understood as a prolongation of the reflection on asymmetric warfare and the revolution in military affairs (RMA) initiated in the beginning of the 1990s (Balzacq and De Nève, 2003; Bonditti, 2008; Wasinski, 2006). From this military point of view, these developments symbolize the advent of a new strategic posture, less governed by *geopolitical* necessities/constraints than by technology and the will to increase the capacities in terms of speed and force projection. The mastering of geographical space against invisible enemies (i.e. terrorists) remains strategically important but it is achieved through speed and the mastering of time (Virilio, 1977). **In the military narrative of the relationship between security and technology, the world is given to us as global battlefield in which non-linear armies**

are to be engaged in network-centric warfare against asymmetric enemies. If it is not the current dominant perspective in Europe, we nevertheless see it surfacing in various national arenas (especially in the UK) as well as within NATO.

11. The civilian pole is more specifically guided by the necessities of information-sharing among the security agencies that play a part in the protection of territories and populations. These agencies include the intelligence, police and border and immigration control agencies. Indeed, the contemporary focus on transnational threats and dangers does not only imply the resort to military forces (like in the United States) but also a deep mutation of the civilian security apparatuses, now clearly governed by the will to network and integrate its different parts. **This narrative tends to present the world in its globalizing dynamics with the advent of a world society - mainly characterized by permanent and multileveled mobility, which should be scrutinized in specific places: ports, airports, train stations, i.e. the *loci* of (transnational) mobility.**

12. Distinguishing the military and civilian poles does not however mean that their respective transformative dynamics have nothing in common. On the contrary, they share common denominators. What is at stake in both of these visions is, first, the necessity to defend and protect territories and populations through an increased capacity in terms of speed. Indeed, both of these visions aim at anticipating threats and dangers: confronted to the impossibility of geographically localizing the enemy, the danger or the threat, security apparatuses (both military and civilian) are taken in an integrative dynamic which deepens the de-differentiation between internal and external that have historically governed the organization of the modern state security apparatus and, more broadly, the exercise of power and authority. **This integration is made possible thanks to technological systems now perceived as the mean by which security agencies will progressively be inscribed into a single architecture within which is to circulate the digital information collected about potential dangerous individuals through technological intelligence.**

13. Here the question can be raised of how the heterogeneous use of technology/technological tools - and especially computing tools - redefines the modalities through which security has historically been ensured, sovereign power and coercion exercised. These are old questions that have been discussed, in the academic literature, by various authors: from Walter Benjamin in 'The Work of Art in the Age of Mechanical Reproduction' (Benjamin, 1969), to Guy Debord in *La société du spectacle* and *Commentaires sur la société du spectacle* (Debord, 1992), going through Jean Baudrillard in *Simulacres et simulation* (Baudrillard, 2004). They all have offered useful analysis to understand the unwilling effects of such technical tools on the exercised of authority and power. We could add to this list authors such as Martin Heidegger in *La question de la technique* (Heidegger, 1958), Gilbert Simondon in *Le mode d'existence des objets techniques* (Simondon, 2001), and Jacques Ellul in *Le système technicien* (Ellul, 2004).

14. Among those authors, Paul Virilio is the one who managed to capture what appears to us as the most crucial change in security practices with the surfacing of speed as the major aspect of our times (Virilio, 1977). Virilio more specifically analyses the effect of technology on military practices and the art of conducting war[2]. In the military use of technology, he sees the contemporary form of power, now exercised through speed and not just force. The major objective is psychological: installing a permanent feeling of insecurity in the entirety of the space under consideration. This is the main idea in the current 'war against terror' waged by the United States, and more specifically the military doctrine of transformation of the armies which is now being applied within NATO. **But what is true in the United States with the military developments we know is also true for the civilian security agencies in**

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[2] On Paul Virillo's work in social science see, *Theory Culture and Society*, 16(5-6), October-December 1999, 247 p.

Europe. The search for speed now governs the transformation of the European security architecture in the making.

15. This search for speed is conducted through technology with the result of the interconnection of the databases of civilian agencies. Indeed, the advent in computing technology now allows for instantaneity of decision and action regardless of the geographical distance is between the location of the decision makers on the one hand, the one who have in charge to enforce the decision (action) on the other. The articulation of digitalization and miniaturisation now allow for speed by erasing geographical distance (Parrochia, 2001; Dagognet, 2001). **Through technology, information on people gathered by the police, the intelligence services and/or border and immigration control agencies can be circulated with high speed beyond seas and oceans, allowing for pro-active policing and remote control**.

16. This is the meaning of the networking process of security agencies, both military and civilian. Networking security apparatuses for a better circulation of the allegedly relevant information about threats and dangers. This is what is in the making and that we now have to observe critically assess as it actually works with crucial implications:

   ➢ the de-differentiation of private and public sectors with the setting up of a techno-scientific matrix developing technological tools for security purposes, and the advent of a techno-informational complex potentially linking security industries and security agencies (Mattelart, 2007);

   ➢ the re-articulation of control and surveillance techniques with the technologies of speed now allowing for new complementarities between surveillance (permanent in time) and control (localized in space or border) techniques. **These are issues we have to investigate to understand their effects on civil liberties, privacy, freedom and more generally the art of governing people in the making.**

EU *activities in the field of security technologies*

18. In scrutinising the EU activities in the field of security technologies, it is important, firstly, to highlight that such activities are relatively recent. There are, furthermore, at least two aspects to these activities: **one concerns the support to the development and dissemination of security technologies, and the other relates to the actual use of security technologies by EU security agencies and services.** Here, we will deal with the former, while the latter will be tackled in the next section in relation to the questions of borders and mobility.

19. As suggested in the previous point, EU activities related to security technologies are relatively recent. **The notion of 'security technologies' itself is a newcomer** in the official documents of the European institutions, and the current EU activities in this area seem to constitute both an outgrowth of previous efforts by the European Commission to set up a common European market and procurement policy in the area of armaments, and a development tied with the establishment of the European 'area of freedom, security and justice' (AFSJ).

20. Commission involvement in the question of armaments and armament procurements took place against a twofold background process: firstly, the major redistribution of assets within the European defence sector in the 1980s and 1990s, fuelled by the increased international competition with North American firms; secondly, the rapidly evolving institutional landscape of intergovernmental cooperative ventures in the field of defence procurements in

Europe after the end of the bipolar period[3]. The proposals issued by the Commission in this regard in 1996-1997 were hence framed as part of the industrial and internal market policies, rather than as part of the then-nascent European security and defence policy (ESDP). The possibility of aligning the armaments markets with the internal market acquis had indeed been systematically blocked by Member States, on the basis of Article 296 TEC, since the entry into force of the treaty of Rome[4]. The two communications of 1996 and 1997, accordingly, deal with so-called 'defence-related industries'. The 1996 communication on 'The challenges facing the European defence-related industry' concentrates mainly on the 'economic and industrial challenges', looking at the possible Community contribution to these issues in trade (both within the internal market and in international commerce) and research and development matters (European Commission, 1996). The 1997 communication on 'Implementing European Union strategy on defence-related industries' introduces an action plan, focusing on: the maintenance of an European industrial and technological base, highlighting in particular that 'this base […] increasingly involves dual-use product […] [and] is valuable for economic development' (European Commission, 1997: 5); the extension of the internal market framework to the field of defence goods. EU involvement in the field of defence, despite the creation of the EDA in 2004, has failed to materialise substantially yet[5].

21. In the meantime, however, the discussions about the support that the EU could provide to 'defence-related industries' was somewhat deflected towards the question of security and security technologies. This shift is particularly visible in the Commission's 2003 communication 'Towards an EU defence equipment policy' (European Commission, 2003), which, despite its title, deals more with what it calls 'global security concerns' than with defence matters *per se*. In particular, the Commission suggests that it 'has had a great deal of experience in managing Community research programmes and coordinating national research activities and programmes', thus expressing its willingness 'to offer its expertise for an initiative to promote cooperation on advanced research in the field of 'global security' (European Commission, 2003: 16). In this perspective, it further proposes 'to launch a preparatory project […] with the Member States and industry to implement some specific aspects that would be particularly useful in carrying out Petersberg tasks. This preliminary operation […] would constitute a pilot phase […] for evaluating the conditions and arrangements needed for effective cooperation between national research programmes in the field of global security' (European Commission, 2003: 17). This proposal, as we will see below, concretised into the 'Preparatory Action on Security Research' (PASR).

22. The framing of the issue of armaments and defence issues in terms of 'global security' arguably reflects the evolving security *doxa* which has affected European practices in this field since the mid-1990s. It highlights, in particular, the growing importance of so-called 'internal security' considerations in the overall reformulation of (in)security, both in Europe and internationally, after the bipolar period, which is leading to an increasing 'de-differentiation' between the previously separate universes of 'internal' and 'external' security (Bigo, 2006). In

[3] Among others, the creation of the West European Armaments Group (WEAG) in 1992, of the West European Armaments Organization (WEAO) and of the Joint Organisation for Armaments Cooperation (OCCAR) within the West European Union (WEU), both in 1996. The activities of these groupings have now been transferred to the European Defence Agency (EDA).

[4] Article 296 TEC states that the provisions laid down in the treaty 'shall not preclude the application of the following rules: (a) no Member State shall be obliged to supply information the disclosure of which it considers contrary to the essential interests of its security ; (b) any Member State may take such measures as it considers necessary for the protection of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the common market regarding products which are not intended for specifically military purposes'.

[5] In this area, the Commission is still at the stage of launching proposals, as illustrated by the tabling, through DG Entreprise and Industry, of the so-called 'defence package' in December 2007 (European Commission, 2007a, 2007b, 2007c).

this respect, one needs to take stock of the importance of the processes associated with the AFSJ in the overall framing of security issues in the European governmental arenas, including with regard the industrial and research and development policies. The shift towards 'global security' as a background notion also echoed the closer contacts between Commission officials in DG Enterprise and DG Research with the actors from the private sector in this particular area. A striking illustration of this is the so-called 'STAR 21' report (European Commission, 2002), published in July 2002 by DG Enterprise. The report originates from the proceedings of the European Advisory Group on Aerospace, composed of senior representatives of the aerospace industry and of the EU institutions[6]. While mainly focusing on ESDP and armaments matters, the report nonetheless discusses 'security and defence', highlighting for instance that: 'It is now accepted that in many circumstances the provision of […] security must be undertaken at European level. Events outside the EU's borders can have profound consequences within the Union. Turbulence in the Balkans has provoked major migratory movements with a direct impact on EU countries, while the events of 11 September 2001 have demonstrated the needs to be prepared to meet new kinds of security threats, both internally and externally' (European Commission, 2002: 28). The endorsement of this security *doxa*, serves in this particular case the purpose of stressing the need for organising an EU-wide armaments market as well as support activities with regard research and development.

23. Two hypotheses can be proposed at this stage, to be researched further. Firstly, t**he shift from featured 'defence' or 'defence-related' to 'global security' concerns reflects, on the Commission's side** (and particularly DG Enterprise), **an attempt at circumventing previous obstacles raised by national government with regard the incorporation of the armaments trade within the internal market dispositions**. The development of Commission activities in this area has subsequently materialised through the support and promotion of research and development activities, through the PASR as well as through the European Research Area (FP7 projects in particular). In the process, the financial efforts linked with the backing and organisation of research and development throughout the EU became framed as a contribution to the security of the EU.

24. Secondly, **this move is matched by evolutions in the private sector, possibly linked with the transformation of the European corporate landscape in the domain of defence in the 1990s, including the heightened competition with North American companies, and the decrease in domestic public funding for defence research and development**. These transformations remain mostly undocumented in the scholarly literature. In the US, the notion that a 'security-industrial complex' is replacing the 'military-industrial complex' of the Cold war is progressively making its way into the political and media fields (O'Harrow, 2005)[7]. The notion has also been taken up by civil liberties groups in the EU, following the launching of the PASR scheme in particular (e.g. Hayes, 2006). This semantic move aims at suggesting that most of the firms that used to be involved in defence activities are now shifting their activities towards the development and commercialisation of either 'dual' technologies which can be used either for military or for policing/surveillance

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[6] Among others, the chairmen and/or CEOs of BAE Systems, EADS and Thales, commissioners Busquin (Research), Lamy (Trade), Liikanen (Enterprise and Information Society), Loyola de Palacio (Vice-president of the Commission, Energy and Transport) and Patten (External Relations), as well as High Representative Javier Solana. The group was chaired by commissioner Erkki Liikanen.

[7] A reporter for the *Washington Post* and associate of the Centre for Investigative Reporting, O'Harrow published in 2005 a striking book on the transformation of surveillance practices in the US after the 11 September 2001 events, surveying the adoption of the Patriot Act and subsequent developments. He attributes the first mention of the expression 'security-industrial complex' by a government official to Peter Swire, the first privacy counsellor appointed in a US presidential team, under the Clinton administration, and uses it himself throughout his book (O'Harrow, 2005: 9).

purposes. One needs, however, to exert caution with respect this argument, regardless of how evocative and seductive its formulation might be (Guittet and Jeandesboz, 2009). Firstly, some scholars suggest that the joint commercialisation of military and police technological systems might actually preclude the end of the bipolar period: Guittet (2007) in his survey of international defence, security and surveillance trade fairs and exhibitions, highlights that events such as the MILIPOL exhibition in France, which was first organised in 1984, have for a long time featured side by side technologies of 'internal' and 'external' security. Secondly, among the companies active in these areas, there is still a tendency to distinguish between defence and security/surveillance activities. Speaking at the 'Launch Event' of the European Organisation for Security (EOS) in Brussels[8], for instance, Thales CEO Denis Ranque, while acknowledging that the creation of this organisation 'reflects a turning point in [security and defence companies'] expectations', made a point of stressing that the 'security market' per se only accounted for a handful of percents in his company's turnover. His and other speakers' communications all argued, in this respect, that this was an 'immature market', which required in Europe the intervention of the EU institutions[9].

25. Of course, **this assessment of market 'immaturity' should be envisaged with caution**. It is highly contingent upon the commercial and industrial positioning of each company, and actually takes on different meanings depending on the kind of activity and technology under consideration. A good illustration of this is the market for biometric equipments. 'Biometrics' are actually a multifaceted industrial and commercial issue: biometric systems comprise a broad range of components, including different types of sensors (e.g: audio, optical, heat-sensitive), workstations, expert systems (including the hardware to run such systems, and the operating algorithms), as well as data-storage and information exchange systems and supports (such as microchip cards). Companies can either focus one or several specific components, or propose so-called 'integrated' solutions, complete with services for managing the system (including, for instance, hosting the information collected or stored by the system). They can also concentrate on a particular type of activities involving the use of biometric: police fingerprint identification systems, personal biometric systems for devices such as laptops or PDAs, small-scale access control or time-management systems or large-scale systems, including national identity card schemes. In this regard, and as highlighted by a knowledgeable actor in the field, the AFIS (Automated Fingerprint Identification System) market for police services is probably the most 'mature' aspect of biometric industrial and commercial activities, having developed since the 1980s (Didier[10], 2003). What remains 'immature' for companies in the field of biometric equipment, however, is the market for so-called 'institutional biometric systems' in Europe and the United States (while several countries in Africa, Asia and the Middle East have already committed themselves to biometric identity titles schemes), with regard welfare identification systems, passports, but also and perhaps most stringently, identity cards.

26. Following these developments, the Commission launched the PASR in February 2004 (European Commission, 2004a). The Action itself is essentially a funding scheme for pilot projects coordinated by companies as well as research institutes and university departments. Between 2004 and 2006, the PASR hence funded 39 projects, for a total Community contribution of 44,5 million euros, dealing with a wide array of issues in the area of biometrics and identification, detection and surveillance, exchange of information, risk

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[8] On 14-15 May 2008. EOS is the most recently created EU-wide grouping of defence and security companies.

[9] For Ranque, 'the EU should play an active role in regulating security markets [as well as in] defining EU-wide standards', and 'remain the turning point for innovation', a position congruent with the elements we have highlighted in previous pages.

[10] Bernard Didier is Scientific and Business Director of the Sagem Défense Sécurité Security Division. Sagem recently won the market for the development of the French biometric passport system, and routinely claims for itself a leading position in the biometric equipment market.

anticipation and analysis, and critical infrastructure protection and civil protection (Bigo and Jeandesboz, 2008).

27. Concomitantly with the PASR, a set of documents were tabled by the Commission, which not only contributed to the familiarisation and visibility of the issue of security technologies in the European governmental arenas, but also further expanded the logic already operating in the PASR. The communication 'Towards a programme to advance European security through Research and Technology' (European Commission, 2004b), published together with Decision 2004/213/EC initiating the PASR, argues in this respect that 'Europe needs to invest in a "security culture" that harnesses the combined and relatively untapped strengths of the "security" industry and the research community in order to effectively and innovatively address existing and future security challenges' (European Commission, 2004b: 2), further stressing that the 'Preparatory Action […] constitutes a Commission contribution to the wider EU agenda to address Europe's challenges and threats' (Ibid).

28. The second document to take into consideration is the 'Research for a Secure Europe' drafted by the Group of Personalities in the field of Security Research (European Commission, 2004c) convened at the initiative of then commissioners Busquin and Liikanen in October 2003. The document, much like the abovementioned STAR 21 report[11], starts with the observation that 'security' has changed, with the end of the Cold War and the events of 11 September 2001: 'threats are more diverse, less visible and less predictable than those Europe faced during the Cold War. Driven by the large number of (potentially) unstable regions and the speed of technological developments they can evolve rapidly. They may or may not include a military dimension, are often asymmetric, and can threaten the security of Member States both from outside and inside EU territory […] these threats are multi-faceted, and interrelated, combining, for example, bad governance, weak states, poverty, human trafficking organized crime, drug smuggling and terrorism' (European Commission, 2004c: 10). These comments echo almost word for word those of the so-called 'European Security Strategy' adopted in December 2003. In light of these alleged transformations, the report then proceeds to highlight the importance of technology, both as an economic opportunity for the European industry and as a crucial element of security policies: 'Technology itself cannot guarantee security, but security without the support of technology is impossible. It provides us with information about threats, helps us to build effective protection against them and, if necessary, enables us to neutralize them In other words: technology is a key 'force enabler' for a more secure Europe […] At the same time, the security dimension of technology itself is changing because technology is often multi-purpose […] As a result, the technology base for defence, security and civil applications increasingly forms a continuum. Across this continuum, applications in one area can often be transformed into applications in another area […] while the armed forces and the various security services will always have their specific needs, there is an increasing overlap of functions and capabilities required for military and non-military purposes (such as is found between border police, coast guard and emergency response teams) that often allows the use of the same technology for the development of both security and defence applications' (Ibid: 12). The terms of reference for technology in the document then parallel the *doxa* of the security professionals, with an additional twist which is the emphasising of dual- or triple-use technologies, that can be construed as a justification from the part of the industry representatives active in the European governmental arenas, *i.e.* mainly from major companies with an institutionalised activity in the military sector rather than the 'security' sector as envisaged here.

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[11] Besides the two commissioners and High Representative Javier Solana, several participants in the group had also been involved in the drafting of the STAR 21 report (see above point 16).

29. The proposals and language of the 'Research for a Secure Europe' report were subsequently endorsed by the Commission in its September 2004 communication on the 'next steps' of European security research (European Commission, 2004c). The document notes in particular that: 'A coherent security research programme at the level of the European Union can add significant value to the optimal use of a highly competent industry. Such research should be capability-driven, targeted at the development of interoperable systems, products and services useful for the protection of European citizens, territory and critical infrastructures as well as for peacekeeping activities […] research has an important role to play to guarantee a high level of protection' (Ibid: 4). **Security research, then, is framed as applied research which should be 'useful'; in the meantime, however, the principle of a technological management of insecurities is uncritically endorsed**. The second element attached to the communication is the proposal for the establishment of a 'European Security Research Programme' (ESRP) under the FP7 (which has since then been endowed with an anticipated total Community funding of 1,4 billion euros over the period 2007-2013).

30. These elements suggest that a series of transformations are taking place with regard to security, and security technologies, in Europe. It is one of the premises of the INEX project that these transformations are best understood through the notion of a 'continuum' being created between the previously differentiated domains of internal and external security. **One needs to distinguish, however, between the semantic continuum of (in)securities and the discursive operations that are taking place around contemporary conceptions of security, the practical continuum of coercion and surveillance practices, and the technological continuum induced by the use of dual or multi-purpose technological systems.** The notion of a 'continuum', in this respect, might prove too vague. Are we talking about a *simultaneous* transformation of these three dimensions? What are the interactions between them? When we evoke a continuum, are we speaking about a merger? An overlap? A de-differentiation? These questions call for clarifications, and will be developed throughout our research.

Security technologies and the management of EU borders

31. In the previous paragraphs, we have highlighted some of the EU activities in framing and promoting the research and development of security technologies. This should not, however, shadow the fact that such technologies are actually *in use* by European security agencies and services, in particular insofar as the control of borders and persons on the move is concerned. In this respect, the section will offer a discussion of the literature with regard to the analysis of EU borders, in relation to security and technology, as well as to the question of mobility and its government, before developing considerations on EU practices in this domain.

Analysing EU borders

32. The literature dedicated to the issue of borders has grown considerably in the social sciences since the early 1990s. This growth has been fuelled in a large part by the apparent transformations brought about by the various economic, social and political processes coined under the heading of 'globalisation'. For some authors, technological change in means of transportation and communication and the correlated growth in transnational flows of capitals, goods, persons and services, is symptomatic of the advent of a 'global marketplace' in which the allegedly parochial practice of national, sovereign borders, is slowly waning away under the effects of a generalised, market-driven, process of homogenisation (e.g. Omae, 1994). Such accounts often go hand in hand with the notion that the nation state, as the

dominant political authority and community in the modern period, is 'retreating' (e.g. Strange, 1996).

33. In opposition to this understanding of globalisation and its implications for bordering processes, one finds two distinct threads of argument. Some scholars have argued that, far from being obsolete, borders have actually become *more* relevant since the end of the bipolar period. The downfall of the Soviet Union and the intra-state conflicts that have unravelled in the recent period, have led to the creation, reinforcement or indeed fortification, of numerous borderlines, a process which profoundly contradicts the notion that globalisation is doing away with borders and socio-political heterogeneity (e.g. for a sophisticated rendition of this view: Foucher, 1991, 2007; Anderson, 1996). Quite often, scholars involved in this line of argument remain dedicated to the classical understanding of borders, *i.e.* as the territorially-defined, defensive and protective 'envelop' of nation-states – although the abovementioned studies do pay tribute to the fact that borders constitute a socio-historical, localised, construction. Others, however, have also envisaged how the persisting relevance of borders in contemporary developments **was also underpinned by a transformation in bordering processes, through their reorganisation on a continental scale, as well as through their dislocation and fragmentation between logics of territorial surveillance and oversight of populations** (e.g. Andreas and Snyder, 2000; Bigo and Guild, 2005; Fortmann, Macleod and Roussel, 2003).

34. A line of critique addressed at the proponents of a 'borderless world', and convergent with the aforementioned studies, has focused more consistently on the question of homogeneity and heterogeneity in processes of 'globalisation'. Scholars such as Zygmunt Bauman (1998a) or Arjun Appadurai (1996), have argued in this respect that **while the processes of economic, social and political transformation usually associated with the notion of 'globalisation' cannot be denied, they nonetheless do not bring about homogenisation.** 'Globalisation', if one chooses to use this notion, actually breeds on heterogeneity, and consistently reinforces it – including insofar as socio-political inequalities are concerned. Bauman, in this respect, suggests that one of the defining characteristics of the contemporary transformations brought under the heading of 'globalisation' is the valorisation of individual mobility over all other dimensions of social life – and accordingly, that mobility has become a central dimension of contemporary social boundaries, which are now established between those who move and those who remain localised. This, in turn, leads him to re-qualify 'globalisation' as 'glocalization' (Bauman, 1998b).

35. This short overview is revealing of the complexity inherent to the economic, political and social processes associated with borders. Should borders be considered only in their territorial dimension, or should the analysis also include social and cultural boundaries? What room should be given to the claims of the nation-state, in which borders constitute the limits of identity, sovereignty, and order? A variety of publications have sought to develop novel perspectives on this question. The '*Identities, Borders, Orders*' volume edited by Albert, Jacobson and Lapid (2001), in this respect, provides an analytical backbone for alternative perspectives. The book reminds us that borders are never an objective given, engraved in landscape and border posts. **Borders are best understood as bordering processes, *i.e.* as processes of social construction which shape what is considered, at a specific time and location, as identical and as different, and regulate the interaction between the two. In other words, the question of bordering is intimately correlated with processes of differentiation and identification, as well as with processes of ordering, within and between human collectives.** It does encompass the issue of spatial delineation, and the question of the limits of state sovereignty and authority, but is not limited to them. The 'Identities Borders Orders' (IBO) triad, in this sense, opens up the possibility of a process-based, relational analysis of borders.

36. Moving now to the question of EU borders, it is surprising to note that there have been relatively few investigations on the question in recent years, even in the field of EU studies. One of the reasons for this among the latter appears to be the strong institutionalist bias, which has led researchers to focus either on first, second, or third pillar matters, or on specific policies (visa, migration, border management). In the process, the transversal characteristics of EU practices, and the interconnectedness of policy issues and dynamics seems to have been lost.

37. As in most of EU-related studies, the investigations conducted about EU borders have been struggling with the fact that the Union is not a state. A key question in the literature has therefore been to assess whether EU bordering practices, both with regard the 'internal' borders between the member states, and its 'external' borders, have brought about transformations in the classical understanding of border operations as being the constraining and protecting envelope of the nation state. These discussions have been strongly influenced by the proposal, initially developed in the 1980s among students of European refugee policies (Ligue suisse des droits de l'homme, 1985) and re-conducted in the 1990s through discussions about the Single Market, that the Union was evolving into a 'Fortress Europe', with freedom of movement inside and 'hard' external borders strengthened in particular by means of the Schengen process and later on, of the AFSJ (e.g. Brochmann, 1991, Gallagher, 1999, Geddes, 2000, Ireland, 1991, Lazaridis and Tsardanidis, 2000, Martin, 1999, Phuong, 2003). Despite having been rebutted in the bulk of the literature on EU borders, the 'fortress Europe' argument still discretely informs, under different forms, a lot of the work that has been conducted on EU bordering processes, particularly with regard to migration, which remains caught in discussions about the tension between 'hard' and 'soft' bordering processes, between exclusive and inclusive border practices, or between free movement inside and interdiction of movements outside/towards the EU (e.g. DeBardelen, 2005).

38. Attempts have been made, however, to move beyond this binary logic and try and provide a more sophisticated account of EU borders. A lot of the concerned publications have coalesced around the notion of 'fuzziness', originally formulated by Christiansen, Petito and Tonra (2000) in the bordering processes associated with European construction. The 'fuzzy border' argument derives from the observation that EU bordering processes are far from clean-cut: not only is the EU characterised by gradients in membership (e.g. EU and Schengen member state, EU non-Schengen member state, Schengen non-EU member state, and so forth), but the effects of its governmental activities reach far beyond its formal borders (in the case of the so-called 'neighbourhood' processes for instance – Balzacq, 2007; Jeandesboz, 2007). EU bordering processes, furthermore, differ widely when one looks at their practical modalities: border controls, for instance, are distributed not only *at* the border, but also in various locales *within* the EU and *abroad* (e.g. Bigo and Guild, 2005; Darley, 2008; Faure-Atger, 2008; Gatev, 2008; Groenendijk, Guild and Minderhoud, 2003; Makaremi, 2008). While for some, this reflects an actual EU 'border strategy', albeit an 'uneven and differentiated one' (Berg and Ehin, 2006), others have pointed out that this emerging European 'borderscape' (Kumar Rajaram and Grundy-Warr, 2008) is **best understood as a coalescence of effects, often unintentional, generated by the variegated practices converging around the issues of EU border management, EU enlargement, EU neighbourhood relations, and so forth.** In EU studies, the notion has been best formulated by Sandra Lavenex (2004) through the notion of 'external governance'. Other investigations, stemming in particular from international relations and security studies, have proposed the idea that **these practices could be understood in the context of a 'banoptic governmentality', with the observed 'fuzziness' an outcome of the various competitions within the EU field of the professionals of (in)security** (Bigo, 2006).

39. Technology plays a growing role in the contemporary transformations of bordering processes. A widening number of studies have sought to highlight how the use of technological systems such as biometrics, databases and information exchange systems, are progressively changing the ways in which borders are controlled and experienced (e.g. Amoore, 2006; Bonditti, 2004; Müller, 2008; Salter, 2004; in the EU context, see Broeders, 2007; Brouwer, 2008; Engbersen, 2001; Jeandesboz, 2008) In the EU, furthermore, one might argue that it is through the question of borders and mobility (in the context of Schengen) that a transnational system of surveillance supported by ICT has actually come into being (Mathiesen, 2001). Louise Amoore (2006) surveys the recourse to biometric technology in the context of the reshuffling of US border management organisation (particularly the VISIT programme), and highlights that **the use of such technical systems result in the inscription of the border** (or rather, of multiple boundaries, including socio-biological ones) **in the very body of the individual on the move**. Bordering processes sustained by ICT **further operate on the traces left by persons in movement:** traces that they leave in the course of their bodily travel, but also traces of their transactions (e.g. credit card references when buying airplane tickets online), which in some cases, should these transactions fit into a risk 'profile', can lead to the banishment of individuals from the circuits of mobility before they have actually started their journey.

40. Several conclusions can be derived from this short overview. **Firstly, the notion of a 'borderless world', as advocated by some commentators, is contradicted by a consistent accumulation of findings that all point out to the persistence of bordering processes.** This becomes all the more evident when one actually reconsiders the way in which borders are studied, and seeks alternatives to the classical, state-focused understanding of bordering processes. Secondly, however, **this does not preclude the fact that bordering processes have undergone significant transformations, at the very least since the end of the bipolar period.** This has to do in part with the re-evaluation of mobility as one of the fundamental stakes and values of the contemporary period[12]. **Borders, in the experience of individuals as well as in the way they are rationalised in governmental processes, have been dislocated and displaced, generating differentiated patterns of mobility**: for some, the experience of borders materialised by checkpoints and border guards officials have all but become invisible; others might actually not even reach such checkpoints, for lack of visas and/or adequate economic, social and symbolic resources. Individuals can be moved in between borders, in the interstitial spaces of waiting zones and airport transit areas, without actually entering anywhere (Makaremi, 2008). **Novel modalities for sorting out individuals and separating 'legitimate' forms of mobility from 'illegitimate' ones thus emerge, functioning not so much according to the formal geographical partition of political communities, but operating through mobility itself.** In the process, state sovereignty is challenged: while even in the EU, border management is still formally a domain of national competence, the displacement of border surveillance and border security, through the increasingly transnational articulation of the practices of professionals of security narrows down the room for manoeuvre of national agencies and services. Thirdly, in this perspective, **the processes of European construction might actually stand as one of the main crucibles for such transformations on an international scale.** While many commentators, including in the media and among professionals of politics, are currently pointing at the problematic evolution of US border control practices (e.g. MEPs on the issue of exchanges of PNR information), the EU, through the Schengen/AFSJ process, the creation of databases such as EURODAC or SIS, the 'externalisation' of border management, migration, refugee or visa policies, seems in many respects to be leading the way, rather than resisting the trend.

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[12] The following sub-section has more on this.

Mobility and its government

41. What is the relationship between mobility, security and government? Whereas this question was rather marginal in the social sciences until a few decades ago, the growing mobility of populations (or the perception of an increase), and in particular migration flows, as well as expressed concerns for the effects of 'globalization' have pushed scholars in disciplines as diverse as anthropology, sociology, political science or international relations to take a stance. This very large literature, split between various subfields including migration studies, diaspora studies, security and surveillance studies, can be roughly distributed **between three, conflicting threads of argument**.

42. For some, processes of globalization, the increase of migrant flows, the generalization of cheap air travel and fast telecommunications **have brought about the possibility of an alternate form of social existence: transnational communities and diasporas** (Anteby-Yemini, Berthomière, et al., 2005; Cohen, 1997; Cohen and Vertovec, 1999; Dufoix, 2003, Portes, 1999; Sheffer, 2003). These groups, conceptualized as distinct social forms, are said to bring with them the promise of a more cosmopolitan world. They are conceived as alternatives to the modern nation-state (Cohen, 1996; Schnapper, 2001), as locales of hybridization and *métissage* (Gilroy, 1993, 1994; Hall, 1990), bearing in their very nature the impossibility of the exclusionary politics of the modern, Westphalian nation-state (Clifford 1994). In this optic, mobility is understood as the possibility of escaping the practices of control and surveillance of the states of origin and populate a new, ungoverned transnational space (Tölölyan, 1996). These studies, usually published shortly after the end of the bipolar period, are consistent with the most enthusiast narratives about the advantages and new opportunities created by the neoliberal globalization. They are also the corollary to one-sided European narratives on the newly acquired freedom of movement, the possibilities of a post-national European citizenship (Jacobson, 1996; Soysal, 1994, 1996) and cosmopolitanism in Europe (Beck, 2006; Beck, Grande, et al., 2007). This literature covers, of course, much more than issues of mobility and security. Questions of migration, transnational identity formation, integration and long-distance mobilization are at the center of most of the debates. Yet it relies on sometimes acknowledged, often untold common assumptions about the relation between security, mobility and the practices of government. **The common feature of most of this literature is to consider *mobility* as the equivalent of *freedom*, and the *absence of mobility* as the condition of subjection to *surveillance* and practices of *security*.**

43. Unsurprisingly, the most optimists of these authors have been largely criticized for their naiveté and for painting a partial picture of the actual processes at stake. Broadly speaking, scholars have gathered around two alternate stances taking a much more skeptical look at the relation between mobility and security. **The first of these alternate positions has been to admit the novelty of post-Cold War mobility of populations and transnational social formations, while considering this phenomenon not as emancipation from security practices, but rather as a source of insecurity in itself.** Here we find the most common move of (in)securitization of mobility as a possible threat and/or risk. While this position has been a common tendency for some EU institutions and EU governments over the past 15 years, a substantial body of literature has concentrated on explaining the possible interconnections between mobility and insecurity from an academic standpoint: be it the dangerousness of the newcomers in terms of criminality, economy, national identify (Rudolph, 2003), for their role as foreign policy lobbies (Huntington, 1997, 2005; Smith, 2000) or for the roles they could play in fueling conflicts in their country 'of origins' (Loescher, 1993; Posen, 1996; Weiner, 1993; Zolberg, 1993).

44. A third body of literature has also developed in reaction to the optimist transnationalists. It broadly shared their starting point of a hope for an increased freedom of movement, but **it**

takes a more pessimistic stance on what is taking place. Scholars in this thread of reflection have pointed out how optimist transnationalists have failed to see the immense restrictions on migration and movement that have taken place in the contemporary period, and to account for the emergence of new borders and frontiers in parallel to the abolishment of the old ones. The view that far from the promises of globalization, but also far from the alleged dangers of migration, the current situation can be summarized as a proper 'war on migrants' comes mostly from the pro-immigration NGO sector (Blanchard, Charles, et al., 2007) and has been taken over by some scholars (Palidda, 2003, 2005; Perrouty, 2004). For this brand of literature – which often draws on the work of Agamben (1998, 2005) and the Foucault of *Surveiller et Punir* (1975), what we are witnessing is a process of *exceptionalisation* of migration, namely a situation in which the detention camps across Europe are the ultimate symbol of the will to reduce the unwanted to a fixed, confined, *bare life*. The main point here has therefore been to refute the argument that anything has substantially changed since the end of the bipolar period, and to argue that what has happened is only the redeployment and the reinforcement of established structures of control. In this sense, these scholars have taken the optimist transnationalist argument and turned it upside down: **arguing that security practices were in fact still largely controlling and limiting the current push for mobility. Here, the equivalence of *mobility* as *freedom*, opposed to *non-mobility* as *security* has been maintained. The oultook has just been more pessimistic in terms of the possibility of mobility to prevail as an emancipatory movement away from security and governmental control.**

45. We therefore see three positions emerge, that we could define the 'transnationalist optimist', the 'traditional securitarian', and the 'pessimist libertarian'. **These three points of view broadly take for granted the equivalence of mobility and freedom, opposed to non-mobility and security. Freedom of movement and security are put in a balance, as two point of the spectrum in a zero-sum game.** The position we intend to develop here is sensibly different, and aims at **breaking commonsensical assumptions about the balance of liberty and security in the context of mobility.**

46. Against the transnational-cosmopolitan argument, drawing on the responses that have already been formulated in the literature at the time (Basch, Glick-Schiller, et al., 1995;Glick-Schiller, Basch, et al., 1992; Glick Schiller and Fouron ,1999; Kastoryano, 2003, 2006), **we argue that the 'transnational' is not a separate, unruled, social space, but a new social territory of contention in which traditional logics of inclusion and exclusion are at play.** Transnational communities and diasporas are as much – if not more, since they are contended by several governments - the object of government as national populations are. In this sense, transnational social formations are often caught up in a web, or a matrix of sovereignties (Huysmans, 2003) The idea of the transnational as a 'third' space, or an 'interstitial space' located in between territorial states is a conceptualization that blatantly overlooks the necessarily territorialized condition of transnational communities and diasporas (Koopmans and Statham, 1999, 2001). The second 'securitarian' position will not be excessively discussed as it has been intensively debated in the 1990s through discussions about the social construction of immigration as a threat and the dangers for governments and scholars to engage in such practices (Bigo, 1998, 2002, 2005; Huysmans, 1995, 2000; Wæver, 1993a, 1993b, 1995, 1998). More interestingly perhaps, in response to the 'pessimist-libertarian' position, we agree on the dim look on the 'abnormalisation' of the mobility of certain unwanted groups, yet we differentiate ourselves on the following fundamental points.

47. In our analysis of contemporary practices of security in Europe, **surveillance and control are not opposed to freedom and mobility. Contemporary modalities of government are in fact exactly the opposite of this vision: they operate through freedom and circulation**. Following in this the analysis of Michel Foucault on the question of

governmentality (Foucault, 2004) we intend to argue that the modern practice of government is not mainly operating through law or through discipline – as it could have been in the past – but through what the late Foucault defined as regimes of security, or governmentality. In this late configuration of relations of power, linked to the material conditions of possibility of acceleration of the mobility of financial, commercial but also human flows, power essentially operates this very mobility and circulation. As Foucault showed, modern liberal regimes do not govern against, but through a regimes of liberties, freedom and hence, *circulation* (Bigo, 2008:107). The art of government is not anymore the art of enforcing what is allowed and what is forbidden, nor is it to mould bodies into workers, soldiers or reformed prisoners. It is to work through the apparent or imagined natural specificities of population characteristics, rendered visible through statistical tools, and separate a majority from the margins. Contemporary forms of security are destined at guaranteeing the highest possible security and freedom to majority and segregate it from an 'abnormal' minority to be controlled and surveilled. But the principle of circulation and movement is never sacrificed to these practices of control.

48. In this sense, **contemporary practices of security in Europe should not be analyzed as a dispositif of *disciplining* bodies and forbidding movement** – as the 'pessimist libertarian' stance in the literature, often stuck in a the imaginary of the Benthamian panoptic model described by Foucault, would argue – **but as a specific modality of government** (Huysmans, 2006) **which operates through different forms of demarcations**. Foucault is here the victim of the popularity of certain books over the others. In his 1977-78 and 1978-79 lectures at the Collège de France he had in fact moved from the disciplinary, panoptic moment whose end he locates in the end of the 19th century towards the emergence of the new form of government we are describing. In this sense, as it has already been pointed out (Bigo, 2008: 107), Zygmunt Bauman's criticism of Foucault in his 1998 essay *Liquid Modernity* largely ignores the fact that Foucault himself had already moved to a position very similar to Bauman's (Bauman, 1998:22). As many in the 'surveillance studies' literature have pointed out, the current practices of surveillance in the European Union are not about a territorializing, spatially fixing dystopia of generalized control – as it could have been potentially in the discipline rationality of government, pushed to its extreme in the totalitarian regimes of the 20th century– it is about governing through freedom and circulation, in a way in which the management of the unwanted never hinders the principle of movement.

49. The analysis of contemporary practices of security in Europe are therefore **not so much the analysis of borders and frontiers as devices aimed at stopping mobility or fixing populations, but as through which unwanted, marginalized and abnormalized mobilites are to be overseen, traced and computed** (Bigo, 2008). The focus of the analysis should therefore be on the following areas, drawing on the work that has already been undertaken in these directions:

   ➢ the modalities and the technologies through which the 'normal' form of mobility is constituted in opposition to the 'abnormal' one (profiling, risk assessment) (Aradau and Van Munster, 2007; Bigo, 2008; Bonditti, 2004).
   ➢ the points through which these technologies are deployed (points of entry and exit, 'zones' of the border not necessarily located at the geographical border etc) (Cuttitta, 2007; Salter, 2007)
   ➢ the modalities and technologies through which the 'abnormal' is identified (identification cards, biometric passports) (Salter, 2004; Torpey, 2000)
   ➢ the modalities and technologies through which the 'abnormal' is followed, traced and surveilled (Bonditti, 2004, 2008; .Salter, 2008)

50. This theoretical stance overturns the traditional idea of balance between freedom and security. Security is the result of liberties. It operates in a twofold movement of freeing circulation: by displacing frontiers and by pushing back the control of others. (Bigo, 1996, 2005, 2006)

51. But to stop here would be to remain prisoner of a Euro-centric approach. The processes of globalization are such that although it remains a dominant actor in the international scene, the European Union and the European members states are well aware that the practices of (in)securitization of mobility cannot originate only from their institutions and practitioners. Be it under the form of co-development agreements, security cooperation, border control cooperation, the EU has been very active in increasingly delegating the very tasks it sets to accomplish to third countries. This fact forces us to look beyond the sole European conceptualizations and practices and analyze the other elements of the transnational social field of control of mobility in order to fully account for the 'matrix of sovereignty' that is at play. 'Sending states' institutions, in fact, have been increasingly active in maintaining different forms of relations with their populations abroad. If we consider the post World War II historical frame, this has primarily taken three forms:

   ➢ As the exportation of the claim to the monopoly over legitimate violence: linked to the monitoring, surveillance and control of exile groups, with at times even long-distance extrajudiciary execrations. Here, sending state police and secret police apparatus extended their activity in the transnational social space to much effect.

   ➢ As a particular long-distance form of the monopoly over the allocation and the redistribution of resources. With the establishment of the guestworker programs in the 1960s and the 1970s, the circulation of the national population in the international division of labour was understood as the very means through which such as unemployment and the lack of foreign currency could be tackled. These populations in mobility were controlled through mechanisms that mirror the contemporary modalities of government in Europe: mostly through the freedom of circulation sometimes (in the light of the economic and social conditions of their home states) by being forced into circulation. The attribution of passports and the regimes of social and medical security are here the most efficient modalities of control.

   ➢ Finally, as the exportation of the legitimate 'symbolic violence' (Bourdieu and Thompson, 1991), namely the exportation of means of controlling and setting the 'correct' inculcation of national identity through controlled religious institutions or educational programs abroad. While these three different modalities of controlling and securitizing mobility from the sending states perspectives has largely been ignored in the security and surveillance studies literature, we believe it is fundamental to take them into account.

52. Two reasons motivate this choice. First, because as we have seen, the European modalities of securitizing mobility do not exist in a vacuum, they are constantly faced with other, sometimes conflicting, practices, those of the sending states. In order to gain a full picture, what needs to be outlined is therefore the 'matrix of sovereignty' in which mobile populations are caught up. Second, it is important to broaden the spectrum in order to take into consideration the changes in EU and EU members states practices in terms of management of mobilities. If most of the literature interested in the EU / sending state relationship has considered questions of security intended as surveillance, control and deportation; very little has been said about how the discourses on development and identity have been harnessed by the same discursive field. We are here in presence of what has been described elsewhere as a 'security trap' (c.a.s.e. collective, 2006) namely the colonization of certain discursive realms (international cooperation, or international cultural agreements) by

the logic of security. The two main domains that only begin to be the object of scholarly attention are the increasing link that is established by governments between co-development agreements and the regulation of mobility on the one side (Weil, 2002), and between identity politics, the so-called 'failure' of the multicultural model, the preservation of 'homeland' identities in European states and the management of mobility.

Border management practices in the EU

53. Notwithstanding the fact that the European field of security professionals is not homogeneous, EU security agencies and services share a certain number of orientations, a *doxa* or common sense, particularly when discussions about 'EU borders' are involved. **They tend to focus not so much on borders as a 'line of defence'** (which is the traditional narrative of the military), **but on 'the targeted control of populations and the tracing of individuals'** (Bigo, Bonditti and Olsson, 2008: 7). They also share a focus on global, regional or transnational (in)security, as opposed to local manifestations of violence, and a reliance on technical and technological solutions as opposed to diplomatic or political ones (Ibid). Accordingly, the question of 'informational prerogatives', of access (direct or indirect) to, and ownership of, databases, has emerged as a crucial stake in the European field of security professionals (Ibid: 8). In this regard, previous research has highlighted **the growing centrality intelligence-led rationales and profiling in the practices of EU security professionals.** Concomitantly, then, the policing of EU borders, both internally and externally has turned into one of the most important sites for the current transformation of security practices, and the study thereof.

54. What is at stake in discussions about EU borders among security professionals, then, is less the enforcement of a territorial 'line of defence' than the surveillance of populations and individuals on the move (Bigo and Guild, 2005). While EU borders remain important in the discourses of professionals of politics, the actual checks and surveillance related to border management happen both 'inside' the EU, at major airports and train stations as well as in random border police and customs controls (e.g. Faure Atger, 2008), and 'outside', through assistance projects and joint operations between the Union and third countries, as well as in the consular offices in charge of delivering visas, and so forth (Bigo, 2005; Bigo and Guild, 2003). This 'de-differentiation' of internal and external security (Bigo, 2006) also comprises a temporal dimension: the objective claimed by EU as well as Member State security agencies and services is to anticipate on potentially threatening developments, to act on them before they actually happen. Technologies, particularly databases as well as systems of data-mining, data-surveillance, and automated analysis, have become in this respect a particular stake.

55. A striking illustration of these processes is provided by the setting-up and subsequent as well as envisaged evolutions, of the Frontex agency. Frontex was set-up as a Community body, with the key objective of coordinating operational cooperation between the border guard agencies and services of EU Member States (Carrera, 2007; Jorry, 2007). While its formal competence lies with EU borders, almost all of the agency's activities in its now four years of existence have dealt with the regulation of mobility, and particularly with the control and surveillance of immigration. Furthermore, Frontex has been significantly involved in the issue of border surveillance technologies, with the publication of two feasibility studies (MEDSEA and particularly BORTEC[13]) on the technological monitoring and surveillance of the EU's so-called 'southern maritime borders', and the realisation of a study on automated border

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[13] These two documents are not publicly available in full. See Council of the European Union (2006) for the declassified elements of MEDSEA, and Annex 7 of European Commission (2008e) for a declassified summary of BORTEC.

crossing systems in airports (BIOPASS - Frontex, 2007). Additionally, Frontex officials have been very keen on highlighting the importance of intelligence, information exchanges, and risk analysis in the management of borders, and the role that their agency could and should play in this process.

56. This focus has been made obvious in the 'border package', consisting of three communications and their accompanying documents, tabled in February 2008 by the European Commission (2008a, 2008b, 2008c, 2008d, 2008e). The first two communications (European Commission 2008a, 2008b) lay down proposals for developing the role and competences of Frontex, while the third one, on 'Preparing the next steps in border management in the EU' contains in particular suggestions for the establishment of an EU 'entry/exit' system for individuals subject to visa-requirements for entering the EU, of an electronic system of travel authorisation for individuals benefiting from visa-waiver programs, together with a possible automated border crossing system for EU citizens. The envisaged evolutions concerning Frontex comprise in particular the establishment of a European border surveillance system (Eurosur), which would, at its latest stage, combine existing national surveillance and maritime monitoring systems into a 'system of systems' (sometimes dubbed FIS or 'Frontex information system'), of which Frontex would be the main coordinator. Eurosur, as presented in the communication, would allow for the handling and exchanging in real time of information from a wide range of sources, including personal data, with the aim of establishing a so-called 'pre-frontier intelligence picture' (for further elements, see Jeandesboz, 2008). The communication on the 'next step in border management in the EU', in this respect, would also entail the creation of a new database, as well as the interconnection of existing or upcoming information systems (potentially SIS-II and VIS), and the systematic collection of personal biometric data of all individuals travelling to and within the EU (for further elements see Guild, Geyer and Carrera, 2008). These proposals are heavily reliant on technology: information exchange and surveillance devices, on the one hand, including in the case of Eurosur new types of sensors, satellite monitoring and UAV, and on advanced biometrics on the other for the 'entry/exit', ESTA, and automated border checks systems. **They also highlight the change in security practices, at the heart of which EU developments lie central, *i.e.* the increased reliance on 'intelligence-led' surveillance, risk management, and profiling, which stand as core challenges for envisaging and understanding the ethical and political implications of security technologies.**

Ethical and political implications of security technologies in Europe

57. Security technologies have evolved into a major stake for EU policy-makers. However, their ethical and political implications have hardly attracted as much attention as their development and deployment. This, as we will develop, is problematic in the sense that the current evolution of security technologies have participated in the transformation of security practices, with an emphasis on proactivity, profiling and prevention, which threatens to render obsolete the existing provisions for the safety of the individual as regards the practices of security agencies and services (Bigo, 2007).

The dominant standpoint: security as right, security as anticipation

58. In the activities analysed previously, **two main threads of justification** are visible as regards the recourse to and investment in security technologies. Firstly, it is **presented as a necessity in a context characterised by 'new threats' which are deemed unpredictable and less visible.** Security technologies, and particularly ICT, are claimed to provide

predictability in a context of fluid insecurity, not only to enhance the reactivity of security agencies and services, but also to allow for the anticipation of insecurities and their countering even before they are actualised. Secondly, the support to the development of such technologies, particularly in the private sector, **is framed as an economic necessity**, as a contribution to the maintenance of an industrial basis in the EU and to the goal of establishing a thriving 'knowledge-based economy' (in the words of the Lisbon agenda). In the process, however, **very little attention is paid to the ethical and political implications of the development and use of security technologies.**

59. This participates from the fact that the dominant argument on the implications of security technologies and their use for individual freedoms and rights is **the idea that there is a 'right to security', and that steps taken in the field of security technologies are justified because they will ultimately contribute to the protection of EU citizens**. Underpinning this point is the notion that security can be equated to other fundamental freedoms and rights, and that in the name of a 'right to security', the latter can be encroached upon should the circumstances prove necessary.

60. We do not claim, however, that fundamental freedoms and rights are *never* taken into account in discussions about security technologies. But the perspective under which they are considered is biased. The final report of the ESSTRT[14] consortium, one of the projects funded under the PASR, is illuminating in this respect. The report notes, quite soundly, that: 'Technology can help considerably in the fight against terrorism […] Legal and ethical considerations are, however, important. Some technologies arouse concerns about invasion of privacy; reliability – the risk that people could be wrongly identified as security threats; social exclusion; damage to humans and the environment; and difficulties of regulation' (ESSTRT, 2006: 20-21). At the same time, however, these concerns are framed in the logic of the 'balance' between liberty and security highlighted previously: 'Achieving the right balance between civil rights and security is challenging. A broad democratic debate on threats and responses offers the best guarantee that tougher security measures and enhanced powers conferred upon intelligence services and police forces have public consent' (ESSTRT, 2006: 20). But, for the report, '[a]nother factor to be taken into consideration is the relative efficiency of technologies. For example, facial recognition systems at present are very unreliable. *The choice of technologies will become political and ethical if it is between if it is between efficient, but highly privacy-invasive systems and less efficient, but privacy-neutral solutions*' (ESSTRT, 2006: 21. Emphasis added).

61. Several points need to be discussed in the light of these comments. While democratic debates on European security policies and their implications for the fundamental rights and freedoms of individuals are certainly *necessary*, they are by no means *sufficient*, for some of the contemporary practices that are related to the technological management of insecurities fall beyond the scope of democratic investigation and scrutiny. Furthermore, the dominant viewpoint, as asserted in the ESSTRT report, frames the issue of privacy in terms of a choice between effective intrusiveness and non-intrusive inefficiency. **The underlying assumption is that intrusiveness is a requirement for efficiency, and that privacy undermines efficiency (and thus enhances potential insecurities)**. Finally, the report favours the notion of 'privacy-neutral' prospects, over the possibility of 'privacy-enhancing' ones (which are however mentioned previously). Such a perspective by all means impoverishes the scope of discussions related to the ethical and political assumptions and effects of security technologies. In the logic of the ESSTRT report (among others), technological devices are

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[14] The 'European Security : High Level Study on Threats, Responses and Relevant Technologies' consortium was composed of Thales Research and Technology an Thales e-Security (UK), the International Institute for Strategic Studies (IISS, UK), and the Crisis Management Initiative (presided by Matti Ahtisaari, Finland).

then considered as mere add-ups to existing practices, as technical fixes to a particular practical problem.

62. Discussions framing the ethics and politics of security technologies in terms of efficiency shadow the transformations that the availability of such technologies has sustained in the management of insecurities. Indeed, in a historical perspective, there is for instance nothing really new about the use of biometrics as means of identification: dactylographic and photographic technologies have been in use for surveillance purposes ever since the end of the 19th century (Mattelart, 2007). The same holds true for documents such as identity cards (Piazza, 2004) or passports (Torpey, 2000), which have been central to the state's 'embrace' (in the words of Torpey) of individuals, its monopolisation of the legitimate means of movement, and indeed its very construction. Scholars, however, have noted how the use of security technologies, particularly ICT, has transformed the legitimisation, meaning, practices, and implications of security and surveillance, **by endorsing a shift from a logic of protection and reassurance to a logic of 'risk management'** (e.g. Beck, 2002; Bigo, 2007; Amoore and de Goede, 2005; Aradau, Lobo-Guerrero and van Munster, 2008). The notion of risk and logic of risk management are not specifically associated with security in the first place. Risk, in the argument of Beck (1997), is associated with the evolution of modern societies (see also Ewald, 1992, with the notion of 'insurance states'): 'Risk' inherently contains the concept of control. Pre-modern dangers were attributed to nature, gods and demons. Risk is a modern concept. It presumes decision-making. As soon as we speak in terms of 'risk', we are talking about calculating the incalculable, colonizing the future' (Beck, 2002: 40). What constitutes a risk and how it should be controlled, of course, is socially constructed, and subject to evolutions (Douglas and Wildavsky, 1982). Hence, while the notion of risk in economics for instance, is considered a positive dynamic, associated with the notion of trust, in the context of security practices and policies aiming at countering terrorism and other alleged 'threats', risk has come to take another meaning: 'The perception of terrorist threats replaces *active trust* with *active mistrust*. It therefore undermines the trust in fellow citizens, foreigners and governments all over the world. Since the dissolution of trust multiplies risks, the terrorist threat triggers a self-multiplication of risks by the de-bounding of risk perceptions and fantasies' (Beck, 2002: 44. Emphasis in original).

63. In the shift of security practices towards risk management, another element of the dominant standpoint on security technologies is made evident: **security and the 'right to security' of EU citizens are reliant on anticipation**. As such, the possibility to be seen as *doing something* becomes tied to the capacity of security professionals to claim that, much like the 'precog' mutants of Philip K. Dick in his *Minority Report* novella, they can 'see the future' (Ragazzi, 2004). **The constitutive factors of this claim at anticipation, and the underlying assumption about the capacities of technologies harnessed in contemporary security practices, are the notions of *proactivity*, *profiling* and *prevention*** (previous and following suggestions drawn from Bigo, 2007). Proactivity involves the activity of following the traces, in particular the electronic ones, left by individuals and/or groups which are the target of surveillance: proactivity can be territorially focused but most often concentrates on populations and movements of populations. Profiling constitutes the technique through which the data gathered through surveillance is integrated in a pre-determined analytical framework (e.g. the EU's 'Common Integrated Risk Analysis Model', CIRAM – see Carrera, 2007), which is expected to produce an image of the present but also to build scenarios of future trends (so-called 'risk analyses' or 'threat assessments')[15]: profiling as a policing technique takes security practices beyond the realm of criminal justice, where it is the past which is investigate, towards the prediction of the future. Prevention, finally, stands as the

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[15] Frontex, for instance, has built such risk analyses for so-called 'immigration routes', sometimes in conjunction with other agencies such as Europol.

ultimate goal of proactivity and profiling: '[T]he idea is not to recover from an event or to respond to it, or even to be protected from it by previous measures, but to assess a future threat and to prevent the event from happening' (Bigo, 2007: 11).

64. **The proactivity/profiling/prevention framework is highly dependent upon technology, in its concrete operations, but even more stringently as part of its symbolic economy**. In order to ground the claim that they can know the future, security professionals must justify that they have access to knowledge that others do not have, such as secured databases, personal data including details about one's private life or biometric information. They must also claim a specific know-how (profiling techniques, risk analysis) which is not readily available, but which is also reliant on technological devices (e.g. data-mining, data-integration or analysis software). In this respect, furthermore, access to sophisticated technology becomes a major asset, since they are considered as a means to know *more*. This knowledge imperative, finally, leads to a significant growth in the number of actors involved in security practices. The surveillance practices of banks, credit card and insurance companies, are increasingly harnessed for security purposes (e.g. for the 'fight against terrorist financing' – Amoore and de Goede, 2005), also making possible the outsourcing of 'dataveillance' to private companies.

65. **While technologies such as advanced biometric identifiers and sensors or systems of information exchanges are not the main reason for the contemporary transformations of security practices, then, their availability, correlated with the evolution of the *doxa* of security professionals towards an anticipative stance, becomes a key stake**. The combination of a claim to know the future, and an increased capacity to scrutinise and render individuals more 'transparent' to the overview of security professionals, particularly, is a cause for concern. **Due to these transformations, the landscape of relations between liberty and security is changing rapidly: the available modalities for making individuals more transparent to security practices are evolving rapidly, raising questions of reliability (e.g. in the case of face-recognition devices), of privacy, but also of social justice.** One major change is what Beck calls 'active mistrust', where individuals are intrinsically considered as potential perpetrators, and thus subject to categorisations which, since they rest on predetermined models, are prone to failures: the problem, here, lies with the effect of such practices on the presumption of innocence. Another element is that the proactivity, profiling and prevention framework is underpinned by the assumption that by knowing more, better anticipation is possible. **Such a stance leads to a vicious circle: it is impossible to know everything about everybody, but attempts at doing so potentially trigger an endless expansion of the scope and volume of the information that is gathered.** Here the issue is clearly **privacy**, and the **capacity of individuals to know of the kind of data that is being collected, by whom, and when.** Furthermore, in this context, some individuals and groups, because they are particularly emphasised in analytical models, become more exposed to surveillance and its possible consequences. The issue, in this respect, is social justice and the fact that individuals and groups who are already vulnerable become even more so.

Envisaging the ethical and political implications of security technologies in Europe[16]

66. The currently conception of security and security technologies has been widely criticised (ELISE, 2005, Bigo et al., 2007). The notion of a 'right to security' has been discussed for instance on the basis that its legal status is unclear, particularly with regard the 'right to safety' ('*sûreté*' in French) which is well established and **encompasses the idea that individuals have the right to be *protected from* the abuses of the state** – such as the British *Habeas Corpus* (Preuss-Laussinotte, 2006a: 80-83). **Proponents of a 'right to security', including some security professionals, technology providers and professionals of politics often forget this aspect, while copiously emphasising the right of citizens to be *secured by* the state.** In this regard, it is preoccupying that the development of EU activities in the field of security technologies have not been matched by a comparable effort (particularly in terms of funding) in addressing the questions that the development of such technological systems raise for the freedoms and rights of individuals. **The notion of a 'right to security', in this respect, has largely shadowed the growing obsolescence of existing modalities for safeguarding rights and freedoms.** There is a need to actively look for updates of such modalities, and to actively promote a 'data-protection culture' that would underpin the 'security culture' advocated by many in the European governmental arenas.

67. The modalities for safeguarding individuals from surveillance practices and their limits have nonetheless been under consideration for some time (e.g. Marx, 1998), particularly with regard the issue of privacy (e.g. Bennett and Raab, 1994, 1997, 2006; De Hert and Gutwirth, 2006; Gutwirth, 2002). As Marx (1998) recalls, the basic ethical principle of privacy in relation to practices of surveillance in the North American context is the notion of 'fair information practice', which comprises 'informed consent, unitary usage, and nonmigration of the data' (Ibid: 172). In Europe, this has particularly taken the form of 'informational self-determination', *i.e.* the capacity of an individual to determine what data is being collected about him in a given context (Stalder, 2002). Privacy implies, in this respect, a '*right* to opacity' and 'the restriction of knowledge and right of access to the personal data for the different state agencies' (Bigo, 2007: 12. Emphasis added). But how to apply 'fair information practice' or 'informational self-determination' in a context where databases are proliferating, where information is exchanged transnationally but also increasingly collected and managed through automated processes, involving both the private and the public sector, and where the type of information collected covers not only elements from daily life, but also physical and psychological data? In his piece, Marx proposes a charter of questions that can be employed in such a context, which covers not only the means through which data is collected, but also the broader social context where this collect is taking place, ad the uses to which the data is put (see chart in Marx, 1998: 174). The interest of proposing questions, instead of readily available principles, is that the rapid evolution of security practices, boosted by technological developments, will call for constant adaptation of the safeguards of individuals' fundamental freedoms and rights.

68. **Privacy is clearly a key aspect of the ethical and political questions raised by the use of technology in security practices**. However, privacy also presupposes of the capacity of the individual to know about the data that is being collected, when it is collected, and by whom, but also of his capacity and willingness to make decisions about this. Stalder (2002) speaks in this respect of a 'cognitive overload': when data collection is being undertaken by so many organisations, in so many different contexts, with so many purposes, and is furthermore being exchanged, it seems almost impossible to be able to decide about when one should agree or disagree, let alone to reclaim personal information. Transparency and

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[16] On these aspects, see also the D.2.1. Deliverable under preparation by WP2 of the INEX programme (González Fuster, De Hert and Gutwirth, 2008).

oversight by selected authorities such as data protection bodies, while necessary, is not sufficient. There seems to be a need, in this respect, to develop alternative modalities for guaranteeing privacy, such as 'privacy by design' (Bigo, 2007), where privacy considerations are included in the very development of technological systems, while not being limited only to data security (*i.e.* the guarantee that only authorised persons can access the data). Privacy by design should not only guarantee that individuals are made aware of the data that is collected (which data, by whom, and when), but also allow to 'watch the watchers', *i.e.* to enhance the scrutiny of the surveillants themselves.

Objectives, lines of research and methodology

Objectives

69. The first objective of our upcoming research is to provide a detailed assessment of the ethical and political stakes of security technologies and their uses, with a specific focus on EU border management.

70. We want, in this respect, to critically investigate the notion of a 'continuum' between internal and external security. While this idea has become commonsensical, featuring as a routine invocation in most EU and Member State policy documents, the notion of 'continuum' might actually be too vague for our purpose, and should be specified in its different dimensions. In the previous paragraphs, we have mentioned in this respect at least three facets of the continuum: semantic/discursive, practical, and technological. Our aim is to refine this distinction, but also to specify what is exactly at stake with the notion of continuum: full merger, overlap or de-differentiation? What are its concrete modes of operation? Differentiation, coordination or integration? We should not, in this respect, assume the existence of a continuum (which is a central part of the prevalent official discourse on security), but also investigate possible separation or bordering effects. All in all, then, our objective is to investigate the relational modalities of the various forms of interpenetration between internal and external security.

71. Accordingly, our second objective is to develop ways of promoting a 'data-protection culture' among security technologies stakeholders in the EU, including the industry. In particular, we want to examine how to include privacy requirements within the practices and products of the technology providers, through the notion of 'privacy by design'.

72. The point in this respect is again to investigate critically the notion of privacy: are the existing modalities for the protection of personal data sufficient? Is it possible to place privacy, rather than extensive surveillance, as the basic script of existing and developing technological systems? What are the requirements for an *evolving*, rather than a fixed, privacy-enhancing system? One objective we could pursue, in this respect, is the updating and deepening of the questionnaire elaborated by Marx, which could then be included as part of the requirements and specifications for technological research and development, as well as for a potential common EU procurement policy in the field of security technologies – such as what is advocated by Frontex for border management equipment.

Lines of research

73. Concerning the scope of the research, we propose to focus on the EU 'providers' of security technologies, namely the actors from the private sector, in their interactions with the security professionals as well as with the Community bureaucracies and selected third countries.

74. The workpackage will focus, firstly, on the various interfaces between the security industry and the Community bureaucracies. In this respect, the PASR and FP7 'Security' theme will constitute a privileged site of investigation. We will also examine venues such as the European Security Research Advisory Board (ESRAB) or issue-specific arenas such as the European Biometric Forum (EBF).

75. Researchers of the workpackage will, secondly, look into the security 'providers' (*i.e.* the industry). We will focus both on the designing of technologies for security purposes, on the marketing practices of private companies in the field of security technologies, and on the advocacy strategies with regard the promotion of specific technological products within the European governmental arenas. We will seek to include both major companies (e.g. EADS, Sagem Security, Thales) and smaller firms in our analysis.

76. We will also consider to what extent the security industry participates in the (re)production of the current security *doxa* in the EU, *i.e.* on whether they contribute (and if so, how), to the constitution of a knowledge and know-how on insecurities, threats and risks.

77. We will, finally, look into the various bodies, whether public or private, which deal with the protection of data and the observation of surveillance practices linked to technology. The activities and practices of the EUDPS will be surveyed, as well as the role of various non-profit bodies and NGOs which have invested on this question.

Methodology

78. The workpackage will put forward a sociology-oriented methodology, combining discourse analysis with interviews and *in situ* studies of practices. We will survey the existing literature, both in the academic and institutional field, as well as the grey literature produced by think tanks and research bodies, with a particular focus on the research bodies attached to private actors.

79. *Discourse analysis:* of the technology providers, of the EU institutions in charge of ensuring the security of citizens in a broad sense, *i.e.* going beyond the third pillar, of the EU institutions in charge of the protection of fundamental freedoms and rights, data protection and mediation, of selected national authorities (public or private) in charge of controlling borders, the circulation of individuals or financial assets, as well as NGOs and organisations of civil society dealing with these issues.

80. *Interviews*: with the main agents of the field, in order to analyse their standpoint concerning security and privacy, their attitude towards technologies of surveillance and profiling, their framing of the ethical and political questions concerning the acceptability of security-related technologies.

81. *In situ*: study of practices related to security and technologies in specific venues, by direct observation.

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