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Reclaiming Control over Europe's Technological Borders

Huub Dijstelbloem, Albert Meijer and Frans Brom

Surveillance by government and citizens

Migration policy and border control in Europe and its member states increasingly take place in a surveillance regime that is focused on control. The surveillance regime consists of the intertwining of migration, integration and security policies on the one hand with a technological apparatus for the control of the movements of people on the other (Haggerty and Ericson 2000; Lyon 2009). Surveillance of citizens, migrants and illegal aliens is not only executed by the state but also by private companies and medical professionals working for the state. Next to that, the surveillance regime is not only regulated externally but travellers internalize security in voluntary behaviour. As a consequence, surveillance is not only exercised by control 'from above' (Big Brother) but also 'from aside' (Little Sister) and 'from within' (Voice Inside).

In this concluding chapter, we will describe how surveillance and control affect the citizen: regular inhabitants of the several member states, travellers, migrants and illegal aliens. Moreover, we will sketch the need for a thorough rethinking of the position and the rights of these citizens because of the consequences technological borders have, for instance, on their privacy, bodily integrity, mobility, quality of data, information storage and exchange, and opportunities for correction. We want to reclaim the role of citizens as *subjects* who are actively involved in controlling and shaping Europe's technological borders.

To elaborate on this perspective, it is useful to remember that originally the term surveillance was introduced as a means not for the government, but for the people. By the time of the French Revolution it referred to a form of public oversight that was celebrated as the main remedy for dysfunctional institutions (Rosanvallon 2008: 13). These

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powers of oversight could function beside the parliament to strengthen public control, for instance by the execution of watchdog functions and civic vigilance. Surveillance is not the privilege of the state apparatus, but a means of control that can be executed by citizens and independent authorities such as supervisors and audit committees as well. Conceptually and historically, the term thus offers some space to broaden the surveillance regime with forms of counter-control by citizens 'from below'. Such counter-control is needed all the more because we cannot expect the several technological systems to work without problems.

A political imperative to reconsider the position of citizens in the oversight of the technologies that are deployed in migration policy and border control is given by the recent changes in the constitution of the European Union since the Treaty of Lisbon (Chapter 2 by Balch and Geddes in this book). These changes include, amongst others, a strengthening of the position of the European Parliament as the representative of citizens. More programmatically, attention for the position of citizens in the area of freedom, security and justice has been asked for in the Stockholm programme of the European Council (Council of the European Union 2009). It highlights migration as a priority area and includes integration, illegal migration, migration and development, labour migration, asylum seekers and rights of third-country nationals (people from outside the European Union) amongst its action points (Collett 2010). Although the Council considers that technology can play a key role in improving and reinforcing the system of external border control, and encourages the EU agency Frontex to continue its work on automated border control, the programme pleads for a greater opportunity for citizens and representative associations to debate and publicly exchange views on these topics. Moreover, the rights of non-EU citizens ('default citizens' – Aas 2009: 319) are also specifically considered.

The role of citizens is not only of importance for the European Parliament, but also for the national parliaments. Although migration policy and border control are increasingly integrated and harmonized at a European level, member states and other states involved in the Schengen area still have sovereignty on many tasks and instruments. Moreover, in some respects there is a discrepancy between national and European initiatives. With regard to biometrics, for instance, European systems such as the SIS, Eurodac and VIS focus mainly on the use of fingerprints while many national governments (e.g. the United Kingdom and the Netherlands) experiment with systems using iris scans. Interoperability between systems is a strong incentive at the European

level, but it remains unclear if and how national systems will fit in a common European system in the near future, especially because cooperation on migration issues demands much more than 'technical solutions'. As the UK's House of Lords has stated in its report *Surveillance: Citizens and the State* (2009: 79): 'technological solutions, if not pursued within a wider design framework, may help to limit surveillance and protect privacy, but they should not be seen as a standalone solution. This is because the specific rules, norms and values – for example, data minimisation, access controls, and the means of anonymity – that may be built into technological systems must come from outside those systems themselves.'

The complex relations between national and European responsibilities, and between national and European technological systems for migration policy and border control, make it all the more important to analyse the problems arising for citizens and to explore the opportunities to strengthen their position.

Technology out of control

The sum of the systems that are used in Europe in migration policy and border control that create a surveillance regime has been labelled in this volume as a 'machine'. This machine is a cross-border policy apparatus for limiting the movement of aliens and for making choices about the migrants (desirable/undesirable) who report to the borders. It consists of laws, policy measures and implementation officers, and not forgetting a considerable amount of technology. It comprises everything from age testing by means of bone scans on underage asylum seekers to the body scans at European airports, and everything from passport control to enormous European databases. As a result, checking the movements of persons to the EU or even their movements worldwide (Redpath 2007) is increasingly becoming a technological issue.

The technology is needed to carry out the complex tasks that European governments are faced with in implementing migration policies and in checking the migrant flows. The dynamics of migration, the employment market and criminal networks have increased enormously, thus demanding important adjustments in migration policy implementations. In order to deal with all the complex processes, increasingly complex forms of control methods are needed (Beniger 1989).

Still, it remains unclear to what extent the 'growth' of the machine can be regulated. In general, issues that have been framed as technological issues tend to remain within the technological domain. Many

scientists and artists have warned us of the dangers of 'technics-out-of-control' or 'autonomous technology' (see the influential and still surprisingly relevant work of Winner (1977) for an overview). In a way the migration machine has already developed its own dynamic, with technical system questions dominating the decision-making around policies and their implementation. The logic of a machine that is trying to perfect itself plays an important role here.

From within the technological frame, deficiencies – such as the impossibility of establishing with any certainty someone's identity from documents – are considered as problems that can be solved technically. Information systems are linked up to each other to an increasing degree, thereby giving added value. Technology is 'greedy' and the danger is that it will come to dictate political decision-making.

Technological developments allow questions from the 'real world' to be translated into system requirements. Technology, however, never allows a one-to-one translation. Some social meaning is lost in translation, and the political environment in which the technology is developed can also cause distortions. In the SIS, the complex behaviour shown by migrants is simply translated into the presence or absence of an observation (hit/no hit). But behaviour is in general more complex than the yes/no dichotomy allows. If one fails to recognize the political character of the techno-social simplifications involved, the machine may run out of control. This leads to machines that develop their own dynamic and that take away room for political choice.

Can we make adjustments to the migration machine in order to keep it under control? Before we are able to develop adjustment strategies, we need to have a clearer view of the risks, issues and unintended problems that arise from insufficient reflection on the deployment of migration technology. This final chapter therefore focuses mainly on the negative side of using migration technology. We sketch risks, issues and unintended problems with the help of four questions on the functioning and management of the migration machine:

- Does the migration machine deliver?
- Is the migration machine just?
- Can the migration machine be managed?
- Is the migration machine subjected to public control?

The objective of these four questions is to assess whether – and maybe more precisely: to what extent – a 'machine' has been created that functions properly within its political, legal, humanitarian, administrative

and technological parameters. To what extent are we still in control of technology?

Does the migration machine deliver?

In an ideal textbook scenario, the migration machine achieves its goal – the implementation of migration policy – effectively and efficiently. In addition, it does function in a reliable manner and makes a limited number of mistakes. The means the migration machine uses to achieve this goal are proportional in relation to the infringements it makes on people's lives. In short: the ideal machine strengthens policy implementation. In practice, however, things look different.

A fundamental question regarding the deployment of migration technology is whether or not the required target is being achieved. The effectiveness of migration technology is often difficult to measure. In many cases there are no data or they are not publicly available. Very often, evaluative reports fail to be written when existing systems are replaced or are succeeded by new systems such as the SIS. We cannot assess whether Europe's electronic borders actually enhance the effectiveness of immigration policies.

In addition, it is often not clear how narrowly or how broadly the effectiveness should be interpreted and whether the effectiveness ultimately achieved corresponds with what had been envisaged. The purpose limitation principle demands that information about migrants, collected for a particular reason, is not without a proper reason applicable for another requirement. The principle restricts the use of information for other goals than it was originally gathered for. If this principle is not adhered to and, for example, a databank is set up to achieve a certain aim but is then used for other reasons, one may speak of function creep. The association between migration and security in particular is significant here, with the risk that contributions to security policy also form part of the evaluation of the effectiveness of migration technology, especially since after the attacks of 9/11 the fight against terrorism gained a much stronger position worldwide (Bigo and Tsoukala 2008).

Related to effectiveness is efficiency. Large government ICT projects are often overloaded with political ambitions that can lead them to collapse under their own weight. It is difficult to predict the gains of large technological systems because thorough analyses of costs and returns are generally lacking. Technology is often presented as the only way forward without systematically analysing the costs and benefits of technological options.

Next to effectiveness and efficiency, proportionality is important. The collection and storage of personal details (especially sensitive information) can have a serious effect on one's personal life. The question should then be asked: is such an infringement commensurate with the aim? There is no general standard for proportionality. In practice, the government, organizations (that implement measures) and judges often interpret proportionality in their own individual way and this leads to discussions about deploying technology such as bone scans and databases intended for security purposes. In that sense, border control in the European Union is not merely enforcing legal norms created by the European Union. Instead, legal norms are modified by local actors who adapt international, European and national law and assert their own claims at their conveniences (Klepp 2010: 20).

Reliability is another of the basic criteria for testing the machine. Technology is often thought to eliminate the arbitrary nature of human decisions and ensures that equal cases are always treated equally. When systems are implemented, the reliability of the technology is often taken for granted. In many cases, technology is indeed a reliable partner. The accuracy of DNA tests used in family reunification cases is almost 100 per cent. However, no biometric system is infallible, as every form of identification is fundamentally unstable (Chapter 4 by Van der Ploeg and Sprenkels).

The reliability of the large databases (mainly European) should also be queried. Error detection is playing too limited a role, at any rate in the national information systems. In the present SIS, personal data are not always deleted within the period of time or according to the conditions legally established (Chapter 6 by Brouwer). The various technologies are enormously complex and involve considerable organization so it is very difficult to guarantee reliability of data.

In sum, it is hard to tell whether the machine actually delivers. Lack of evaluations, shifting goals and an unbalanced proportionality trouble a clear judgment on this point.

Is the migration machine just?

From a legal perspective, the ideal migration machine should function in accordance with the legal demands that have been formulated through democratic and legal processes. Equal treatment of equal cases is a key principle and a well-functioning machine should respect it. Other requirements are respect for the human body and people's privacy. The ideal machine respects the general requirements that have

been formulated for government. However, in this case too the practice of migration policy raises many questions.

The protection of migrants who are subjected to the migration machine can be conceptualized in terms of guaranteeing (or violating) the protection of migrants' privacy, their equality before the law and their integrity (Chapter 6 by Brouwer). This integrity has to do with preventing data being misused by governments, civil servants or third parties. 'Everyone has a right to the protection of his personal data' (Art. 8 EU Charter for Fundamental Rights). Therefore, protecting information and creating clear rules for the lawful access to data is of crucial importance (Chapter 4 by Van der Ploeg and Sprenkels). After all, migrants are required to supply data about themselves, so it is very important they can rely on there being no misuse.

At the same time, the extent to which the machine can still do justice to migrants' individual situations can be questioned (Chapter 6 by Brouwer). A properly functioning migration machine can increase equality before the law as migrants are not then at the mercy of one individual civil servant's decision. However, there is also a risk of increasing inequality. Some migrants are offered a DNA test; others are not. This leads to differences in potential ways of collecting evidence. Also, age testing is carried out in different ways in different EU countries, thus causing possible inequality before the law. The practice of data profiling seems at odds with the principle of non-discrimination (Chapter 6 by Brouwer). The migration machine makes use of a way of social sorting (Bowker and Starr 1999; Lyon 2003) and can be characterized as a sorting machine that provides some people with privileges whilst excluding others (Chapter 3 by Broeders). After all, selection is, after restriction, the main aim of the policy (Chapter 1 by Dijstelbloem *et al*.).

Migrant protection is also expressed where a technique uses the body as point of intervention: as information storage device or even as way to verify a migrant's story. A possible side effect is an infringement of the integrity of a migrant's body. According to Alterman in an article with the telling title 'A Piece of Yourself', collecting biometric data acquires a fundamental privacy interest because it has an impact on one's right to control the use and disposition of one's body. Moreover, according to him we should be concerned about having biometric images created, reproduced or circulated (Alterman 2003: 145–6). So, in general, technologies making use of information the human body provides are far from innocent. As European Data Protection Supervisor Peter Hustinx stated in 2007: 'Biometrics are not just another information technology. They change irrevocably the relation between body and identity, in that

they make the characteristics of the human body "machine-readable" and subject to further use. Even if the biometric characteristics are not readable by the human eye, they can be read and used by appropriate tools, forever, wherever the person goes' (in Ludford 2007: 3).

Other risks are that the human body is actually put in danger or at the risk of being damaged. An example of possible infringement of the bodily integrity is exposure of minors to X-rays in order to establish that they really *are* minors. This exposure to X-rays is not justified by a valid medical reason, because those seeking asylum are, after all, not ill and have not reported to a medical authority; they simply wish to be considered for a residence permit. The investigation being carried out is also not a medical but an anthropological one. It is far from clear whether the aim justifies the infringement of the human body.

Another potential side effect is stigmatization of migrants. The EU guidelines regarding migration should be applied without reference to race, skin colour, ethnic or social background or religion, but databases and biometrics make it increasingly easy to distinguish between people on the basis of these features. This means that certain forms of 'categorical surveillance' can arise, and also discrimination against migrants (Chapter 4 by Van der Ploeg and Sprenkels). The migration machine can sort on ethnicity and origin by referring to body material and this seems to be developing into data profiling. Some people may be stigmatized and this could be seen as an attack on their personal life. The risk of stigmatization increases when databases are also used for security policy. The idea behind this appears to be that every migrant is a potential criminal if data analysis shows that they belong to a high-risk group.

A third potential side effect is the establishment of a class of 'migration-machine operators'. The migration machine is adequately characterized by the idea of vulnerable individuals who are being steamrollered by a large governmental machine. It is more realistic to analyse the roles of individuals from the perspective of who benefits from the 'sorting machine' function and who does not. The official narrative is that a functioning machine separates the migrants who satisfy all the migration requirements imposed by government from the migrants who ask to migrate for dishonest reasons. A side effect, however, is the establishment of bureaucratically competent middlemen who assist migrants in playing the migration machine successfully. This makes bureaucratically less competent migrants dependent on people smugglers – the people who can support them sufficiently in playing this game.

And, finally, Europe's electronic borders do not only distinguish between the 'good ones' and the 'bad ones' but also between ethnic

groups (Chapter 3 by Broeders). For certain ethnic groups, there is a problem with fingerprints, hand shapes and facial characteristics (Chapter 4 by Van der Ploeg and Sprenkels). Thus, although the migration machine may have succeeded in reducing the bias showed by individual civil servants, this individual bias may well have been replaced by a system bias.

In sum, the functioning of the migration machine should not be analysed purely in terms of decreasing or increasing migrant flows; the advantages and disadvantages (and which groups experience one or the other) also need to be analysed. In this respect, the importance of impact assessment and a human rights test should be emphasized, to which a periodic evaluation could be added, as it is extremely important to guarantee that the migration machine is not adversely affecting the wrong groups (Chapter 6 by Brouwer).

Can the migration machine be managed?

Europe's electronic borders are managed by bureaucratic authorities in the various member states. In theory, the migration machine is controlled by bureaucrats and does not infringe upon the principles of bureaucratic organization. These principles are important to ensure the government policies are implemented according to the demands of bureaucracies' political masters and with respect for the law. The migration machine needs to be comprehensible and controllable to the various layers of bureaucratic organization (Chapter 5 by Meijer). Again, in practice many questions arise.

The relationship of the civil servants making the decisions to the automated processes deserves some special attention (Lyon 2003). Strictly speaking, technology and automation apply to all processes in which information is registered in documents or databases and to all processes that are automated or supported by the use of information databases to such an extent that the character of the administrative processes is strongly affected. Such systems do not replace civil servants, neither do they confirm that civil servants are an extension of technology. However, they do structure situations because, for practical reasons, it is rather difficult to diverge significantly from the route traced out by information technology. That makes it difficult to guarantee a civil servant's discretion and to separate automated decision-making from structured decision-making.

The quantity of data on individuals that the migration machine collects, processes, enhances and combines is formidable. Examples would

be the use of the SIS and VIS: by 2005, 30,000 terminals in the Schengen territory already had access to the SIS and more than 260,000 records had been entered. The estimate is that 20 million visa requests are processed annually in VIS. However, it is often unclear precisely which data are collected and used. Individuals are not normally aware of what information is collected by which government and in which situation.

A relevant question is to what extent migrants can have insight into the migration machine. For example, in order to make a tax law effective taxpayers should not be aware of precisely which criteria the Tax Administration uses when carrying out checks. In general, surveillance to discover unlawful practices demands a degree of non-transparency. Non-transparency, however, needs checks and balances, for instance forms of checking, monitoring and appeals. Non-transparency should, thus, be limited and be subject to countervailing powers. Statutory rules therefore grant asylum seekers a right to sufficient information to be able to check the claims against them. The practice of informing migrants, however, deserves serious consideration and monitoring (Chapter 6 by Brouwer).

An important concept here is *Einzelfallgerechtigkeit*; in other words, the necessity to take account of the circumstances specific to the case (Chapter 5 by Meijer). If the migration machine applies the rules of implementation strictly, it may have the effect of not doing justice to the circumstances specific to that case. Open standards are a manner of creating the possibility of doing justice to these individual cases. If the open standards are limited to only one interpretation because of technological systems, individuals risk being crushed in the cogs of the machine. The development of the migration machine, however, leaves fewer and fewer opportunities for 'street- level bureaucrats' to judge individual cases on their merits (Chapter 3 by Broeders; Chapter 5 by Meijer). '[T]he migrant becomes what the computer says he or she is' (Chapter 3 by Broeders). But at the same time there should be no doubt here that this computer dominance also brings many advantages. It is no longer possible to make judgments that are coloured by preconceived ideas about certain groups of people because computers render the judgment objective. However, the autonomy of 'street-level bureaucrats' offers the possibility of looking at individual situations.

In sum, the migration machine does not like exceptions at all: these need to be categorized so the machine can process them using agreed rules. This means that management becomes complicated in the sense that exceptional cases cannot be dealt with in a correct manner. Discussions on the further development of the machine should contain

the question as to which possibilities still exist for doing justice to exceptional cases. That raises the question of how much room is left for practical judgment 'in the spirit of the law'.

Is the migration machine subjected to public control?

Europe's technological borders may be managed perfectly, but without any oversight by politicians these borders are not subjected to popular control. In theory, the migration machine is controlled by the public: that is, directly or indirectly by politicians who are accountable to Parliament and citizens (Winner 1980). In addition, independent authorities play a supplementary role in ensuring that the migration machine does not get 'out of control'.

Arrangements for carrying out inspections are required to ensure that those implementing the rules also keep to them. However, the question is if internal and external monitoring authorities have sufficient insight into the functioning and effects of technology. If sufficient data are not publicly available, the technology being deployed cannot be evaluated in public and political discussion. The information density of the present policy is such that increasing amounts of data concerning migrants are stored and used by more and more organizations. In addition to the fact that it is no longer possible to monitor which information is used by whom, it has also become impossible for a migrant (or the person representing his or her interests) to request the data in order to check for accuracy, let alone correct them if necessary.

Monitoring authorities such as the EDPS (European Data Protection Supervisor) or national data protection authorities are not authorized to give binding advice and their non-binding advice is often pushed to one side. Moreover, there is often a problem in the relationship between staffing and the powers that are wielded, so in fact there are insufficient authorized staff to monitor the situation. In 2007, the Data Protection Authority was unable to deal with every individual request for advice because of lack of resources (Chapter 6 by Brouwer).

As made clear above, monitoring is especially important when it concerns non-transparent surveillance measures because, in such cases, individuals have little or no chance to monitor what governments are doing. The European Court of Human Rights is very critical of national governments that have created too few opportunities for monitoring the way in which surveillance takes place. Not only monitoring the implementation is important, though; in the course of further developing and extending the migration machine there should also be guarantees in

place that the machine develops within the human rights frame. An *ex ante* evaluation is one way of guaranteeing this. Making a human rights test part of such an *ex ante* evaluation helps to guarantee that the functioning of the migration machine does not lead to a violation of human rights.

The final question concerns public control over the migration machine and the opportunity for exercising democratic control over the use of migration technology. This can take place by means of political discussion in both national and European parliaments (depending on the technology) and through public discussion, but often both together.

For Europe there is the complicated question of the relationship between the national and European parliaments. Since there is no real public European political discussion the possibilities for exercising political control over migration technology at both national and European levels are insufficiently clear. Their individual roles are not always totally clear for citizens when it comes to making decisions about technology that is implemented at a European level (and that at the same time has an effect on national policy of individual member states).

In sum, to reach political legitimacy, both the functioning and the regulation of the machine are crucial. However, due to opaque European decision-making the actual control seems to be lost to system developers and to a European level. When for instance large-scale databases (some of them European) are used, political commitment and supervision in the use of this technology is, by contrast, limited. The 'front end' of the migration machine is discussed whereas the 'back end' and the coupling between these two remain outside the public debate.

Controlling the migration machine

Our fourfold assessment has resulted in a list of risks, issues and unintended problems of the migration machine. There are reasons to think that the migration machine does not deliver what it promises and that it infringes upon legal requirements. Bureaucrats work with the migration machine but are not able to control it, and complexity hampers public control.

The migration machine is not 'ready'; it is still very much in development. This development, however, takes a specific direction. Firstly, instead of being based primarily on accurate procedures, the machine relies increasingly on the use of new technologies. It moves away from procedures in which meticulousness is all important and where time and attention are valued more than speed and quantity

('slow-tech'), towards a use of the most up-to-date features of biometrics and database technology ('high-tech'). Secondly, facilitation of travellers and migrants in the bordering process is being replaced by broad screening of citizens. The machine is less focused on processing requests of individual migrants quickly and accurately ('service'), but emphasizes the broad screening function of the migration machine to rationalize policy and safeguard security ('screening').

In this twofold respect, the migration machine is out of balance. But even a balanced machine still needs to be controlled to prevent the dystopic vision of technics-out-of-control. If specific measures are not carefully considered with due regard to necessity, privacy and proportionality, we might, according to Baroness Sarah Ludford, Member of the European Parliament and rapporteur on the Visa Information System, risk instead of creating a safer society to be midwife to a surveillance society (Ludford 2007: 6).

In our modern, large-scale democracies, the issue of control is a layered and complex one that leads us to questions about bureaucratic subservience, (parliamentary) democracy and the rule of law. The crucial point here is that a migration machine in this modern age needs to be controlled from various angles. The rise of the surveillance state in migration policy demands new countervailing powers, because 'the developments in European Union migration politics are neither following a fixed scheme, nor are they always driven by democratically legitimate or obvious actors. They should be closely observed because they constitute an arena in which the parameters of the future of the EU and its core values are under threat' (Klepp 2010: 21).

The migration machine is a typically 'modern' machine, not only because a great deal of information technology relevant for this machine is 'new' and 'present day', but mainly because the expectations aroused by this machine and the way in which it has been developed and is being managed is entirely within the spirit of modernism. It relies on a rationalization of working processes by efficiency, a division of labour, functional specialization, refined administrational procedures, and it is goal-oriented. In short, these are the ingredients which typify a policy model rooted in command and control.

Often, the rise of the surveillance society is illustrated with the metaphor of the 'Panopticon' or 'Big Brother' (Fernandez 2009: 199), but the 'modernist' spirit spoken of here is represented perhaps best of all in the film *Modern Times* (1936). Charlie Chaplin played a factory worker who struggled with the machines and production work at the conveyor belts. The fact that this was a comedy does not hide that the film was

just as tragic as it was hilarious. In this film, the main character comes to grief. It is amazing to see how Chaplin's machine generates the same questions as those presented in this volume: how can we prevent the machine becoming an uncontrollable and unmanageable monster that takes on more and more functions but also becomes increasingly anonymous in the way it implements things, thereby in line with Mumford's (1970) famous but worrying analysis of the machine transforming the people it deals with into cogs in the mechanism?

However, there are possibilities of winning back ground from this machine. The machine should be stopped every now and again when there is danger of overloading it or of its grinding to a halt. Interim evaluation, more openness about the effectiveness and efficiency of the policy, a deliberation on proportionality, political and public discussions on justice, and validated research into the reliability of technology can all help to create such periods of rest. The machine can also be programmed in another way. Technological and administrative determinism should leave room now and again for political and public voluntarism. Taylorism and the factory conveyor belt have, after all, been replaced in many cases by less hierarchical and more intelligent and flexible technological and professional processes. With the correct use of technical aids, these can do justice to the specific expertise that professionals are required to have. Migration policy should not be carried out according to the administrative paradigms of the factory where Chaplin was working a century ago.

We therefore propose to subject the migration machine to a way of scrutiny, in line with Rosanvallon's (2008) opening-up of the concept of surveillance at the beginning of this chapter, as not only a form of control from above, but also a form of public oversight. Control by citizens is an important but understudied form of counter-surveillance that can contribute to the political, administrative and legal control of the migration machine, especially now the emphasis of the machine is on the use of high-tech and its main goal has shifted towards the screening of citizens and aliens.

In the introductory chapter of this volume it was already obvious that technology is deployed in decision procedures, the outcomes of which have enormous consequences. After all, someone can be prevented from entering the country or from being allowed to settle here. It also became obvious that migrants, in a political sense, have a weaker position, because they, for instance, have limited possibilities for fighting decisions in the courts. Within the migrant population, underage migrants are even more vulnerable. In general, migrants who are

non-EU subjects without residence status are often unable to represent themselves properly and only have the right to speak indirectly – via refugee organizations, asylum lawyers or the sporadic media attention. They risk being handled not as citizens but as aliens.

Citizens are generally regarded as the objects that are processed by the migration machine: they need to be 'packaged' and 'framed' so that the machine can process them. The migration machine by its nature tends to dehumanize the people it needs to process. Human histories and characteristics need to be translated into measurable indicators which can be stored in databases. These transformations will distort the information and, therefore, they can lead to unjust treatment of citizens. Forms of public control can create the opportunity for bringing back the subject (Monahan 2006). Citizens will need to know what information is stored in the system so that they can challenge this information or even neutralize it, although actions to prevent this should not be underestimated (Marx 2003, 2009). The position, however, of these citizens is often problematic since they are not nationals and do not have the same legal position as the inhabitants of a country. Their condition as 'aliens' should not result in a denial of fundamental rights for citizen control since, in the end, these forms of control are needed to prevent the construction of an inhumane migration machine.

Instead, migrants should not automatically be regarded as objects of policy or even as input for the migration machine. It is crucial that migrants are seen as subjects who can interact with governments because of their own life story. It is therefore crucial that migrants, migrant organizations and their representatives are involved in debates on judging this machine and the choices of design. The design of technological borders is a democratic, legal and humanitarian issue which deserves more attention and which needs the inclusion of the experiences and opinions of citizens and migrants as well.

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