Tjerk
Timan

Changing landscapes of surveillance

Emerging technologies and participatory
surveillance in Dutch nightscapes

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CHANGING LANDSCAPES
OF SURVEILLANCE

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EMERGING TECHNOLOGIES AND
PARTICIPATORY SURVEILLANCE
IN DUTCH NIGHTSCAPES

PROEFSCHRIFT

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Contents

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Introduction

Public space and surveillance

The newspaper articles (figure 1), point to new trends in surveillance technology. The article[2] on the left deals with the deployment of mobile cameras by police officers whereas the other article[3] deals with an increase of social media use by local government and police in keeping public spaces safe (both in the UK). These newspaper articles reflect an often positive stance towards these developments, and indeed, it is difficult to be against using all the means possible to capture an offender. However, by taking a broader, and more longitudinal perspective, we might become more critical, or at least careful in shaping an opinion about the impact of these technological innovations on society. These developments have to be seen in a larger discourse surrounding the necessity and effect of surveillance technologies on and in public spaces. In the aftermath of 9/11, Western-European societies, often following American trends, have increased surveillance on all sorts of terrains and in all sorts of places, the airport being the first- and obvious place where this increase became visible. New types of gates, control-points, body-scanners, smart cameras and passports were all thought up to separate "the other" from "us"; to differentiate between in- and outsiders. This would all lead to a decrease of terrorist attacks and would make everything safer for us. Of course, we would have to sacrifice a part of our privacy, but what is more important, your privacy, or your safety? This type of thinking transferred to other places and soon enough also city centers, schools, and companies became infected with this new discourse of zero-tolerance and control by technological means[4].

These are classical techno-optimistic responses, where technological means are seen as the solution to a social, or societal problem. Unfortunately, it never is that simple. Technology and society are always intertwined, and always show a form of mutual shaping. Technological "fixes" might maybe solve the problem they were introduced for, however, they will undoubtedly introduce another new societal problem or issue. The introduction of the computer, to name an example, did not relieve humanity from labour as was expected upon introduction in society. On the contrary, it meant a large increase in both quantity and type of labour; it revealed new spaces and places for work-to-be done (Brynjolfsson, 1993; Brynjolfsson & Hitt, 1998).

Besides the point of unforeseen consequences of introducing a new technology in society, another point to take into account is that this new technology is never stand-alone; it is never a singularity that all of a sudden makes an appearance in society (although advertisements often would like you to believe otherwise). Rather, the new technology will be embedded in all kinds of technological and socio-cultural networks and structures that are already in place; it might find support and success in one context while facing resistance in others. Moreover, it will somehow affect and change these networks and structures. The telephone was introduced as tool for professionals, but its success came from home-calling; being able to chat over a distance became a favorite pastime for US-housewives in 1920s (Fischer, 1987; Martin, 1991). The microwave was introduced as a new type of cooking; it resulted in an individualization of 'dining', where it changed from a family activity at

a specific time to a fluid notion of 'eating when and where I want to eat' (see f.i. Cockburn & Ormrod, 1993). The printer, meant to decrease paper usage in offices, resulted rather in an increase of paper use, also in the home-context (see. f.i. Schilit et al., and Sellen et al., 2001 on the myth of the paperless office). These are just some examples out of many one can think of where the meaning or goal of a specific technology changes drastically once introduced in a society and vice versa, where the technology affects social-cultural structures.

Problematizing notions of surveillance in public space

In that light, it seems a rather useless endeavor to research and measure the effect of an increase of surveillance on feelings of safety in a society. However, this is an often-requested research topic in Western societies for politicians, policymakers and technology developers. The reason for this can be found in the reasoning that any proof of a relation between an increase in surveillance technology and an increase in safety would support and encourage the deployment of surveillance technologies in a society. This agenda can be questioned, not only in terms of the necessity of developing technology for the sake of technology, but also in terms of the type of society we want to live in: what is a desirable future when it comes to surveillance technology in society? What happens to our understanding and lived experience of safety and publicness when surveillance technologies are introduced in society? How far can a government or a police force go when it comes to surveillance presence in public spaces? And to what extent are they responsible for protecting and guaranteeing the publicness of these spaces?

Without going into these questions here, it suffices to point out that there is a certain mandate or authority for a (local) government within a public space and that the boundaries of this mandate are constantly shifting. One of the main movers in this shifting is surveillance technology. It is with the introduction of (new) surveillance technologies in public space that the extent and reach of surveillance becomes re-evaluated,

privacy-debates re-opened and (political) positions renegotiated. At the same time, while a new technology or a new combination of technologies emerges, existing surveillance technologies and networks are also under scrutiny.

Concerning the combinations of new and/or existing technologies, this is a trend visible in the world of surveillance, where there is a constant, technology-driven demand towards creating 'blanket'[5] surveillance in public space, which means striving for a complete coverage of public space. Besides the technological challenge this brings about (challenges of aligning standards, formats, databases, code, storage times, hardware and so on), this goal of creating a totally-covering surveillance network brings about new problems in these negotiations of surveillance in public space. For instance, that of losing control, or oversight, on what types of technology are actually 'surveilling' and who or what is sur-veilling who or what exactly. Combined with the rise of more individualized ICT technologies that are emerging[6] in the same public spaces where surveillance technologies are in place, boundaries and relations between surveillor and surveilled become blurry and opaque.

This in-transparency causes all kinds of new problems in defining publicness and the boundaries between public and private spaces. In the case of 'old' surveillance technology such a Closed-Circuit Television (CCTV), there exists a sense of clear power relations that are at work in defining the boundaries: a government installs a camera and citizens in public space are the subject of surveillance for that camera. These boundaries are reinforced by regulatory governance in terms of specific laws for

surveillance. Moreover, the cameras and surveillance- signs that can be encountered in public spaces clearly communicate what is happening; you are a citizen and as such you are being watched. The local government, or police, is the one watching and this (or so the discourse unfolds) is for your benefit; for your safety as a citizen. When however, this gaze becomes decentralized and somehow ubiquitous, as we can witness with emerging social- and mobile media technologies as discussed in the newspaper articles, it becomes more difficult to understand who is watching who and why: power relations and the boundaries of surveillance now have a multiplicity of negotiation-points in public space. Typical sites where these negotiations are expected to become most apparent are cities and city centers[7].

5. This is a term taken from "surveillance studies", which tries to describe total surveillance as a blanket thrown over public space; it will cover every space and place. See f.i. Fyfe, N. R., & Bannister, J. (1998)

6. In this thesis the term will be used in two different ways. First, it will be used to refer to surveillance technologies that are only recently introduced and tested in the Netherlands and can be considered as newcomers in the Dutch nightscape. Second, the term will be used to refer to technologies that are frequently used for other purposes in other places, but may be used for surveillance in public spaces as well.

7. See SUN project (www.stadsnachtwacht.nl) and publication by Van Aalst en Schwanen (www.stadsnachtwacht.nl/publications), where these authors argue that city centers, especially at night, form a specific place (or stage) where most excesses in society can be witnessed in daily life (excluding special events such as football matches or manifestations). Both links last visited July 24, 2013

8. See http://www.stadsnachtwacht.nl/about/ last visited July 24, 2013

9. See SUN proposal: Schwanen. (2009). MVI application. Society (pp. 1–17).

Tensions in the city

One problem of large cities in (Western) societies is that they engage in a competition to be the next upcoming and booming centre of attraction and attention. City halls attempt to put their city on the map. This competition is channeled via for instance titles such as "creative-", "design-" or "cultural-" capital of a certain year. Being appointed such a title, or hosting certain events, businesses (international festivals, flagshipstores) and cultural palaces (museums or pop-arenas built under prestigious architecture), will attract a metropolitan group of tourists and, more importantly, creative class-workers (see. f.i. Florida, 2002). The ac-claimed positive effect of this creative class coming to the city is that this group will rejuvenate old neighborhoods (gentrification), reinventing the local economy and local culture, and this group would do all this for 'free' (see Smith and Williams, 1986; Ley, 1997). So far as this rhetoric goes, the downside of these attempts come to light when local communities or neighborhoods prove to not play along. Tensions, crimes and poverty might scare off these bringers of wealth, culture and new tourism. The city needs to become attractive and exciting, but never dangerous! This poses new challenges for all kinds of institutions and local governments; how to deal with the dichotomy of fear versus fantasy (van Melik et al., 2009)? This dichotomy reveals itself contrastingly in nightlife districts of these city centers, where most incidents and encounters with both the exciting and the dangerous take place.

One deemed solution of creating and managing these safe and pleasant nightlife districts (van Aalst, 2012) is the use of

surveillance and policing. By designating certain areas as nightlife districts and 'protecting' these spaces by the city itself, the aimed effect is two-sided. Firstly, bars, restaurants and theaters can exploit their business with the promise of a protected space. A second effect is that the visiting public can be themselves in a relatively controlled and protected part of the city, where police is always around the corner. By communicating to the public that surveillance and policing are in place, and that the city holds up certain rules of conduct in that area, the public who wants to do harm is warned and the public that is there to have fun is reassured; this is a safe but exciting place. These walled gardens (Malone, 2007) in public space, however, are not uncontested; the garden is only accessible for some. In the act of policing and surveillance in public space, processes of channeling and exclusion might emerge. By this it is meant that surveillance and policing might create safety and pleasantness, but it might scare away others. Who are the targeted audiences in these public spaces for surveillance and whose purposes with respect to policing and surveillance technology are served in these spaces?

Questions of channeling, exclusions and marginalization, as well the lived experience of safety and surveillance in urban nightscapes are addressed within the larger project of Surveillance in Urban Nightscapes[8]. of which this research is a part. In this thesis, the role of technology is taken as a central starting point. The research question addressed in this thesis is:

" how both humans and technologies shape surveillance practices in Dutch nightlife districts[9].

In the next chapter, I will start exploring how urban nighttime economies are shaped by addressing three disciplines. In order to better understand these spaces at night, I will turn to Urban Geography and its insights on the city at night as a research site. The second theoretical section will deal with how we can understand the shaping role of technologies in these spaces. I will to this by addressing insights from the field of Science and Technology Studies. Finally, the questions of how technologies and humans in these spaces create a landscape of surveillance and how that defines the nightscape will be addressed by turning to Surveillance Studies.

Drawing from these three fields, a theoretical framework will be provided that acts as a lens through which several empirical cases will be investigated in the thesis. In the concluding chapter of this thesis I will return to this theoretical framework to re-address notions and question as put forward throughout the thesis.

Chapter 01

Theoretical starting points

figure 2;
a nightscape
in Utrecht

1.1 Urban Geography

1.1.1 Nighttime economies and fear versus fantasy

One of the topics of interest in urban geography is the city as a unit of analysis (see. f.i Ramadier, 2004). Urban geography looks at how cities and citizens within cities shape and constitute the notion of publicness and looks at how spaces become places and for whom[10]. Variables that directly spring to mind are that of place and time. Who uses which part of the city and at what time. Subsequently, one can think about different rhythms within a city; where certain places are used differently over time (during a day, a week or even during different seasons). The relevance of these notions becomes clear when returning to the specific topic at hand; the nighttime economy. As put by van Aalst:

"In keeping with the shift toward consumption as the economic basis of cities, nightlife entertainment districts have come to play an increasingly important role in the fortunes of urban economies across Europe. For the most part these districts are located in city centers where bars, restaurants, discos, cinemas and clubs are spatially clustered. They often attract large numbers of nighttime visitors looking for fun, adventure and enjoyment." (Derive, 2013[11])

These districts (see figure 2) are designated places of fun and attraction and as such important for the development of a city or a particular part of a city. Where historically these districts might have sprung up 'naturally', or at least accidentally, urban governments and city planners more and more try to steer and regulate the development of these districts. The rationale behind this attempt to regulate is to create 'better' nighttime districts that are safe and attractive. The challenge for governments, city planners or architects is then to achieve this attractiveness for as many different crowds as possible. This is described in urban geography as 'animation':

"According to Montgomery (1995), the animation of city centers can be stimulated by offering a varied diet of activities in public space. This is what is meant by the development of themed public space. The term 'themed', particularly in association with 'fantasy', bears connotations of theme parks." (van Melik et al, 2007, p. 28)

This animation of the city reflects in the emergence of top-down organized events where public spaces increasingly serve as venues for the arts and culture, typically for performances, festivals, concerts, parades or outdoor film shows. These developments appear to serve a common purpose: to attract people with discretionary income to the city centre by transforming it into a 'Pleasure Dome' (Oosterman, 1992). This purpose is deemed beneficial for different stakeholders in the city. As described by van Aalst:

10. For an overview of this discipline, see f.i. Knox, P. L., & Pinch, S. (2006). Urban social geography: an introduction. Pearson Education or Pacione, M. (2009). Urban geography: a global perspective. Taylor & Francis US.

11. http://www.derive.at/index.php?p_case=2&id_cont=1013&issue_No=44 Written by the SUN project team. Last visited: July 24, 2013

"Investing in public space appears to be a lucrative option, not only for the government but for the business community as well" (Van Melik & Van Weesep, 2006b).

Punter (1990) observed a growing awareness among property developers and investors that it can be in their own interest to invest in the quality of the public realm. Doing so would enhance both the value of the scheme and its long-term potential. The focus on safe and entertaining public spaces can thus partially be explained by the economic ambitions of the local government and other actors involved in the development of public space (see van Melik *et al.*, 2007, p. 32)

In other words, economic gain turns out to be a driving force behind the aim to create safer nightlife districts (Roberts and Eldridge, 2009). The 'trap' or the danger of over-regulating and hosting such events is that indeed city centers becomes subject of disneyfication, where city centers become predictable and similar. Another consequence of this gentrification, or even disneyfication, is that the emphasis is put too strongly on turning cities, and nighttime districts for that matter, into safe zones that attract similar audiences and similar venues (the safety of offering a recognizable city centre). Sociologist George Ritzer (1993) labelled this the 'McDonaldisation of society'. Citizens and tourists as visitors of these city centers, however, might also be looking for something else than a safe and recognizable place to spend their time (and money). Russell Nye called this 'risk-less risk', which means being able

to be adventurous without really taking chances (Hannigan, 1998, p. 71). In other words, excitement and even fear might not only be a side-effect of creating 'safe and pleasant' nightlife districts, it might also be something that is sought for. As put by Ellin:

"By extension, it is not a question of good or bad, safety or danger, pleasure or pain; there is fear but also fantasy, adventure and excitement" (Ellin, 2001, p. 879).

This fear versus fantasy is a precarious balance, and one that is not solely shaped or controllable by local governments, city planners and so on. These citizens and visitors, the users of public space, also have a shaping role. Or, to paraphrase van Melik and van Aalst (2012, p. 6):

"Public spaces are not solely the products of planners and architects but are, as sociologist Henri Lefebvre (1990) argued, produced by and within a society. Other sociologists, from Weber to Giddens, also believed that cities, and thus urban life, can only be understood in relation to the wider societal context" (Urry, 2001).

As argued here, the city is also shaped by others than the planners and the architects. For instance, the visitors of nighttime districts, who are also under influence of this wider societal context. For instance, the type of international audience (the metropolitan - the globe-trotter - the 'young urban professional') that Western cities try to attract is becoming a large factor in the shaping of

cities. This group reflects a homogeneous lifestyle and a set of norms and values that might prove to comprise more similarities in between cities than for instance, in between nationalities. Maybe even more important to look into are the ways and methods in which this group is attracted and is attracting; their shaping role has become highly ICT dependent. With the emergence of (mobile) ICTs, every city and every activity has to be digitally present in order to attract attention, or to get noticed. This digitization of the city is in itself a very broad phenomenon, worthy of research in multiple disciplines (see f.i. Schwanen et al. 2008 and Nagenborg et al., 2010) In light of city branding and tourism, van Aalst (2007) states:

"With the expansion of ICT, it has become much easier to choose among the activities on offer. Online tourist information and announcements of forthcoming events can easily be found on the Internet. As personal mobility increases, even distant events come within reach. Furthermore, individualization has made life a 'do-it-yourself' package."
(van Aalst & van Melik, 2012, p. 7)

Where there indeed is 'an app for everything' in current city centers, and both the elements of fear and fantasy are mediated through ICTs (safety apps, event apps, location-based services, and so on), emerging ICTs as a part of the city have become a unit of analysis.

1.1.2 The concept of night-scapes and rhythms

So far, different stakeholders have been mentioned that in some form play a role in constituting the city at night. The assemblage of (amongst others) visitors, facilities and surveillance can be seen as a landscape. Chatterton and Hollands (2003) have combined these factors to coin a 'nightscape', by which they mean the urban landscape at night. They describe this term as 'socially constructed geographies of commercial nightlife activities'. Within a city center, there can be multiple night-scapes. Although these places tend to look more alike, as described earlier, still each nightscape is unique, due to aspects such as a specific setup of a city center, specific demographics in that city or subcenter of a city, and difference in local policy surrounding nighttime districts. These, and more, elements create specific rhythms of activities in these nightscapes. Drawing on a description by Schwanen (2012), time-geography and notions of rhythm have been on the agenda since the 1970s:

"... since the introduction of time-geography to the Anglophone world (Hägerstrand, 1970) geographers have had a conceptual apparatus to think about rhythms (Crang, 2001). Nonetheless, Parks and Thrift's (1979; 1980) chronogeography—directly inspired by time-geography—offered the first comprehensive treatment of rhythmicity in human geography." (Schwanen et al., 2012. p.5)

Many approaches of dealing with time and rhythm have been developed in the field of urban geography. In the context of this thesis, studies that look at the nighttime economy and nightlife districts through the lens of rhythms are relevant. First of all, the main and obvious difference is that of day and night. Distinctions of time-spaces are made in urban geography where the urban night offers a "more intense emotional experiences and provides more opportunities for transgressive and anti-social behavior, including public drunkenness and alcohol-related violence" (van Melik et al., 2007) compared to the daytime situation. The night allows for- and triggers- different behaviors in public space than the daytime. Although this might seem obvious, the point here is that this changes the atmosphere and the 'stage' in which things take place drastically (see figure 3). Other rhythmic influences, or 'pacemakers' in the nighttime economy can be found in factual aspects (opening- and closing times, transportation facilities, the presence of a cash machine). In urban geography, empirical works has been done in this field. As described by Schwanen (2012, p. 7):

"Roberts and Turner's (2005) descriptive study of Old Crompton Street in Soho, London, indicates that a nightlife district is indeed a polyrhythmic ensemble in which pedestrian activity, traffic, noise levels, instances of antisocial behavior, and opening hours of facilities fluctuate and interact over a 24 hour period. Their work suggests that the opening times and availability of different nightlife facilities—bars, clubs, pavement cafés, etc—act as pacemakers for the number of visitors that can be observed on the street."

Besides these hard facts, there are also more 'soft' aspects that might have an influence on rhythms in the night, although these are hard to measure (reputation of a place, hype, 'what friends do', accidental passing). Also notions of fear and un- safety can influence visitors to stay away, or visit a certain place. Paraphrasing Schwanen, several studies (Roberts and Turner, 2005; Thomas and Bromley, 2000; van Aalst and Schwanen, 2009) indicate that perceptions of crime, disorderliness, and un- safety increase over the course of the night and are among the factors which keep people from participating in the nighttime economy in the later hours (Schwanen, 2012, p. 8). Where I will come back to this topic in chapter 2, it suffices here to conclude that rhythms of a nighttime economy change over the course of a night and that this changing is instigated by both 'hard' and 'soft' facts or instances.

1.1.3 Participation in the nightscape

As described in the introduction, the sense, or understanding, of public space and publicness is at stake in these nightscapes. During these different rhythms of visitors in nightscapes, different ideas of what publicness means, and what is accepted behavior, are negotiated. Where there exists an assumption that public space is accessible and open to anyone, this can be questioned by looking at the playing out of surveillance and publicness and the way this shapes a safe place for one, and a dangerous place for another at the same time. Or, as phrased in the original research proposal of the Surveillance in Urban Nightscapes project[12]:

"If forms of inequality and exclusion exist here, questions can be raised about the nature of public spaces and local public policies regarding such spaces at nighttime." (van Aalst et al., 2008)

The question addressed here is if exclusion takes place in the nightscape. A reference is also made to local policies that have a shaping role on this inequality. However, it is not only policy and people that shape inequality. As mentioned earlier, in the nightscape, surveillance technologies also play a role. Where theoretical notions and concepts of surveillance will be discussed later in this chapter, I want to point out that the physical setup of the nightscape, but also different technological devices in that nightscape can have an influence on who is participating in the nightscape and when. To put it stronger, technologies and

physical infrastructures are important means to serve the goal of creating 'safer' (but not necessarily more equal) nightscapes. In putting these surveillance-means into practice via different channels, forms of exclusion might emerge. As phrased by the SUN project:

"One consequence of the increased importance of the nighttime economy and the pervasive culture of fear surrounding nightlife districts has been the intensification of surveillance: police agents, private security firms and technologically advanced CCTV (Closed Circuit Television) systems aim to reduce crime and make visitors' experience of the nightlife area as pleasant as possible. The rationale underpinning this approach is that new visitors may be attracted to nightlife areas if they are safer and more secure. However, the implementation of enhanced security measures for the benefit of some visitors may entail the exclusion of other groups, who may be singled out by surveillance agents as constituting a potential risk on the basis of their race/ethnicity, dress, comportment, etc. These issues raise questions about the effects of surveillance practices on the public character of public spaces." (van Aalst et al., 2008)

Although this quote describes the problematics of nightscapes and notions of publicness poignantly, these 'enhanced security measures' are (as of yet) not defined. Where to find these places or touch-points where this negotiation and possible exclusion of the public takes place? One would expect that during busy times

figure 3;
a late-night economy in Groningen

and in busy areas, experiences of fear in the public space would be less. As van Aalst & van Melik put it:

"Underlying the earlier mentioned 'animation' approach is an assumption that crowded places are safer. Concentrations of people will presumably make it more likely for offenders to be seen and apprehended or even prevented from committing a crime. Now that mobile phones with cameras are ubiquitous, people will be more likely to participate in surveillance." (van Aalst & van Melik, 2009, p. 4)

Referring to the question of means, these authors point to an interesting observation; that people more and more carry a mobile phone, often equipped with one or multiple cameras. When local governments try to regulate these spaces and make them safer, there is the implicit or sometimes very explicit danger of promoting certain individuals or groups while excluding others (see f.i. Helms et al., 2007; Lyon, 2003). However, as earlier mentioned, it is not only local policy and government-owned means such as CCTV cameras that determine and shape the nightscape. Where we have already established that visitors have a large role in defining the public in public space, this visitor also has access to means that can have an influence on that nightscapes (see. f.i. Hardey, 2007). These means, such as a mobile phone equipped with a camera, might not have been developed as a means for safety or surveillance as such, but does hold with it the potential to be used for these purposes in the nightscape. In how far both these government-owned 'official' means and the potential means of visitors have an actual

influence on the rhythms and behaviors of visitors, is an empirical question. Schwanen states:

"A strong visible presence of well-equipped surveillance agents may draw some people into the nighttime economy yet trigger suspicion in and deter others [...] The rhythmic presence of police officers, for instance, may reflect the anticipation, on the basis of past experiences, of undesired events and risks involving certain (types of) visitors at particular times and places during the night." (Schwanen, 2012, p. 8)

The suggestion made here is, based on past experiences with a certain rhythmicity in the nightscape, that presence of surveillance agents indeed already have a (strong) influence of who visits the nightscape and at what time. Where this is a human agent, means such as CCTV cameras, and maybe more importantly, signs stating that CCTV cameras are present, as non-human agents also have an influence on visitors. Where the effect of CCTV presence is as of yet a point of (academic) debate (see f.i. Hempel & Töpfer, 2002; Norris and Armstrong, 1999), the challenge in this thesis is to look at the entire network of human- and non-human agents in the nightscape; to the entire landscape of surveillance.

To summarize, urban geography introduced relevant concepts to analyse surveillance in urban nightscapes. First of all, this discipline points to the city and especially city centers as potentially rich research sites. Processes of gentrification and McDonaldisation lead to an increase in similarity of city centers. This leads to recognizable and controllable spaces,

where surveillance is one of the means of control and regulation. However, via the concept of rhythms, urban geography also shows that these places are under constant negotiation and flux. Where during the day a city centre might be aimed at shopping, the same district attracts restaurant public in the evening and clubbers in the night. Together with the different rhythmicalities of facilities during a day and a night, the message is that these places are never the same and never homogeneous; it is a constantly changing landscape. The introduction of the dichotomy of fear versus fantasy shows the tension in these spaces at night; they have to be attractive yet safe in order to become a 'thriving' nighttime economy for different stakeholders. One way of doing so is via surveillance and regulation. The nighttime economy is made up of a complex network, dubbed a 'nightscape', by which the urban landscape at night is meant. This concept will be used to describe the different research sites within three Dutch cities at night. I will use the concept of the nightscape to point out not only to human factors in nighttime economies, but also at technological means such as CCTV or mobile phones as shaping factors of urban landscapes at night.

Scholars in Urban Geography as an academic discipline look at experiences in the nightscape of different groups of citizens and, in the SUN research project, of surveillance professionals. Their main interest lies with the human actors in the nightscape. Although they acknowledge the role of CCTV and mobile phones as a part of these experiences, the heuristic tools used in this discipline are not sufficient in explaining how these technologies act, nor is the technology itself questioned or looked into.

To some extent, technology is black-boxed, while I aim in this thesis to incorporate surveillance technologies into my analysis of Dutch nightscapes. The question of how both humans and technologies shape Dutch surveillance practices, demands to also look into surveillance technologies. In order to include these technologies and the networks of surveillance technologies into my analysis, I will draw from Science and Technology Studies (STS).

1.2 Science & Technology Studies

1.2.1 Science and Technology Studies: Accounting for things

A field that has been productive in developing heuristic tools for including technologies in the analysis is the interdisciplinary field of Science and Technology Studies (STS). Scholars in this field have been involved in analyzing how (new) scientific facts emerge and technological developments take place and how it influences society (and vice-versa). Instead of framing science and technology as purely 'positive' and always progressing, and scientific facts as an objective truth, STS revealed another perspective. The production of facts in their view is very much a social process (see f.i. Latour & Woolgar, 1979) and facts are never stable entities; they transform when they travel outside the laboratory. Related to this traveling of facts is the role of knowledge production and the notion of expertise (see f.i. Selinger, 2006; Webster, 2007). Based on what expertise and what kind of facts do policymakers or practitioners evaluate the impact of technologies?

These type of questions become relevant for this thesis when looking at surveillance technology in comparison to other types of technologies, such as social media. Where and how are 'facts' established and how do these facts gain authority?[13] Moreover, STS looks at how new facts and innovations come into being, how they are framed and consequently how they alter existing views and practices in society. This latter notion is relevant because it points out that new technologies are never entering society blank or objective and that once they are here, they are therefore not neutral (Irwin & Wynne, 2004). For instance, the introduction of a body-worn police camera changes the way of working for a police-officer; it might also change the way nightscape visitors think about cameras, or the legitimacy of filming in public space. By only looking at the interaction between humans and the social (as often done in the disciplines such as urban geography and amongst policymakers), the material world and the influence of things, in all kinds of processes and events, is dismissed (as being 'merely' soulless objects). Recalling the questions of publicness as stated in the introduction as well as the notions of public nightscapes as posed by urban geography, the objects in this public space then are not just soulless objects, but rather, they can be active in shaping these nightscapes. As in the example of the police-worn bodycamera, often technologies introduced in these nightscapes are contested; questions of surveillance, privacy and data protection, for example, make these technologies in these spaces highly political. In that sense, the non-neutrality of technology as pointed out in STS becomes even more apparent in this context (see f.i. Radder, 1998 on the politics of STS).

Connecting politics in and of public space to artifacts or objects is not uncontested. An example worth noting that surrounds the issue of politics and objects is that of Winner's bridge.

The case is that a bridge in lower Manhattan is seemingly designed is such a way that public buses cannot pass. The road that surpasses the bridge lead to a beach. By designing the bridge in this manner, only private cars could reach the beach, thus excluding the public that was dependent on transport by bus. This evokes social exclusion (Winner, 1980)[14]. Another author that contributed in a more fundamental manner to this problem, is Latour. He argues that perhaps we need a shift towards the politics of things in order to re-map politics. This can be achieved via the introduction of Dingpolitik (as opposed to Realpolitik), combined with a set of experiments to research the following question: 'what would object-oriented democracy look like?' (Latour, 2005). He states that objects trigger the connections of public issues. 'Each object gathers around itself a different assembly of relevant parties' (Latour, 2005), and triggers discussion. All these objects, with their issues, are binding us into a 'public space'. Where this has up to now never been looked into as being political, objects are. Latour continues by strongly criticizing political philosophy due to its 'strong object-avoidance tendency'. While always describing the how, and the procedures around the issue, when it comes down to what the issue is, political philosophy has remained silent throughout history about things. Within the res publica, the only focus until now has been on the procedures; not on the things that allow for politics; the 'matters that matter' (Latour, 2005).

Latour continues by arguing that there is a need to investigate how and through what medium the matters of concern are discussed. How are all involved parties, people and things assembled?

While one might claim that the actors in this setting are the human beings organizing this assembly, Latour claims that the influence of things have an even role in creating this assembly. However, this brings in another problem: 'to assemble is one thing; to represent to the eyes and ears of those assembled what is at stake is another. An object-oriented democracy should be concerned as much by the procedure to detect the relevant parties as to the methods to bring into the center of debate the proof of what it is to be debated' (Latour, 2005). He also points out how the "Ding" has been around for centuries, referring to 'thingmen' dating back from old northern peoples. It has always been things that brought people together, because things divide. Therefor it is time to go back to things.

1.2.2 Latour and the problem of Modernism

The problem of going back to things and the network of things and humans lays in the fact that Modern thinking has given up on the delicate web of humans and things, something the 'pre-moderns' were involved in. The work of the Modern - purification and mediation, leads to the separation of all into two camps; the Nature and the Society pole. In wondering why this dualism is so strong, Latour asks: is not society literally built of gods, machines, sciences, arts and styles? Why has it always been impossible for the social sciences to accept the object as part of that society, rather than turning to the 'hard' facts of natural sciences to provide for answers and vice versa? The things in between, the connectors that were always there but never recognized as such, are called quasi-objects. These objects are not intermediaries, but mediators. They are simultaneously real, discursive and social. They belong to nature, the collective and to discourse (Latour, 1992).

He continues by stating that, in order to understand the modern world, we should embark on a mission to follow these quasi-objects or networks. The statement that 'the asymmetry between nature and culture then becomes an asymmetry between past and future; the past was the confusion of men and things: the future is what will no longer confuse them' is what caused modern temporality, where we kept looking at the world in a superposition between past and future. Instead, it is wiser to accept a poly-temporality: we have reached a point where we are mixing up times. 'We are exchangers and brewers of time', where Latour's

argument is that the connections amongst beings alone make time. So, instead of focusing on this constant fixation with 'the next thing', or 'the new paradigm', now we can give up analyses of the empty framework of temporality and return to the passing of time – that is, to beings and their relationships, to the networks that construct irreversibility and reversibility (Latour, 1992).

But how do we manage this shift from immanent/transcendent society towards collectives of humans and non-humans? And what does such a collective look like? Not by trying to create another revolution, or by debunking another paradigm; rather by re-thinking and re-evaluating the role of these quasi-objects and to acknowledge their existence. Where things and human first needed to be explained ultimately by either Nature or Society, Latour points out that we do not need to attach our explanations to either Object or Subject/Society. They are both part of the same central starting point; the collective that produces things and humans.

These quasi-objects then can transform from intermediaries to mediators, because the message (however shaped) they transport, will undergo a transformation; it will be edited and altered due to this transportation. The shift in thinking is about not to try and explain how the subjects construct the object, but rather how objects shape the subject. To back up this point, a reference is made to the origin of the word 'thing', which is literally 'cause', a word from the realm of politics and criticism. Latour claims that we have to move from digging into the essence of things into the event of things: the fact that they 'trace networks'. The quest of finding the truth becomes different when we chase not only the

phenomena, but also gain access to things themselves. The real is not an abstract entity, but accessible in all the objects mobilized throughout the world (Latour, 1993). Maybe there is more to things-in-themselves than we now give them credit for. On the other hand, the collectives we move ourselves in, are maybe more interesting than the humans-amongst-themselves led us to expect (Latour, 1992). If we look at humans and objects together as a collective, maybe that does tell another tale. The dimensions of these collectives make sure that new hybrids keep popping up: an increasing number of objects need an increasing number of subjects. The nice aspects of science and technology are that they multiply the non-humans enrolled in the manufacturing of collectives and they make the community that we form with these beings a more intimate one. So in order for these collectives to endure, a different role is given to the hybrid, the quasi-object and the human; one that is not so distinct, but much more networked than thought before (Latour, 1992) Drawing on these insights, analyzing how the surveillance landscapes are shaped can be done by looking into the collectives and networks present in these spaces.

1.2.3 Actor-network theory and the concept of script

The perspective of tracing the networks of humans and objects has become an important topic of research in STS over the past decade and is called Actor-Network Theory (ANT). In this approach it is stressed that if actors and circulation are followed, rather than pre-positioned roles or topologies of the social or the technical, new insights can be gained on how realities are shaped. Where ANT is faithful to ethno-methods (Latour, 1999), it is a way for social science to learn from the actors involved. By studying both human and non-human actors and their constant constitution of temporal hybrids with specific roles and actions, the subject of study can be described in terms of networks. Specifically mentioning that the term network here stems from pre- Internet notions, a network can be explained as trails or paths between different nodes in a network, whereby information, or that to-be-transferred alters through every node. These translations happen because every node in a network mediates information, e.g. receives, interprets, and sends. This mediation makes the notion of a network 'pre-Internet', precisely because it alters information (rather than information being identically accessible with every mouse-click). The nodes that alter can be human, or non-human; either way they are actors and actants in this network.

When engaging upon such a research trail, often we will find interaction between humans and non-humans, both actively mediating. A method for describing these interactions and how

these mediations are shaped, can be found in the concept of script. The notion of script, developed by Madeleine Akrich and Bruno Latour in 1992, can be explained as a way to describe these interactions in terms of a film or theatre script; artifacts have certain actions inscribed in them, that tell users how to act with it. The added value of this approach is that it allows for reflection on artifacts and users beyond the functional (Verbeek, 2006). This opens up space for moral reflections on user-artifacts and these inscriptions of artifacts. One could reason that an artifact is made my humans, and as such, the developer of this artifact is somehow inscribing his or her morality into the artifact. Latour describes this inscription process in terms of delegation: designers delegate specific responsibilities to artifacts. When using these artifacts, end users are influenced by these inscriptions in their actions. In other words, these inscriptions alter user behavior (see f.i. Tromp et al., 2011; Oudshoorn et al., 2003, Neven, 2010).

If we return to ANT, this would mean that in the mediation process of information flowing from one node of the network to another, the mediating actor is also being altered in a way. The consequences for the network are that nodes of the network are never constant; they are left in a different state each and every time mediation takes place. Taking a closer look at these nodes, then, can inform the researcher of what and how the nodes change as a result of mediation. Latour terms these nodes hybrid collectives; a set of human and non-human actors in a certain place and a certain time that create a unique set of values or possibilities. These hybrid collectives keep popping up due to a more widespread saturation of non-humans (things) that we

have to interact with. The added value of naming these hybrid collectives is that it allows for thinking about human-thing-relations, diverting and ignoring the ever-existing subject-object dichotomy. Via these hybrid collectives, alternative forms emerge, that allow for new social reflections of certain phenomena.

In this thesis, my focus will be on urban nightscape phenomena such as CCTV cameras or mobile phones. Can we understand surveillance practices mediated by CCTV or a mobile camera via the concept of these hybrid collectives? For instance, the nightscape visitor that walks around with a mobile camera can be seen as such a hybrid; due to the combination of human and mobile phone camera, new action possibilities occur (such as sharing the pictures of a night out with your friends). Such descriptions of different distinguishable hybrid collectives can serve the purpose of mapping these action possibilities; what kind of actions take place in that nightscape that became possibilities due to this particular hybrid collective? An ANT analysis can reveal different collectives and their shaping role, their agency, in the nightscape. This agency can be explained as how these hybrid collectives act and how responsibilities are delegated (Akrich, 1992; Latour, 2012) between humans and technology within these hybrid collectives[15].

However, a challenge when thinking about hybrids in relation to surveillance-related technology is that these tech-nologies might affect people beyond the direct end-user of an ICT. In short, the context- and thereby the multiplicity of use has to be taken into account. What is meant here is that, for example the end user of a CCTV camera is the CCTV

operator in a distant room. The visitor of the nightscape that alters his or her behavior due to the CCTV camera that is in place, is in a way also a 'user' of this system. Clarke (1998; 267) has introduced the notion of the implicated actor to address these types of use of a technology. Oudshoorn (Oudshoorn & Pinch, 2008) has proposed the notion of multiple users to address the problem of incorporating more that only the user and the designer in analyzing new (ICT) technologies, but rather to look at 'the distribution of power among the multiple actors involved in socio-technical networks' (Oudshoorn and Pinch, 2003, p. 7) as an empirical question.

Summarizing, I draw from STS the lesson that technology is not neutral. Moreover, via Latour I have shown that artifacts (and technologies) have a role in negotiations; in politics. This becomes relevant when looking at surveillance technology since these technologies themselves are often introduced as politicized artifacts. Furthermore, an-other lesson drawn from STS that serves a purpose in this thesis is the notion of networks. When investigating existing or emerging technologies, the networks of development and use, but also the networks of other technologies that surround the technology-under-investigation, play a role in the shaping of that technology in society. On the question how to research emerging surveillance technologies, I turn towards user studies in order to gain insights in how user practices and existing networks of human and non-human actors are affected by the new technology. Concepts of script and delegation of responsibilities between human and technology are central here. New technology-user configurations can be called hybrid collectives and can

be found in for instance a visitor of the nightscape who is using a mobile phone camera or a police officer who is using a bodycamera. Besides being single user-technology configurations, the use of these technologies in public space also affect others. When it comes to visual technologies in relations to surveillance, it can be stated that these hybrids are not only new watchers, they are also being watched. Where the act of filming might constitute an active role for watchers in shaping surveillance, they might at the same time be subject of a CCTV camera, or another visitor using a mobile phone camera. The roles of these hybrids then are multiple; they can be seen as both users and implicated actors of surveillance technologies. These technologies have a strong normative aspect, because (we assume) that they do articulate and mediate processes of exclusion and social sorting in public space. In order to turn to questions of normativity and power while not losing the strength of ANT as a method of analysis, I will turn to surveillance studies as a discipline that has been dealing with these issues in an academic tradition.

1.3
Surveillance
Studies

1.3.1 The Panopticon as a model for thinking about surveillance

Probably the most famous example -and model- to think about surveillance is the Panopticon (see figure 4). Originally, this panopticon is a design for a prison, thought up by Jeremy Bentham[16]. In short, the idea is to create the ultimate prison, where all cells are placed in a circle. All cells face each other, where the only visible blockade are the bars of the prison cell. In the middle of this circle of cells, there is a watchtower. The watcher in this tower can see every prisoner, at all times. This watchtower was to be built in such a way that the prisoners cannot see in which direction, or at what times the watcher is watching. Bentham's idea was that, because of this setup, prisoners would be under constant surveillance; because they cannot know when they are watched, they will have to assume that they are watched all the time (or take the chance). Besides this practical aspect, the main consequence of such a prison is that the prisoners 'will stop wanting to do wrong' (Dorrestijn 2012, p. 30).

Taking this prison as a diagram, Foucault projected this notion on other parts of society in analyzing power-relations and models of governing (Foucault, 1975; 1995). When everybody is constantly watched, an internalization

of control, of morals and values, will take place. Based on historical research, Foucault coined this type of society the disciplinary, or discipline society, where (in Western societies), we have seen a development to technocratic approaches to governing. Foucault's study on power consisted of formal and evident institutions, where the Panopticon was introduced as an 'ideal' system to internalize the power struggle from institution to the individual[17].

Another French thinker responded to Foucault, stating that the object of study in 'current' society (the 1980s) begged for a different analysis, where the routes, or 'touch-points' of power between institutions and individuals are not so clear-cut anymore. Deleuze & Guattari in their publication milles plateaux (1987), made the observation that Foucauldian institutions no longer existed, at least not in the form as described by Foucault. In comparing Foucault's and Deleuze's objects of study and 'spaces' for study, one can state that they are closed (Foucault) versus open spaces (Deleuze), leading to respectively a controlled and a disciplined society.

Foucault used enclosed spaces as space of study, like the factory, the prison, or the hospital, where the object of study was the individual: the body. In order to make bodies docile, the use of surveillance (the panopticon), internalizes power-struggles and the will to 'do good'. Through control at a distance and technologies of power, a chain of behavior emerges; bodies (and minds) reform through daily regimes[18] that are instigated by the ones in power.

With Deleuze, the object of study alters, due to the fact that society has altered; he introduces the dividual (Deleuze, 1992). Where society is

16. See Dorrestijn, S; The design of our own lives p 29-30 for a very elaborate explanation and history of how the Panopticon idea came into being.

17. Where I do realize that this is a very short description of what Foucault said and wrote about the panopticon and forms of government, I wish to a) not turn this into a study on Foucault, and b) refer to the work of Dorrestijn 'the design of our own lives' pp 45 – 60, in which the works and life of Foucault both as a historian as well as a 'philosopher of technology' are elaborately discussed.

18. Think of attending work in time, going to church at set times, going to the hospital at certain times, etc. The point is that it concerns patterns of behavior, controlled by those in power. Via these patterns, a form of disciplining takes place.

figure 4:
an actual prison based on the idea of the Panopticon

becoming fragmented, so does the individual; the panopticon becomes blurry and the individual is split up into pieces, where the 'new' power of consumerism is demanding all kinds and types of attention from the citizen/consumer. In a Deleuzian society, it is not about making bodies docile anymore, but about moulding the consumer (who consists of a real body and a data-body, where the latter becomes more important). Where Foucault would talk about the shift in power from 'taking life or let live' towards an administration of life (bio-power) 'to foster or disallow life', Deleuze states that power has taken another shift; towards access. Subsequently, Deleuzian places of study would be airports, borders; access points. The notion of the dividual and the turn to access points as object of study mark the point of a post-Foucauldian direction, and to a certain extent the beginning of 'surveillance studies'. Surveillance studies in a post-Foucauldian fashion thus emphasize the importance of looking not into the top- down institutions who are 'disciplining' the visitors of these nightscapes, but rather look at interaction, or touch points of power and surveillance in that nightscape, that take place between humans and technologies. The Deleuzian notion of the dividual allows us to look at individuals not as complete or uniform beings, rather as entities that have potentially many roles[19], or forms in that nightscape. A further exploration into surveillance studies is needed to refine this idea.

19. For instance, a police officer can be at the same time using a cellphone as an citizen and using a bodycamera professionally.

20. For a recent overview of the main issues in surveillance studies, see Ball, Kirstie, Kevin D. Haggerty and David Lyon eds. 2012. The Routledge Handbook of Surveillance Studies. London: Routledge, ISBN 978-0-415-58883-6

1.3.2 What is there after Foucault? Questions in surveillance studies

Attempts have been made in surveillance studies to get away from the panopticon model. The idea of internalization of control via one-directional top- down technologies of surveillance did not seem to fit con-temporary societies anymore, mainly because Foucault did not, and could not, include electronic layers of surveillance. However, as David Lyon, a leading author in this field, describes in the book Theorizing Surveillance (2006, p 4): "we cannot evade some interaction with the Panopticon, either historically, or in today's analyses of surveillance". This, he claims, is due to the ever-growing presence of "watching and being watched" via all kinds of new technologies or paradigms. Where the idea of the panopticon and the goals of creating docile bodies has spread from the prison to for instance the workplace and the government for reasons of productivity and efficiency managing, it also travelled to 'softer' forms of entertainment and marketing. Via forms of voluntarily being watched in reality shows or YouTube, to be watched becomes a threshold; an advantage (a YouTube adagium of the more views the better). Lyon coins this 'panopticommidy' (Lyon, 2007), Whitaker the 'participatory panopticon' (Whitaker, 1999).

However inviting these notions may sound, they still lie within the framework of the Panopticon and the power struggles between watcher and watched. Lyon states that we do not have to dismiss the idea of the panopticon, but that there are other sources of theory to be found. This can help in creating more balanced, and more informed analyses of current surveillance practices (or to reframe phenoma in society into theories of surveillance). The problem with most Panopticon-based analyses is that of Modernism (which Latour also dealt with, as described earlier); that is, splitting up subject and object, and thereby creating abstract entities or categories (institutions, the government), that hold the Power and exercise it upon the Subjects in Society. This perspective ignores any form of situatedness, context, or technology, for that matter. Not that technologies of surveillance are not questioned or discussed, however, often this happens in such a way that a) technology is black-boxed ('the Internet' or "ID cards") without examining the inner workings and the 'back-end' of these technologies, and b) user-technology relations and questions of remediation (Bolter and Grusin, 2000) between user and technology are often neglected.

Scholars such as Dubbeld (2006) and Ball (2003) or Taekke (2011) have recently taken up these challenges with-in surveillance studies[20] by drawing on STS and media studies, respectively. Both these fields can help when looking into networks of surveillance in urban nightscapes, where more and more relations between surveillor, be it organi-sational surveillance (see f.i Taekke 2011, Smith, 2004) or another visitor, the surveilled visitor and technologies emerge (f.i. mobile phones, urban screens, or ID cards). These interactions between humans and technology are crucial in surveillance studies because it is in these interactions, rather than -for instance- only in regulation, that questions of power and government become crystallized. Rules and regulations in public space

do play an important role in shaping the public nightscape, but I argue here that technologies of surveillance should be seen as forms or extensions of these rules and regulations as exemplified in the signs referring to the presence of CCTV cameras in public space (see figure 5).

Negotiations and adjustments on how to act (e.g. what is the 'right' behavior) in public space are more and more mediated by technologies, therefore the interactions between surveillance technologies and its users (police officers, visitors, bouncers), should be examined more closely[21].

1.3.3 The surveillant assemblage

Before examining what is negotiated and how in public space, some framing needs to be done as to how to approach this research without taking a normative stance that was often to be found in Foucault-based analysis (such as 'surveillance is bad'). One way of doing this is to take a step back and look at cases of surveillance in a situated and contextual way. Haggerty & Ericson provide a heuristic tool here by drawing on Deleuze & Guattari's notion of an assemblage. By this they mean that:

"This assemblage operates by abstracting human bodies from their territorial settings and separating them into a series of discrete flows. These flows are then reassembled into distinct 'data doubles' which can be scrutinized and targeted for intervention. In the process, we are witnessing a rhizomatic leveling of the hierarchy of surveillance, such that groups which were previously exempt from routine surveillance are now increasingly being monitored" (Haggerty & Ericson, 2000, p.2).

Moving away from Foucault's pre-given entities of those surveilling and the subjects of surveillance, these authors point out to a more recent development in (Western) societies, where we can see a quantitative turn towards citizens, or those being surveilled. The result is that parts of society that were not monitored before, now (can) become scrutiny of surveillance. Once your name, address, occupation or other types of information are electronically stored, your records can travel. These flows of information are the

21. I do recognize that in the first place, these negotiations of surveillance, safety and 'good' behavior are social processes between human beings. These aspects of surveillance in urban nightscapes are mostly carried out by colleagues in the "Surveillance in Urban Nightscapes' project. The main point to stress here is that we have to look into emerging surveillance technologies and the type of negotiations of 'public' values taking place in the interaction with these technologies.

figure 5;
signs as a physical form of rules and regulations

'things' to be watched and the more spread your data is, in the more flows you are represented in. Resonating with Deleuze's dividual and the notion of the data-double (Los, 2006, p. 77) as a unit of analysis, this perspective also changes the way we have to look at governmentality and power relations. Not the individual needs to become visible and controlled, rather the data he or she represents becomes the point-of-passage in forms of government (voting, traveling, securing, housing etc), where the kind of data you represent has to match with a certain query in a database that respectively says 'oke', or not. These databases form a rich source for potential surveillance (also dubbed dataveillance), especially when it becomes possible to connect different sources (or 'flows') of data. Lyon calls these databases leaky containers (Lyon, 2007).

New questions then emerge for surveillance studies because more and more responsibilities and decisions are moving towards databases and algorithms, even to such an extent that surveillance agents rely their decision on what the query returns. This decoupling of the individual and the data he or she represents implies also a new mode of thinking about public space and what a control-society, or a discipline society is, or even if these are the right terms to start with. Based on the notion of a databased society, Galloway, a new-media scholar, looks at protocol as the new means, or form, of power (see figure 6). With the birth of Internet and its (short) history, forms of power, of freedom and control, need re-visioning. In doing so, Galloway implicitly states that we are still in a Deleuzian control society, be it that the actors within this society may differ from earlier viewpoints.

A periodization map is given (figure 6). Galloway claims here that the manager of control society, the distributed society, is protocol. This protocol can be found in computer algorithms and languages such as HTML that decide whether a Website works or not, for instance. This protocol is not a normative agency; it is just there, once programmed by somebody and currently the responsibility of no one in particular. Where Galloway continues by linking protocol to all sorts of new forms of government and bio-power (by linking protocol to DNA), the relevance here is the resonation of the notion of protocol with the context of surveillance practices, which are often (as we will see further on) highly protocolled environments, where human and machine have to operate in a rigid and strict setting.

Responding on this rather dystopian view on the power of protocol and the non-role of humans, Chun (2006), a media and surveillance scholar, argues that indeed (computer) code (which acts via protocol) as a language gains more influence, but she states that we will keep having a role in creating machines and their languages in the future. Her investigation into fiber optics shows different views on what the Internet is throughout its short history and what myths were created around it. Trying to understand the linkage between freedom and democracy to control, often this relation is constructed via techno-deterministic explanations. Looking at the technology and its effects within a (Western contemporary) democracy, people do not have a voice as individual, but are becoming abstractions, where the individual is disembodied and turned into a statistic of the crowd. The Internet does not, through its town halls or chat rooms or through its disembodiment,

period	machine	diagram	manager
sovereign society	mechanical machines	centralization	hierarchy
disciplinary society	thermodynamic machines	decentralization	bureaucracy
control society	cybernetic machines	distribution	protocol

figure 6;
a periodization
map of (Western)
technologies
and power

enable publicity as imagined by the Enlightenment nor do its protocols make its networks transparent. It does threaten a publicity that, as it makes irrelevant the distinction between public and private, enables something like democracy - an ideological polarization around control and freedom. The argument is about how the Internet and surrounding discourses are a reflection on our vulnerabilities. Chun is warning for both utopian and dystopian ideas (extreme perspectives might harm or affect democracy). The image of an Internet has changed since 9/11 attacks on the U.S., where this happy place, this space for sharing ideas and knowledge, has made way for an extreme paranoia, due to the melting of security with freedom (Chun, 2006, p.15).

1.3.4 9/11 and new places of surveillance

The role of the Internet and new media on society, then, has been acknowledged and researched by both new media- and surveillance scholars, who argue that the ways in which we govern 'life' in our societies has rigorously changed since this new technology. However, questions of legitimacy and the ever-growing monitoring on the Web have not yet been addressed. Indeed, as Chun has pointed out, this rapid growth of Deleuzian points of surveillance has spread widely after 9/11. Bigo (2005) has coined the notion of the BANopticon, in an attempt to conceptualize this event and what it did to notions of control, freedom and security. He points out that a series of events, of which the 9/11 attacks are most prominent, have declared a 'state of unease' and an American imposed idea of global 'in-security' (Bigo, 2006, p. 49). This leads to rhetorics of 'better safe than sorry' under which an increase of surveillance measures could take place. Also, this rhetoric paved the way for experimentation with new surveillance technologies, such as body-scanners in UK airports and the accelerated introduction of the biometric passport and experiments with motion-tracking at Schiphol Airport, for instance (see f.i. van der Ploeg, 2003; 2005). Most of these measures could indeed be witnessed in Deleuzian places of access, such as airports and border controls. In how far this effect trickled down into daily life of our public space, is a question still unanswerable. What it did evoke was a renewed interest in the role of surveillance in social sorting (see Lyon, 2003). The fear

22. The term was first used by Mark Poster (1990) The mode of information: Poststructuralism and social context. Chicago: University of Chicago Press, and T.L. Taylor, 2006. "Does WoW change everything? How a PvP server, multinational player base, and surveillance mod scene caused me pause," Games & Culture, volume 1, number 4, pp. 318–337.

of the other and the difficulty for security services and politicians to distinguish them (Bigo, 2006, p. 55) became pressing matters. A question for this thesis then becomes to what extent this renewed focus on 'the other' and processes of social sorting can be found in public nightcapes in the Netherlands. Is 9/11 still resonating in policy and practice, or have we fallen back into the old patterns of social sorting via surveillance technologies? And if indeed something changed, how and where can we see this taking place? A comment here is that in all the above, both in surveillance - and new media theories on existing and emerging technologies, agency is placed with the technology, still dismissing parts of the lessons drawn from STS. Technology never acts alone, and technology never comes 'out of the blue'; it too is developed by people with values, morals and ideas, and these values may partially be inscribed in the machine. Moreover, in using these technologies, as an end-user, or as an implicated actor (Clarke and Montini, 1993), there is still room for negotiation and resistance; for anti-programs (Latour, Akrich, 1992) in use. The need to look into actual use becomes even more pressing, because it is here where also the forms of resistance or anti-programs can be found. When analyzing processes of social sorting or exclusion, it can prove insightful to look into forms of resistance against, via or with (surveillance) technology. Another critique is that, despite the attempt to remain as objective as possible and to not fall into the Foucauldian trap of normativity, still surveillance technology is seen (implicitly) as invasive and bad. Are there accounts of positive or empowering aspects of visibility and surveillance to be found in Surveillance Studies?

1.3.5 Empowering perspectives and the concept of participatory surveillance

One concept, and one author in particular diverts from the solely negative views and connotations on surveillance. Continuing on the topic of new media and surveillance, Albrechtslund argues that since the emergence of ubiquitous computing, the Panopticon should be reconsidered.

"The entertaining side of surveillance is a phenomenon worth studying in itself, and we expect that this type of study will contribute to an understanding of the multi-faceted nature of surveillance." (Albrechtslund and Dubbeld, 2005, p.3)

Rather than a place where one looks at many, many new media's follow a logic of 'many follow many', where visibility is often deliberately chosen. Mann et al. (2003) have coined this sousveillance, where everybody is watching everybody. Albrechtslund looks at how surveillance is often used as a design principle in, for instance, online games and sports-tracking services. This dwells on the idea that surveillance as a design-principle is used in many contemporary games and installations. Besides a fun aspect, these games can also inform us about how a (part of) society reflects on notions of surveillance. Going further, Albrechtslund coins the term participatory surveillance[22]. Many online environments, especially social-network-sites, serve as interesting places to study, since many beliefs, ideas

and opinions are shared here. Boyd (2011) and boyd and Ellison (2007) even state that social networking sites are dominating online activities today. Where I have strong oppositions to this statement[23] for now it suffices to state that these places are indeed new arenas for surveillance. However, taking the perspective of the user, this is not necessarily a negative thing. As Albrechtslund states:

"Characteristic of online social networking is the sharing of activities, preferences, beliefs, etc. to socialize. I argue that this practice of self-surveillance cannot be adequately described within the framework of a hierarchical understanding of surveillance. Rather, online social networking seems to introduce a participatory approach to surveillance, which can empower – and not necessarily violate – the user." (Albrechtslund, 2008, Introduction)

Participating via for instance sharing, responding or liking engages users into these platforms, where the idea of being seen and being 'followed' is a precondition rather than a setback. The added value of this approach is a user-centered per-spective on surveillance. Together with boyd (2011), this turn makes possible another type of analysis, of surveillance, where tracing users' steps and activities reveals another experience of surveillance and visibility. On the question why this visibility is so important to these users, Koskela (2004) for instance, pointed out that exhibitionism such as shown on social networks sites, or TV shows, can work empowering. By throwing everything into

public arenas, this "visibility becomes a tool of power that can be used to rebel against the shame associated with not being private about certain things. Thus, exhibitionism is liberating, because it represents a refusal to be humble" (Koskela, 2004, p. 210). The focus in many of these practices is not to know who actually is watching, since many online audiences are anonymous. Rather, it is the act of sharing, of 'self-broadcasting' that creates the possibility for others in the network to see, read and respond to self-made content. However, if there is no audience, there probably will be silence; sharing is something social. In terms of thinking about surveillance, this implies that from this perspective, users of social network sites want to be watched; it can be empowering (see also Shilton, 2010). On the act of sharing, Albrechtslund states:

"Accordingly, the role of sharing should not be underestimated, as the personal information people share – profiles, activities, beliefs, whereabouts, status, preferences, etc. – represent a level of communication that neither has to be told, nor has to be asked for. It is just "out there", untold and unasked, but something that is part of the socializing in mediated publics." (Albrechtslund, 2008)

Here, an important point is made for my further analysis, namely that this sharing is an act that does not necessarily lead to a pre-thought consequence or reaction. It is 'just out there', where every self-posted media outlet on a social network site will probably have a temporal aspect and will linger for a while before being forgotten. Places such as Facebook did

23. Where boyd focusses her research on online youth activities, this statement is definitely telling, and valid. However, the statement that the main activities on the Internet take place on social media sites clearly only reflect front-end consumer/users of the Internet (where there are many other forms of 'use' of the Internet). Even then, the term 'activity' is crucial here in defining what Internet use is (gaming, checking email, downloading, watching a movie on youtube etc).

24. See facebook.com. A timeline is a line where all your posts in history are place, thus making browsing through your history possible. Timelines can be closed for third-party viewers, however this is not the standard setting.

25. During the writing of this chapter, Albrechtslund published a paper in which the concept of participatory surveillance is explored in a broader context, rendering this critique not entirely just. See Albrechtslund, A., Lauritsen, P. Spaces of everyday surveillance: Unfolding an analytical concept of participation. Geo-forum (2013), http://dx.doi.org/10.1016/j.geoforum.2013.04.016

26. This is but one example case in this book; Trottier discussed much more press ing issues concerning social media as surveillance, which I cannot all discuss here.

introduce a timeline[24] to make history-browsing possible. This makes surveillance stretchable over time (e.g. it adds a temporal aspect to these mediated publics).

Although the concept of participatory surveillance is valuable, a critique on boyd and Albrechtslund here is that their location of analysis remains within the digital realm[25] and that these realms are not completely public; they too can be seen as walled gardens (Bortoli et al., 2009), that create a 'participation divide' (Hargittai & Walejko, 2008) only those who have the means to be inside the walls of social network sites can actually participate in these realms. I agree with boyd that these places do pose new questions for surveillance and identities. However, it is when these mediated publics start interfering with physical and real publics, true consequences of social media sites become visible. In his book Social media as surveillance, Trottier (2012) looks into these situations, by looking at the microcosmos of a university campus under the influence of Facebook. Where at first this is an empowering tool for students, campus security starts using the medium as well, thereby linking a 'safe' place for students into a tool for surveillance and control over student-behavior[26]. This example shows that online participation is not necessarily empowering when the actions of sharing something have a direct consequence for one's direct physical living space. When pointing out to privacy issues, the usual response is that 'you chose to be on Facebook, so you could have known'. This type of 'publicness-by-default' can be framed as nudge politics (Thaler and Sunstein, 2008), where one is part of a system, or of a set of choices, unless the participant or user actively opts out. Thinking back about STS insights as

described earlier, it becomes questionable if this is really the responsibility of the end-user of for instance Facebook, or whether that part of this responsibility lies in how the software is designed and presents the user with choices.

1.3.6 Responsible citizenship

Recalling questions of publicness and responsibilities, the logics of new-media spaces collide with the logics of physical public space. Due to an emergence of using media via mobile devices in public space, public places more and more become infested with private islands of communication. Topics that once were private become topics that can be shared, said, and at some point, done in public space[27]. On other fronts, such as surveillance, these logics of social-media sites and the earlier model of nudge politics are being copied into physical public space. The problem that emerges is that, where often these type of services are well-meant, the disadvantage is that opting-out of these services or systems will become more and more difficult in current- or future public spaces[28].

A trend that resonates with this new form of governing is that (local) governments in Western cities more and more call upon 'responsible citizenship'. Against a neo-liberal background, the idea is that instead of creating a 'big government' that controls everything, as a government one outsources problems and issues to citizens, calling upon their own responsibility in creating a good society. For instance, in campaigns on keeping your streets clean, citizens are called upon to act and not to look at he State for a (complete) solution[29]. Inviting people to act as responsible citizens is also used by governments in the U.S. and Europe incrementing safety and surveillance (France, 1998; Stychin, 2001; Handler, 2004; Lyon 1994). A recent campaign in the Netherlands on safety and surveillance called upon citizens to -in case of an

incident or crime in public space- take out their camera and record the offender[30]. Consequently, they were asked to send it to the local police or to put it online accompanied by a certain set of keywords, to increase find-ability[31].

In that respect, the concept of participation might trigger negative associations[32] and it raises questions on what type of public space is desirable, and for whom? Besides the implicit digital divide (there is an assumption that everyone owns a mobile phone equipped with a camera and knows how to use it) in this campaign, it also clearly illustrates new vulnerabilities in public space (as described by Chun), due to the possibilities of participating via new, digital, layers in these spaces. Where the real influence of social media and mobile devices on public life and surveillance needs to crystallize, this then is an attempt to cover first grounds on the actual practices of these emerging phenomena. Although recently Surveillance Studies are dealing with these topics, some point of concerns are still present, as I will explain in the next section.

27. Think for instance about discussing relationship-issues in the train, taking and sharing pictures during a night out, or making movies, thus deliberately 'voyeuring' on people.

28. Think about CCTV for instance and how one cannot 'opt out' of this technology.

29. See f.i. http://www.parkeer24.nl/nieuws/artikelen/een-schone-parkeerplaats-is-een-veilige-parkeerplaats.html (in Dutch) or http://www.nederlandschoon.nl/publiek (in Dutch) Last visited July 24, 2013

30. http://www.nederland-veilig.nl/pakdeovervaller/ Last visited July 22, 2013

31. See http://www.neder-landveilig.nl/ , a government campaign stating that 'safety is in your own hands' Last visited July 22, 2013

32. Especially in Europe, this type of calls on citizens to records other citizens is a reminder to type of regimes such as the Pre iron- curtain DDR, where the pressured 'call' on responsible citizenship lead to a paranoid society in which everybody could potentially report on everybody. See Maria Los "looking into the future; surveillance, globalization and the totalitarian potential' in Lyon, D. (2006). Theorizing surveillance: The panopticon and beyond. Willan Pub.

33. In this respect, I myself am guilty of this practice, when for instance putting forward 'the Internet' as a technology. It is clearly not one technology and not so straightforward in its inner workings as we might think.

34 . An example of case where context was indeed taken into account, in an STS fashion, is Dubbeld, L. (2005). The role of technology in shaping CCTV surveillance practices. Information, Communication & Society, 8(1), 84–100.

35. See for instance Sherry Turkle's work on the inner history of devices (2008), or "How users matter' by Nelly Oudshoorn and Trevor Pinch (2003).

1.3.7 Three issues concerning surveillance studies

One: Surveillance studies still black-boxes technology by following technological trends

In surveillance studies, technology evidently plays an crucial role. In order to govern a society, some form or method is needed for communication between government and the governed, however this relation is shaped (mutual, equal, hierarchical, rhyzomatic and so on). Agreements have to be mediated in some form or another. Where Foucault goes back to the 18th century and the problem of dealing with the plague, the local governing actor in that situation had to rely on two things: a wall to separate the sick from the healthy and b) statistical mathematics to predict how many more would get sick, thus how many citizens had to be put outside the city walls (Foucault, 2003). Foucault does dives into the technology as actor in his analysis (in a much more elaborate way than I am displaying here), however, in contemporary surveillance studies, as stated earlier, technology is often taken for granted as a shaping influence, or at least black-boxed. Drawing on the terminology that stems from STS, black-boxing in this case means that technology is discussed as a 'box', not questioning the networks this technology act in, nor the inscribed values, meanings and intended goals of the technology. A common reason for black-boxing is the assumption that what technology does, or how it works, is static and common knowledge[33]. In surveillance studies, however, where questions of power

are often played out via contemporary technologies in society (see f.i. Lyon, 2003 on new technologies and social sorting; Koskela, 2002 on high-tech surveillance means and Elmer, 2003 on new media and the panopticon), it would seem obvious that the key to understanding current surveillance practices is to investigate these technologies. Another aspect is that these technologies need to be looked at in context[34]. For instance Facebook is crucially different from Myspace, a mobile phone camera serves other logics than that of a bodycamera. In my analysis I will take this into account by indeed trying to analyze emerging surveillance technologies in a situated and contextual manner. As explained in an earlier section this entails the importance of turning to users.

Two: Surveillance studies 'neglects' users; instead, it often concerns profiles and data-doubles. Post-Deleuzian theory needs to re-enter qualitative user studies

Another issue that pops up when drawing on this discipline, is the little attention for users. As stated earlier, some authors such as boyd and Albrechtslund have taken a user-perspective in their analysis of surveillance. However, I argue that taking the perspective of end-users of surveillance technology is not enough; drawing on (STS- informed) users studies[35] could help expand the analysis of surveillance technology by looking into how users and technology have a mutually shaping role. When it comes to questions of governance and how public spaces are shaped by debates or controversies, a trend

in many disciplines such as surveillance studies and media studies is to go into quantitative analysis and 'big data'[36] in order to find insights by processing large datasets. Large datasets, however, cannot capture the granularity and resolution often required when it comes to a situated and contextualized analysis of a surveillant assemblage. To give an example, it would be possible to measure how many Tweets were sent on a Friday evening in the centre of Rotterdam between 2200 and 0600. Then we could even show the peaks and gaps and thereby conclude that around 2430 there was something happening in the nightscape because there was a peak in Tweets. Without turning this into a methodological debate, it becomes clear that when we want to know how Twitter influences the nightscape, it might provide more fruitful to follow a couple of Twitter users who go out in a large city and see how, when and why they actually use Twitter when going out and if they relate this to any practices of surveillance or feelings of safety.

In this thesis I want to literally ground surveillance studies by taking the latter approach; following actors and actants in the nightscape. Looking at qualitative, ethnomethod-informed and small-sampled accounts of what actually takes place in the nightscape allows me to reflect on local stories and contexts of surveillance.

Three: Surveillance studies speaks in messy metaphors

A definition of 'surveillance technology' is hard to provide, and has often changed over time. Mostly, analysis of surveillance societies and their accompanying technologies (or vice versa) start with the example of Jeremy Bentham's prison-design; the Panopticon (Bentham, 1791; Foucault, 1975). The panopticon is used by Foucault not only as an example but rather as a metaphor to explain for other developments in society. As discussed above this metaphor seems to have lost its relevance in explaining and understanding current changes in surveillance.

A more recent metaphor introduced in Surveillance Studies is the data double (Los, 2006; Lyon, 2007), a term that point towards the (digital) databased identity of citizens (Whitson & Haggerty, 2008). Where the database is not particularly new, since the digitalization of records, they have expanded enormously. This resulted in a 'double' identity of citizens in the digital realm. This metaphor of the data double invigorates and resonates in recent analysis of security, privacy and society. Here, the data double is clearly linked to online -or digital- existence in relation to its physical counterpart, and the tension between the two. In light of surveillance, issues of representation and access control arise, where mutual proof is constantly needed to confirm a real person's identity with its data double (think of biometric passports, public transport cards, social media logins and passwords and so on). However, records on citizens are far from new, and in that respect, the data-double has been around since the introduction of the first record-keeping of citizens, or archive (see Foucault, 1970; Star, 1999). In that sense, the notion of the data double remains vague. The point here is that rather than referring to messy metaphors when it comes to surveillance technologies, it might prove more fruitful to look into the

36. See f.i. Work by R. Rogers and the DMI group, where new media is being researched via 'big data' and quantitative methods, f.i. Rogers, R. (2009). The end of the virtual: Digital methods (Vol. 339). Vossiupers UvA.

37. See f.i. The call for papers on the Surveillance & Society journal; http://library. queensu.ca/ojs/index.php/ surveillance-and-society/ (last visited July, 2013)

38. See for this context Schwanen et al., 2012, where these nighttime districts are actually mapped in terms of human and non-human actors present over time.

implications of surveillance technologies in Dutch nightscapes and the different actors who exercise power upon subjects via certain (surveillance) technologies (see f.i. Hier, 2003; Jespersen et al., 2007). Unlike current trends in surveillance studies to look into big data[37], my contribution to surveillance studies is to take a contextual, user-and technology oriented approach in analysing surveillant assemblages in actual Dutch nightscapes. The context for this research is public nighttime districts in Dutch cities. This context proves relevant for studying an actual surveillance landscape, because:

a. Urban areas and city centers become very important places of focus for city branding (see van Aalst & Liempt, 2012) an therefore are at the locus of intense control, both by (local) government as well as commercial parties.

b. These urban areas are equipped with the largest diversity of surveillance measures such as CCTV cameras, public lighting, access gates, private security officers and ID cards. In other words, the local surveillant assemblage (Deleuze & Guattari, 1980; Haggerty & Ericson, 2001) shows a high density.

c. The actual practice and influence of the surveillant assemblage can be studied and the actors in place can be followed.[38]

Instead of drawing on metaphors and basic theoretical insights from surveillance studies, such as the Panopticon idea, when it comes to studying surveillance in current societies I have chosen to look at other theoretical developments. In surveillance studies other, more suitable concepts were found to address the research questions in this thesis. If indeed society has become more complex and more technologically mediated (via ICTs), the concept of the surveillant assemblage provides a fruitful heuristic tool to explain how practices and places of surveillance are not singular or uni-directional. Instead, the complex networks of surveillance actors has to be taken into account. Where this resonates with STS and actor-network-theory, a difference in surveillance studies can be found in normativity: surveillance technologies explicitly deal with (the negotiation of) power-relations in society.

Besides critical stances on post 9/11-spreading of surveillance means in society, Albrechtslund's notion of participatory surveillance also sheds light on the positive aspects of surveillance in society. The concept of participation and sharing is especially relevant in this thesis, because these are actions with technology that also emerge in the micro-site of the Dutch surveillance nightscapes and as such might be a driving force of alteration of the landscape of surveillance. My contribution to studies of surveillance lies in the turn towards use practices of emerging surveillance technology to see how these power relations of surveillance are negotiated (Albrechtslund, 2005; 2013) between nightscape visitors, police officers, mobile phones and CCTV cameras.

1.4 Conceptual framework

In order to understand changes surveillance practices in urban night-scapes[39], I approach this nightscape as a place where surveillance, safety and the concept of public space are under constant negotiations between humans and tech-nologies. Hereby my specific interest in this thesis lies in how landscapes of surveillance are changing due to emerging technologies. The conceptual steps I take to come to an analysis of how these emer-ging technologies alter the landscape of surveillance are the following:

1. City centers at night (nighttime economies) are places where fear and fantasy come   together in an explicit manner. Dubbed 'nightscapes', these landscapes at night are contested thus providing an interesting site for research.

2. These nightscapes are places where surveillance is fore-fronted as a means to create safe and pleasant public spaces. Rather than looking at a-priori roles or actors that are responsible for this safety through surveillance, I turn to surveillance practices in order to see how surveillance in urban nightcapes is shaped, thereby realizing that this nightscape is constantly changing due to rhythmical changes of humans and technologies present in these spaces.

3. Inspired by Deleuze, I will conceptualize differences in surveillance between urban nightscapes in terms of differences in local surveillant asssemblages.

4. Following insights of STS and notions of the politics of things as explained by Latour, I will look at surveillance technologies. Besides looking into inscribed values in these technologies by developers or designers, I also turn to user practices to see how surveillance crystallizes via practices of the interactions between human and technology.

5. In order to incorporate both human and technology in my analysis, I will use ANT and the notion of hybrid collectives. This allows me to to look at how responsibilities are distributed between humans and technologies in surveillance practices. New hybrid collectives such as the mobile phone-citizen hybrid and the police-bodycamera hybrid might challenge or alter existing surveillance practices in nightscapes.

6. The users of emerging technologies such as mobile ICTs not only form new hybrids, they are active users that have a shaping role on the surveillance landscape and they are also implicated actors of other technologies. Becoming both watcher and watched, active user and implicated actor, their roles in the nightscape are hybrid and multiple.

7. Linking these insights to post-Foucauldian theories of surveillance, it becomes possible to see what kinds or types of surveillance are expressed in these practices. Via the notion of

39. One of the main deliverables of the Surveillance in Urban Nightscapes project, see http://www.stadsnacht-wacht.nl/about. Last visited July 24, 2013

participatory surveillance, both negative and positive sides of these new hybrids can be explained.

8. Moving from an analytic stance towards an interventionist one, the former steps allow for grounded speculation on futures of surveillance in Dutch nightscapes. Based on insights from analyzing a selection of emerging technologies, questions of good surveillance can be addressed.

1.5 Research questions

The conceptual framework as presented above enables me to refine my initial research question as follows:

> "How are surveillance practices in Dutch nightscapes shaped by hybrid collectives of humans and emerging technologies?"

Several subquestions are formulated in order to specify and answer this question. First of all, Dutch nightscapes need to be mapped in order to see what is actually to be found in terms of humans and technologies. Once an idea is formed of what happens in the nightscape in terms of visitors, police officers, CCTV cameras, bouncers and so on (actors and actants), in other words, once different nightscapes are mapped, it becomes relevant for this thesis to see which technologies are emerging that might hold potential to change surveillance in the nightscape:

1. *What constitutes Dutch nightscapes in terms of humans and surveillance technologies and what new hybrids can be observed?*

The latter refers to the idea not to look at technologies stand- alone, but see how a specific technology creates new action possibilities, new practices, in use. These new hybrids bring about new practices in the realm of surveillance. The question however rises if and how these hybrids are aware of their role in the surveillance landscape. Where the focus will be on ICT related technologies, blurring boundaries of what a technology is and what it does might occur that sometimes might not explicitly be directly linked to surveillance by the users of these technologies. Turning to the nightscape visitors, the next question that needs to be addressed is:

2. *How are existing and emerging hybrid collectives experienced by nightscape visitors?*

Looking into how surveillance is experienced needs be done by looking at the hybrid; this means both addressing how ideas and paradigms of surveillance are inscribed into these new technologies by policy, design and development, and addressing the use and users of the technologies in order to see if and how the intended use differs from use practices. These use practices feed into- and create new ideas of- surveillance by for instance finding new functionalities or alternative uses in the nightscape:

3. *How do new hybrid collectives of humans and mobile technologies behave in the nightscape and how does this alter surveillance practices?*

This is a necessary step to distinguish differences that these new technologies evoke and how that impacts both on surveillance practice and theory. Being cautious here, the reflexive step that needs to be taken is if there is a change or impact to be witnessed and established, how long-term and solid this impact then is.

New forms of surveillance might pop up via emerging technologies, and some forms of surveillance might be dismissed or exist parallel to new forms. The larger question to be asked to surveillance theorists, professionals, policymakers and visitors of Dutch nightscapes becomes:

4. *What is considered to be good surveillance in Dutch nightscapes by relevant stakeholders?*

Multiple approaches will be necessary to address these questions. By following actors and actants in the field, I aim to provide a balanced account between humans and surveillance technology and their interactions that occur in-and during a night out in a Dutch city. In the next section an outline will be provided, where research steps taken will be explained and coupled to the chapters that will follow in this thesis.

1.6 Research methods and outline

Via a mixed method approach (Morse, 2003), drawing from both STS and urban geography research methods, as well as basing my methods on research experiences obtained as an Industrial Designer and a New Media Research scholar, I have developed an array of methods in order to collect data form the field of surveillance. Where specific methods of research are explained separately in each chapter, an overview is provided here to show what kinds and types of approaches have been chosen and created. Moreover, I will address what types of data these approaches and methods will produce and how this data helps in answering the research questions.

In this research project data is gathered via qualitative empirical research (see figure 7 for an overview). The choice for basing this thesis on empirical research in qualitative manners is inspired by the original project proposal, where instead of merely literary, or theoretical accounts, empirical research of surveillance practices are the focus. Although quantitative methods will also be deployed, mostly by fellow-researchers in the project of SUN[40], the cases in this thesis are heterogeneous and situated. This thesis is based on several case studies, both testing existing theory as well as developing new grounded theory (Glaser and Strauss, 1967) concerning surveillance in urban nightscapes.

phase	method	activity						
mapping								
	observations	visitor counting on different locations in city centers	x	x	x			
		counting of surveillance agents and props (a.o. police officers, city stewards, bouncers, police-cars, bikers)	x	x	x			
		mapping of urban furniture (a.o. benches, bicycle stands, trashcans)	x	x	x			
		mapping of facilities (a.o. pubs, eating facilities, shops)	x	x	x			
		counting of CCTV cameras both public as well as private cameras aimed at public space	x	x	x			
		observations in CCTV control room		x				
sensing								
	interventions	short interventions with visitors of nightscapes (these interventions were held during several nights)			x			
	interviews	interviews with visitors on mobile phone camera use (these interviews were held in the nightscape during daytime and evenings)			x			
		interviews with bodycamera policymakers (Enschede enters the list here due to hosting early bodycamera tests)				x	x	
		interviews with bodycamera developers (camera developers deliver cameras to a variety of cities)	n/a					
		interviews with bodycamera users				x	x	
	participatory observations	participatory observations with police officers using the bodycamera (during several nights, observations were held)				x	x	
probing								
	CTA workshop	workshop with organizational surveillance stakeholders (the workshop was held in Utrecht, stakeholders present at the workshop came from Utrecht and Rotterdam)		x	x			

figure 7;
method matrix

1.6.1 Three cities, three phases

In the initial research proposal, three cities in the Netherlands (Groningen, Utrecht and Rotterdam were appointed as research sites. Groningen was selected because of its investments in new surveillance technologies, such as a sound-camera[41]. In terms of population, Groningen is an average-sized city according to Dutch standards, and it holds a large student population. Concerning facilities, it has a vivid centre of bars and clubs that have (at this time of writing) flexible closing times. In terms of location, Groningen is situated in the North of the Netherlands and serves the function of being a regional core. Utrecht acts as base-case, being a fourth- largest city in the Netherlands with a wide range of surveillance measures such as cameras, bikers, police on horse and private security. Just like Groningen, it hosts a university, although students do not make up for such a large part of the population as it does in Groningen. Also, similar to Groningen, it has an old city centre with small streets and several different locations of bars and clubs. Closing times are fixed, but differ between types of facility (f.i. a pub, club or music podium). Utrecht is located in the centre of the Netherlands and can be considered a part of the Randstad[42]. Rotterdam is the largest city in these cases and can be considered the only 'metropole' in this list. Famous (or notorious) for its density of surveillance measures, this city holds maybe the most contrasts and controversies when it comes to the research questions posed above. Rotterdam hosts a university, the main port of the Netherlands and the most

multicultural population in a Dutch city. In terms of nighttime economy, there are several locations throughout the city, with considerable distances between them. These different locations attract different types of crowd. In this research, the focus will lie on the central nighttime economy (this will be explained in chapter 2). Due to its history[43], this city centre differs from the other two cases, having a strict, planned and Modernistic character. Rotterdam is located in the West of the Netherlands and forms a large core of the Randstad.

Three phases of empirical research are distinguished to study the three cities. The matrix provided in figure 8 reveals which activities, or specific methods, fit within which phase. The fourth city that appears in this matrix is Enschede. Due to reasons of access and availability of one of the the emerging technologies that will be discussed in this thesis, namely the bodycamera, this city became a research site as well. In the next section, I will describe the three phases of my research approach.

41. The sound-cameras were tested in Groningen, but due to technical inefficiency (it proved to be too difficult to filter noise from 'good' data) the project was discontinued. See this newspaper article (in Dutch) http://www.binnenlandsbestuur.nl/openbare-orde-en-veiligheid/nieuws/groningen-stopt-met-geluidscamera-s.1423721.lynkx Last visited July 24, 2013

42. See http://commons.wikimedia.org/wiki/File:Randstad_Population_Bubbles_%28nl%29.svg (although it is a wikipedia source, it is based on Dutch government data). Last visited July 24, 2013.

43. Rotterdam was bombed in WWII, where especially the centre of Rotterdam was hit. Due to (ongoing) rebuilding and renovations in the city centre, the architecture in Rotterdam differs greatly from cities such as Amsterdam or Utrecht, where functional and Modernistic architecture can be witnessed, creating a typical public space. See http://www.rotterdam.nl/tekst:geschiedenis_binnenstad (in Dutch) for more information. Last visited July 24, 2013

44. The colleague PhD student in the Surveillance in Urban Nightscapes project, working at the Urban Geography department of the University of Utrecht.

1.6.2 Mapping the nightscape

The first phase is that of observing and mapping who and what is there is the nightscape. Via structured observations in three cities, on several locations in the city, over a period of time, during several nights of the week visitors, organizational surveillance, bouncers, and physical objects (CCTV cameras, private cameras, street furniture, lighting) will be mapped. This will provide both qualitative- and quantitative data on the landscape of surveillance. From these observations and this data, insights can be derived on rhythms of surveillance in these cities, both in terms of time and place. Also, it provides a basis to differentiate new, or emerging technologies of surveillance that were unanticipated at the beginning of the observations.

Chapter 2 deals with observations and mappings of three different nightscapes. Here, the choice is made to look into different rhythms of the night, both in terms of visitors, surveillance agents and surveillance means and technologies. This leads to insights about the situatedness of surveillance and differences between local surveillant assemblages. The locations for these observations and mappings were chosen based on earlier exploratory observations held by Jelle Brands[44] and myself in the three city centers to see which places within the city centers are key places in the nighttime districts. In terms of timing, it was chosen to hold observations during the three nights of the week when these districts are most-visited: Thursday, Friday and Saturday night. Observations are done in two modes: static and dynamic.

In the static observations, the physical surrounding of the nightscape has been

mapped in terms of general facilities, urban furniture(s) and surveillance means. The general facilities were mapped insofar possible; the main goal was to find out where and how much facilities are present and at what times during the course of a night these facilities open and/or close (think of f.i. pubs, eating facilities, nightclubs). Another reason was to get an impression of the spreading of these types of facilities and how this creates routes and typical spots in a city centre. By looking at how these spaces or routes are facilitated in terms of public lighting and street furniture, more nuanced data was added to the mapping. Via the assumption that these 'stage props' (Goffman, 1959) do have an influence on human behavior in these spaces, a final step is to map surveillance camera infrastructure in these spaces. By this we mean surveillance camera signs warning the public that CCTV is in place, the actual CCTV camera, but also the private cameras that (partially) cover the public nightscape. Although data collected in these methods is likely not to be exhaustive or complete, the aim here is to structurally map the nightscapes that we selected as research sites, thereby preparing the ground for analysis of social-technical processes within these spaces.

In the dynamic observations, several repetitive rounds of observations were planned, in which visitors and surveillance agents were counted. Concerning the counting of visitors, the choice was made to capture slices, or representations, of nightscape visitors by choosing four location per city where the amount of passers-by will be counted. In counting, variables have been noted such as group-size, gender, ethnic background and age category (insofar possible). This creates a rhythmic overview during the night of

the type and amount of visitors. Counting surveillance agents was done by using the same locations as where visitors were counted. Police officers, private security agents and city-watchers[45] were counted, as well as the means they carry (f.i. flashlight/weapons/communication tools/ cameras - see chapter 2 for a more detailed description). By following a similar pattern of rounds, rhythmic surveillance data have been gathered. A last form of rhythm-data was generated by providing general descriptions of the nightscape during these rounds (f.i. smells/sounds/behaviors/ vandalism). This was done in terms of written descriptions and pictures. Chapter 2 serves the purpose of mapping the field of research, in order to distinguish what is actually there in terms of visitors, surveillance agents, artifacts, technologies, and specifically surveillance technologies.

1.6.3 Sensing the nightscape

The second phase in methodology is to move away from observational data gathered in the nightscape. In this research, this will be done by performing 'action-research' (Baskerville, 1999; Stringer, 2007; Greenwood & Levin, 1998) in the actual nightscape. By means of a method co-developed with my colleague Brands, situated interventions were held in the nightscape of Rotterdam. Via short (recorded) interviews on several occasions, responses of citizens were taken on accounts of safety, surveillance, CCTV and OCTV[46]. Chapter 3 deals with sensing the nightscape by investigating the experiences of nightscape visitors in terms of safety and the awareness of surveillance, especially CCTV. Also, the notion of OCTV (mobile cameras) and responses of watching and being watched will be questioned. These interventions will be held in two cities; Utrecht and Rotterdam. In this chapter, the relations between visitors and surveillance technology will be addressed, where the notion of the implicated actor (Clarke, 1993) as discussed earlier adequately describes this relation; the interviewees in this method of research can be considered the 'watched', either by organisational surveillance or by other visitors who are using a camera. Chapter 3 zooms in on the experience of visitors with questions of safety and surveillance in these spaces. In chapter 4 and 5 subsequently, I will look into new hybrids in the surveillance landscape.

Two emerging technologies were followed; the mobile phone camera used by visitors and the bodycamera used by police officers. Both are camera technologies and both are used on the body and/on in close

45. The Dutch word is 'stadswacht'. These city-watchers do not have the same authority as police officers, however, they are they not observe, note and intervene in public space (see an extensive report on definition and jobdescription here http://www.binnenlands bestuur.nl/Uploads/2012/6/ Rapport-horen-zien-en-schrijven.pdf (in Dutch). Last visited July 24, 2013

46. Open-Circuit Television. As opposed to CCTV, these are cameras that are nog in a closed circuit – neither physical (i.e. it concerns mobile cameras), not in terms of content (the footage made by these camera can be reviewed by other-than government- or police forces).

47. One could argue here that, with the emerging use of drones (see f.i. http://www.binnenlands bestuur.nl /drone-use-cause-for-increasing-concern-amongst-politicians-in-the-netherlands/), that an opposite move is already going on, where 'surveillance goes airborne'. However, this is, in the Netherlands, at the time of this writing, not the case. Last accessed July 24, 2013

proximity of the body. This creates a literal grounding of visual recorders and I observed this as being a new trend in surveillance means[47] that opens up new questions concerning notions of watching and being watched that are being (re) negotiated via these technologies (see chapter 2). In chapter 4 the mobile phone will be investigated by looking into the interface of a contemporary mobile phone camera via a script analysis. Furthermore, interviews were held with visitors of the Rotterdam nightscape on their experiences with using a mobile phone camera while being on a night out. This research is highly exploratory and qualitative by nature. The purpose of this chapter is to provide accounts of mobile phone camera use and via these accounts, provide indications of new challenges or problems regarding surveillance related topics. Relating this to the concept of participatory surveillance, I will explain these accounts in terms of actions these camera-visitors hybrids perform and how they might alter existing ideas on what surveillance is, or might mean in urban nightscapes.

In chapter 5, the police-worn bodycamera will be investigated by looking into policy, design and use of this emerging camera. Data was gathered via document analysis and interviews with policymakers, designers and engineers of this camera. Moreover, a script analysis of this camera was conducted in which the design of the camera and its interface were linked to concepts of the act surveillance and the value of footage. Finally, participatory observations and interviews were held with users of this camera in order to capture use practice of this camera at night. This created qualitative data on how the bodycamera alters work-practice

of police officers, but also how the police officers-body-camera hybrid is changing surveillance in the nightscape. After sensing the nightscape and its new hybrids, the next phase discusses probing nightscape stakeholders on their views of surveillance.

1.6.4 Probing the nightscape

Whereas the previous two phases in methodology consisted of descriptive research and (to a lesser extent) action research to investigate surveillant assemblages and practices in Dutch nightscapes, the third and final phase focuses on assessing and probing views on current and future surveillance nightscapes among relevant stakeholders. More specifically, this will be done by feeding back insights gathered so far into different stakeholders of the nightscape. In compliance with the funding of which this project is part, a move towards responsible innovation has been made via the organization of a CTA[48] workshop. In this workshop, stakeholders from the field of policy, design and use of the surveillance technology, in specific the bodycamera, are brought together to make- and think about current- and future surveillance landscapes. This workshop has been developed specifically to get to the current beliefs (hopes and hypes) of these stakeholders as well to their anticipation on Dutch surveillance futures. Via a combination of techniques, I will draw from both design research methods as well as CTA methods to facilitate an active debate on several issues concerning current surveillance technologies and technological futures. This workshop provided rich qualitative data, which served as material for reflection on earlier gathered data. It will provide an insider-expert view on the Dutch surveillance landscape and what are influential tech-nologies in shaping that landscape according to them. Moreover, insights were gained on what is deemed good surveillance from the viewpoints of these stakeholders. Contrasting this to my own findings, this serves as the basis for near-future (design) recommendations for Dutch Surveillance in Urban nightscapes.

In chapter 7, I will summarize findings from the empirical chapters and thereby answer the research questions. The steps as performed in the thesis were to first look into (selected) current Dutch nightscapes by mapping and counting humans and things. The next step was to get insights from visitors on the lived experience of safety and surveillance in the certain nightscapes. In explaining what are important technological actants for this lived experience, I distinguished two mobile camera technologies that I found promising to follow. These new hybrids have been separately researched in order to find out how they alter notions of surveillance. A final step was to feedback those explorative insights into the field of Dutch organisational surveillance to see how they look at these emerging technologies. Moreover, desirable futures and ideas on what good surveillance should be in nightscapes has been probed with these stakeholders. Recommendations will spring from remarks and insights as produced by these stakeholders, put in a broader context of nightscapes in cities. Moreover, a reflection will be given on the role of social and mobile media not only in shaping new contexts for surveillance, in terms of new tools to create surveillance data with, but also in shaping opinions and ideas on what it means to take a picture or a movie in public space. By this it is meant that I will reflect on new forms of *etiquette*[49] surrounding mobile techno-logies and cameras in public space and how from there, theories and practices of surveillance might change.

48. Constructive Technology Assessment, a research method within the field of STS. This method will be explained in Chapter 6.

49. Where online a sort of etiquette has emerged, or at least discussed in the form of Netiquette (see f.i. Shea, V., & Shea, C. (1994). Netiquette. Albion Books.) something similar has not yet evolved when it comes to taking pictures or making movies in public space, especially when it concerns mobile phone camera use.

Part one:
Mapping the
nightscape

In this part, research subquestion 1 will be addressed:

"What constitutes Dutch nightscapes in terms of humans and surveillance technologies and what new hybrids can be observed?"

This question will be addressed in chapter 2, in which the Dutch nightscapes of Groningen, Rotterdam and Utrecht will be mapped. Based on qualitative and quantitative data on these nightscapes, insights can be derived on rhythms of surveillance in these cities, both in terms of time and place. Chapter 2 serves the purpose of mapping the field of research, in order to distinguish what is actually there in terms of visitors, surveillance agents, artifacts, technologies, and specifically surveillance technologies. This will serve as a basis for further chapters in this thesis. It provides a basis to differentiate new, or emerging technologies of surveillance that were unanticipated at the beginning of the observations.

Observations in Dutch nightscapes

figure 1:
a Dutch nightscape
in Groningen
(Grote Markt)

Introduction: Three Dutch nightscapes

In this chapter, three Dutch nightscapes will be observed and mapped in order to create a basic understanding of how and of what constitutes these nightscapes. How does the local surveillant assemblage in these nightscape look like? Main insights drawn from Urban Geography (see also chapter 1) are that city centers have become an important point of attention (and revenue) for Western cities, especially the nighttime economies. These nighttime economies reveal tensions between fear and fantasy in the pursuit to create safe and pleasant nighttime districts (see van Melik et al., 2007 and chapter 1). The targeted audience for whom these nighttime economies are aimed at might clash with local culture and ideas of different citizens on what these places should entail, resulting in walled gardens where certain visitors of the night are left out. Via surveillance, processes of this 'social sorting' (on age, gender, race and so on) are maybe reinforced or made (more) explicit. Looking at the entire nighttime economy as a unit of analysis, the term nightscape is used to describe all actants that make up the nighttime economy (see figure 1); visitors, police officers, but also CCTV cameras and mobile phones (see Chatterton & Holland, 2003 and chapter 1). In order to create a better understanding of different nightscapes, these spaces will be mapped and observed both in terms of physical make-up as well as the dynamics of visitors in these places. Formulated

differently this chapter investigates what physical objects and people can be found in these nightscapes and what new hybrids can be observed. One way of looking at the nightscapes can be to divide the night in different times, or phases. Three phases of a night out have been proposed in urban geography (Bromley et al., 2003; Rowe and Bavinton, 2011). These are an evening economy (premised on visits to restaurants, cafés, theaters, concerts, and cinemas by a relatively heterogeneous population in terms of age, class, and gender), a night economy (predominantly youth, and more males than females, tend to frequent bars and clubs) and a late-night economy (evolving around nightclubs in which alcohol-fueled crime and disorder are concentrated). The hours of change, or transition, between these three phases have been suggested to be 2300 and 0200 (Rowe and Bavinton, 2011).

In this division of phases, specific facilities that link up with these phases are mentioned by Rowe and Bavinton. Where this hints at the influence of the (change) of physical space in shaping the nightscape, there are other factors at play they do not mention (here). Besides facilities, such as cafe's or cinemas, more dynamic actants might be found. Think of cameras, police-cars, or mobile phones, for instance. One way of thinking about things in these nightscapes, be they static things such as street-lighting, or dynamic things such as cameras, is to look at how these things make spaces hybrid. By this it is meant that all these things (actants) together with human actors (the visitors or users of these spaces) make for specific action possibilities. A taxi-sign informs and allows one to order a cab at that specific place; a fence can block a route, thus steering one's movement; a CCTV

camera makes specific locations in the city being monitored, which might alter one's behavior on that particular spot. All these things in the public nightscape can have a steering influence on users of these spaces; they try to convey a message on how one should or should not act.

A heuristic tool that can prove relevant when thinking about actions in the nightscape and the relation between humans and things in these spaces, is the concept of stage props as introduced by Goffman (1959). Here, public space is seen as a stage; all things inhabiting this space (signs, benches, fences, mobile phones, cars, advertising etc.) are seen as props on this stage. As on a stage, there might be a script on how to act, but there also is room for improvisation. Visitors can use these stage props is that one can use these stage props to make acting in public spaces more easy. This acting can range from functional (e.g. to achieve a goal), to emotional (e.g to feel more comfortable or at ease). Thinking in terms of stage props can help in thinking about relations between humans and things present in the nightscape, where not only visitors are present, but also police officers and bouncers who act together with their stage props. The three phases in the night, then, are an attempt to taxonomize different atmospheres during the night, with different configurations of human actors and their stage props, that together make for patterns that serve as a heuristic tool in explaining what happens in the night.

This chapter will continue by providing an explanation on how we approached mapping and observing the nightscape, and what, where, when and whom we have mapped and observed. Consequently, the found data will be presented and analysed in terms of how

the physical make-up as stage props shape the nightscape, and how the dynamics of use of these places connects to that in terms of visitors of nighttime districts, but also in terms of surveillance personnel. Conclusions will be provided on the differences and similarities of the surveillant assemblages in these nightscapes, and on which aspects are of specific interest for further research in this thesis.

2.1 Methods of mapping and observing

2.1.1 How to map? Strategies for researching the nightscape

The data presented in this chapter was collected via a specific research design where methods of observations needed to be adequate and manageable by the researchers. By this it is meant that during several nights out my colleague Jelle Brands and me had to be in the nightscape, monitoring and recording without interfering in it (or at least as little as possible). Realizing that it is very difficult to study a surrounding or context without changing it, still one can try to keep this influence or change to a minimum. The locations are chosen as such because of several reasons; either because these locations are crucial entry- and exit points in the nightscape, or because these locations in the nightscape have a particular attraction (due to its facilities). Combined with the three phases of the nighttime economy as described above and in chapter 1, especially in the last phase, the late-night-economy, blending in, or being inconspicuous as an observer in the night poses challenges for, for instance, counting visitors.

The research activities of mapping and observations have been divided in two types: static mapping and dynamic mapping. The static mapping of the nightscapes only needed to take place once in each city and the mapping involved objects and things, not humans. Therefore more elaborate research tools (meaning less inconspicuous) could be taken into the nightscape. For the dynamic mapping, Brands and I chose to record our observations auditively, via a smartphone, in order to transcribe them afterwards. The two main reasons for doing so are 1) written recordings turned out to be too slow to count visitors and 2) due to earlier-mentioned reasons of inconspicuousness the smartphone presented itself as a highly suitable research tool. Taking a step back, in conducting these methods we as researchers also become surveilling, or at least monitoring actors in the nightscape. Performing multiple of these observations, it creates a profound sense of what it means to watch people; to be a watcher in the night. The strategies for researching nightscapes then work in two ways. First of all it creates awareness of doing research in public spaces and the practical boundaries this entails. Secondly, it creates reflection on the research topic of the overall project itself: safety and surveillance in the nightscape and what it feels like to be a watcher in these spaces.

The data collection centred on public spaces in nightlife districts. In part, this was a pragmatic choice: streets and squares lend themselves better to observational research than do the interiors of nightlife premises. More importantly, the streets and squares considered are, in principle, available to anyone. This relates to the theme of (notions of) publicness as addressed in chapter 1; if surveillance is in place to create safe public space, then does it do that for all people in that space? Conclusions regarding who has visited bars and clubs can, to a degree, be inferred from the collected information because the public spaces considered provide entry to nightlife premises.

2.1.2 Where to map? Selection of research sites

The observations were conducted in the main nightlife districts of Groningen, Utrecht, and Rotterdam, in the Netherlands. As shortly described in the previous chapter, these cities were chosen because of their differences in population composition, spatial structure of the nightlife district, and surveillance and policing practices.

In order to understand the nightscapes and their differences, the facilities provided earlier need to be expanded by looking at how nightlife districts are made up in terms of bars, clubs, or other entertainment-facilities. On the next page, an overview is provided of the make up of these nightlife districts in Rotterdam, Utrecht and Groningen, where also, the type of music and/audience is given. The differences between the nightscapes are described by Schwanen *et al*, as follows:

"Nightlife entertainment differs across and within the three city centers. In Groningen much of the available entertainment is oriented towards students, with a mix of pubs, snack bars, and restaurants. Papengang (site IV), however, houses a Dutch-style coffee shop (sale and consumption of soft drugs) and a nonmainstream club. Utrecht's nightlife entertainment consists of a mix of restaurants, (small) pubs, and clubs strongly oriented towards university students and young urban professionals (see figure 4). This is particularly the case on Thursdays, when many clubs have students-only nights, and for the Janskerkhof area (sites I and II). However,

the northwest side of the Neude square (site III) is more diversified and houses a large club which plays mainly house and funk music and also explicitly targets nonstudents. In Rotterdam the spatial segmentation of nightlife entertainment is stronger than in the other cities. The Schouwburgplein area (site I) houses a theatre and casino in addition to pubs and restaurants, and thus has many facilities associated with the evening economy. Kruiskade (sites II and III) and Stadhuisplein (site IV) are characterised more by late-night facilities targeting different crowds: the former houses a mix of heterogeneous mainstream and alternative venues (from R&B clubs and lounge bars to an Irish pub and alternative club), whilst the latter accommodates a series of relatively uniform themed bars and clubs with a strong focus on mainstream pop music" (Schwanen et al., 2012).

2.1.3 When and who to map? Research protocols in the nightscape

For the empirical analysis, information is used from systematic observations on Thursday, Friday, and Saturday nights in the city centers of Groningen, Utrecht, and Rotterdam. These nights were chosen because they are the busiest and attract different crowds: Thursday is the typical students' night out, Fridays and especially Saturdays, attract more school-going adolescents and (employed) younger adults. In each city centre, Brands and I conducted observations during five ten-minute intervals between approximately 2200 hrs and 0500 on four different sites. In total, information is available for (3 cities x 3 nights x 4 sites x 5 rounds) 180 ten-minute observation periods on nine nights in March and April 2010. The first round of observations of all four sites on a given night was conducted between 2200 and 2330, and coincides with the evening economy (see above). Periods II and III tended to coincide with the night economy, and IV and V—the period from 0230 onwards—with the late-night economy.

These rounds in each city on the selected locations were held in order to create insights in who is actually in the nightscape at what time(s). We have looked into visitors of the nightscape and surveillance personnel in the nightscape[50]. See appendix A for detailed method descriptions. Considering nightscape visitors, by counting during the three stages of the nighttime economy in all three cities, an overview was provided in who was there in terms of gender, racial features, ethnicity, and age (roughly).
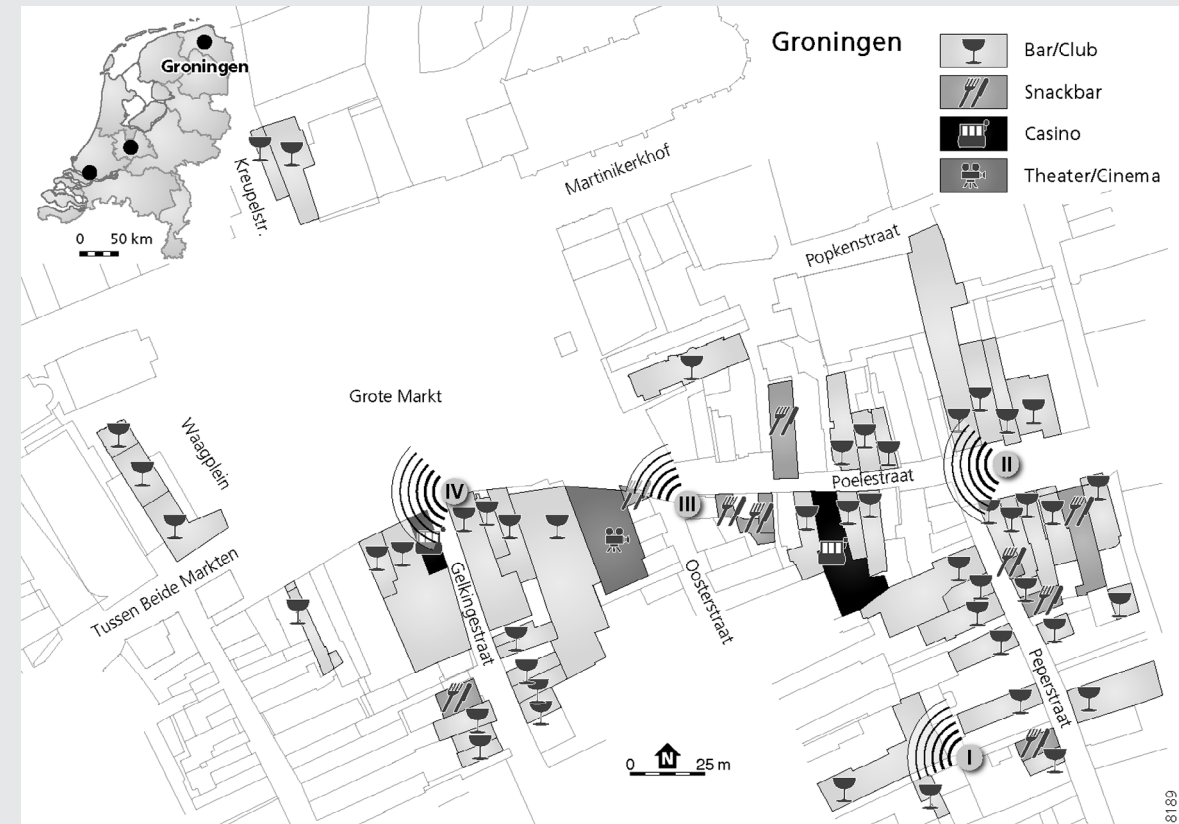
figure 2:
the research sites of
Groningen

Also, group sizes were recorded, providing data to look into if and how this changes during the night (are unaccompanied women, for instance, still to be seen in the late-night economy?). Independent of each other, we registered the number of visitors we saw, segmented by race/ethnicity and gender, and the size of the groups of individuals in or traversing public space at the observation site. In our observations of dynamic surveillance, we have distinguished three types of 'surveillance workers': Police officers, private security (bouncers) and city stewards. The police officers observed in the three nightscapes were counted and included walking patrol, police-cars, vans, bikes and police-on-horse. Private security entails both bouncers that are present at the entries of pubs and clubs as well as private security companies active in the area. Our counting and observation were limited to the public sphere, which means we did not include bouncers that might have been inside clubs or pubs, for instance. The use of city stewards is a local government-initiative; these stewards are actively present around clubs to act as mediators between (potential) quarrels amongst visitors or between visitors and bouncers. They act as a semi-police force, with the idea that they are more easily approachable. These three actor-groups all three have specific looks and specific means or tools that they use while doing their work in the night. Insofar we were able to observe the presence and-or use of these tools (such as communication tools, cameras, bikes, weapons, recognizable clothing), they were also taken up in our counting.

In addition, we audio recorded narrative accounts of events and the atmosphere during each observation period. The information on visitors, surveillance and policing, disorderliness, the weather, and smells were digitized and categorized, and the verbal accounts transcribed. Our individual records of the numbers and composition of visitors during each observation period were compared and combined (see also Schwanen et al, 2012).
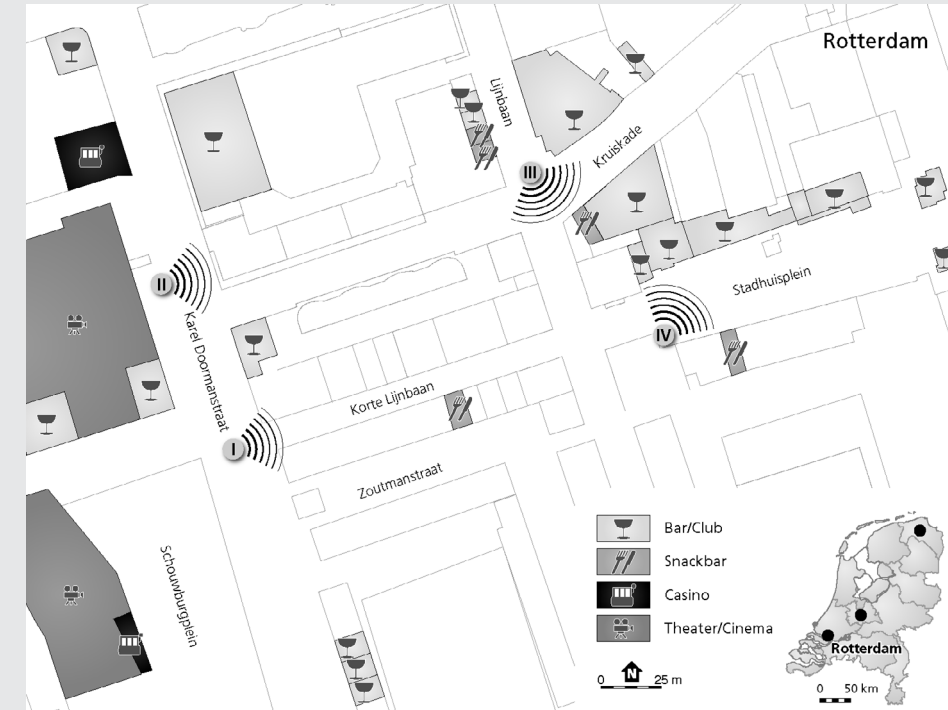
3
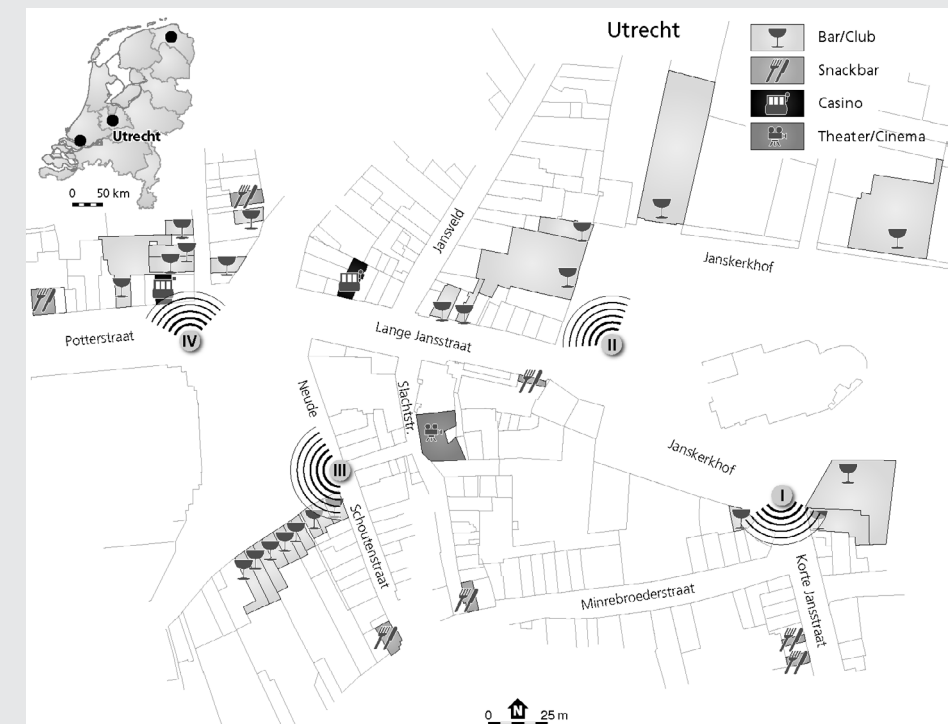
figure 3:
the research sites
of Rotterdam

figure 4:
the research sites
of Utrecht

4

2.2 Three nightscapes

2.2.1 The built environment and static objects in the nightscape

The first layer of mapping the nightscape entails looking at the built environment. In order to understand visitors' activities in the nightscape, we have looked at what is offered in terms of nighttime economy facilities. In appendix B an overview is provided of the facilities in Rotterdam and Utrecht (Groningen was not part of this inventory). As can be seen, the research site in Rotterdam hosts a rather homogeneous city centre, hosting mainly shops during the day and restaurants, bars and clubs during the night. No schools, or other work-related facilities can be found. In Rotterdam, above most shops and bars, there are are houses; the city centre consists of mainly high-rise buildings, creating corridors and semi-closed squares. Compared to Utrecht, having an old city centre with relatively low buildings and less housing in the centre and the nighttime economies, Rotterdam on the one hand seems more open and wide (the streets are wider and the distances between clubs and squares is larger), on the other hand, it feels more enclosed, due to the high-rise housing buildings. If we look at the overview of the Utrecht nightscape, already more diversity in functionalities can be distinguished. This also points towards the different history of both cities; Utrecht's core shows the traces of old, messy citycenters, where

th e influence of city planning and the necessity to rebuild in an 'efficient' manner shows when looking at Rotterdam.

The relevance of starting with these facility overview maps is a) to show the variety in planning and b) to show that possible routes through the city are literally forced by the design of city centers. A consequence is that the way citizens move through the city and the type of facilities available in the city centre develop differently. One clear example is that the centre of Rotterdam is easily accessible by car, whereas the small streets of Utrecht invite different modes of transport. Not aiming to provide a complete overview of transportation means in all three cities, the point is that distances between nighttime venues, but also the connection routes in between venues have an influence on perceptions of safety and surveillance. The problem is that city centers as such, even that of Rotterdam, are not easily adjusted. The built environment is in that sense more steady and 'long-term' than, for instance, urban furniture or local surveillance infrastructure. Considering more temporal 'things' in public space, yet part of the built environment, public lighting can be seen as an important factor in shaping the nightscape. In an explorative, interpretive manner, Brands and I have mapped the lighting condition in the three nightscapes (see figure 5), to distinguish, at least for ourselves, light-and dark spots in these cities at night. Although not scientifically grounded, these maps do provide a sense of how lighting is distributed and what areas are deemed worth lighting up, where others are left dark. We demarcated 5 steps of lighting, ranging from dark blue (darkest) to bright yellow (brightest).
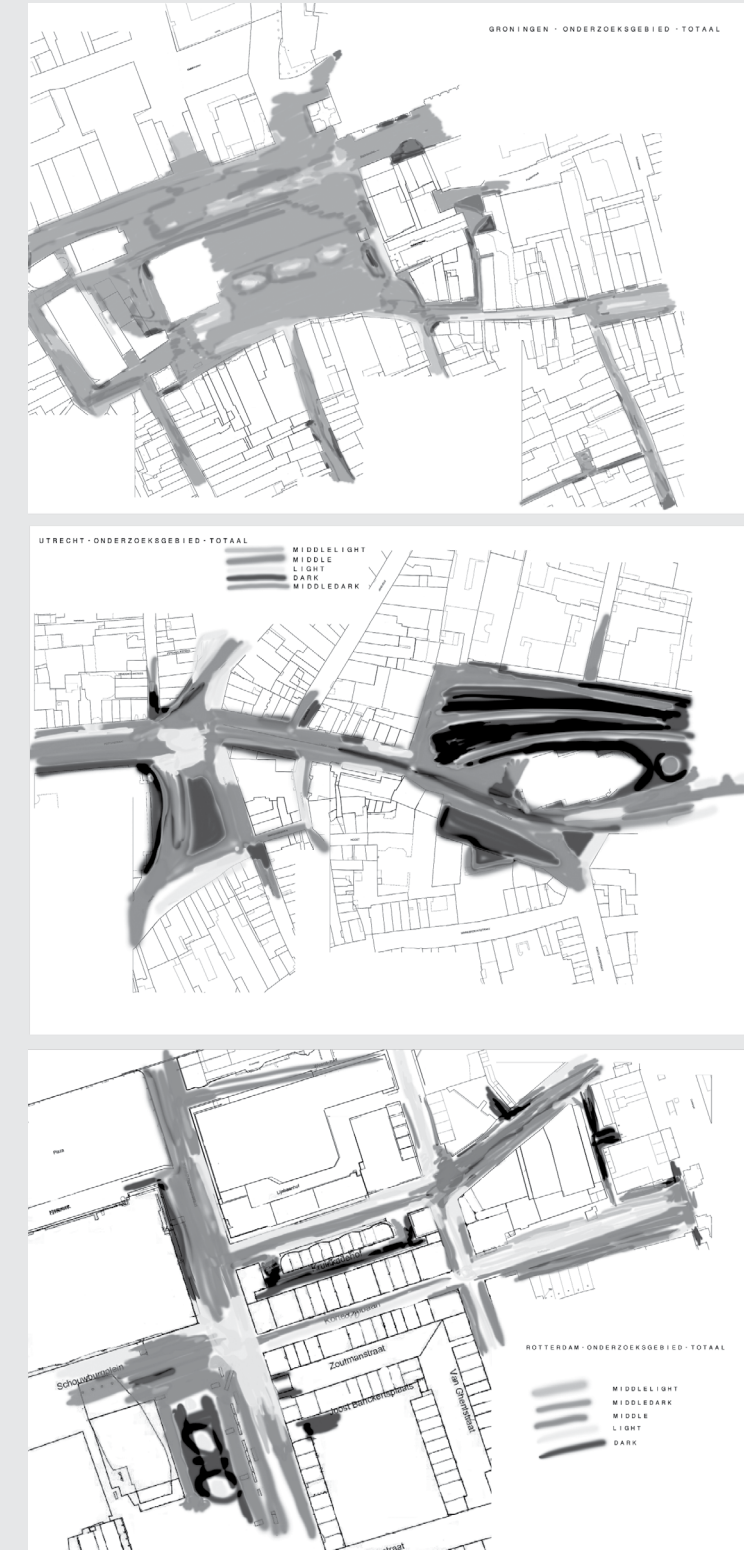
figure 6;
public lighting maps of respectively Rotterdam, Groningen and Utrecht, from bright to dark

From the overview as can be seen in figure 6, Utrecht reveals the most dark spots. Especially surrounding Janskerhof (the square on the right) and in the centre of the Neude (square on the left), dark areas were witnessed. In Groningen the main square (Grote Markt) is relatively well-lit, as are the streets that are connected to the square. However, some areas, especially the Papengang, one of our observation points (lower right) shows dark areas. Rotterdam is well-lit on connection points such as the Schouwburgplein (lower left square) and the connecting streets to the Stadhuisplein (right square). Where the Stadhuisplein, which hosts many bars, is brightly lit, the Kruiskade (the street above this square), which hosts nightclubs, is poorly lit.

Public lighting and the relative brightness or darkness might have an influence on feelings of safety in the nightscape. The influence of public lighting, amongst other factors, and the experience of safety have been discussed by amongst others, Painter (1996) and Pain et al.,(2006), where relations are made between street-lighting and crime rates, and experiences of safety using both quantitative and qualitative methods. The relevance for surveillance, and surveillance technologies such as cameras is that when there is no light, there is no clear image. The connection between public lighting and the location of surveillance cameras is subject for further research; it is not pursued here. The point made by authors as mentioned above is that as a technology, public lighting can have a strong shaping role on how public nightscapes are perceived, both by visitors of that space as well as surveillance personnel working in these spaces. Public spaces and their publicness is also dependent on how welcome, or how

friendly a place looks and feels. Despite the fact that this is difficult to measure, I turn to a selection of urban furniture as found in the nightscapes as another shaping factor in public space. In the three cities, Brands and I photographed and mapped all urban furniture in sight. We considered a range of facilitating objects as urban furniture (see appendix B for a complete list). If indeed these object are stage props, as stated by Goffman, then it begs the question how they are used as such and in what kind of scenes they play. Below a number of typical urban-furniture objects will be discussed that were found in all three cities.

Thinking about the type of behavior, or activity that is inscribed in urban furniture, the first image (figure 7), hints to all kinds of services offered in the nightscape. Drawing on the line of Goffman's stage props, the objects above hint towards particular actions to be taken, inviting, or pointing out services. In city centers we can find benches to sit on and public urinals. Mailboxes from the postal services remind us sending mail is also a part of public spaces (although in this form, diminishing in the Netherlands). Another major actant in all three nightscapes, although in the three cities we have looked at, the most prominent in Utrecht and Groningen, is the bicycle. As an often-used mode of transportation to and from the nightscape, as well as within the city centers, the parking of bicycles can be an issue in Dutch cities. The parking facilities as depicted in figure 7 nudge bicycle users to park their bike in these particular spots, in order for the city centre not to clog up with bikes. However, as can be seen in the figures shown here, there is limited space for parking; bike users find out other

51. This is debatable; there are of course ways to interact with public lighting (one is for instance, to destroy it). Besides this point, there are undoubtedly project or installations that allow citizens to interact with street lighting. Moreover, there are more structural solution appearing (fi.i public street lighting equipped with motion sensors to save energy). However, in our cases, we did not encounter these cases (one exception is the lighting- installation at Schouwburgplein, Rotterdam-these large public lights move thus altering the light that shines on the square. This invited interaction because the suggestion is made that they are interactive (although they are not)).

52. Here I only make this argument in light of urban furniture as found in particular Dutch nightscapes (e.g. I am not taking into account typical architecture, city planning/ make-up, unique landscapes such as canals etc).

ways and places to park. Another common object to be found in many shapes and sized are signs. Such signs do not only serve to communicate basic traffic rules, for instance, but are used for a myriad of reasons. Depicted is a sign that informs passers-by that a taxicab can be hauled there (figure 7). Other (semi) governmental signs can be found, that inform or guide users of public space. Although signs are meant to communicate a certain rule or service, it cannot be known if passersby see and read them. Especially relevant for surveillance in public spaces are the CCTV signs (this will be discussed in a later section).

These examples show a selection of objects found in the nightscape that are there to assist citizens by providing action possibilities or information concerning the actual public space. Antiprograms or alternative uses can occur (for instance sticking or putting posters on signs, parking one's bike). The examples provided depict objects that are 'dead', or passive; they communicate their function via text, shape, material and color. However, there are other types of objects to be found in the nightscape that are more interactive by nature, for instance pay phones as shown in figure 7. The already discussed public lighting can be seen as something that is actively shaping public place by lighting up a part of public space. However, the user or the citizen cannot directly interact with these lights[51].

However, in observing the nightscape, some non-functional objects (in a narrow definition of functionality) were encountered. The picture in figure 8 shows respectively an art statue, an 'electricity' box and a billboard. There are more of these types of objects to be found. However, these three are shown to point

out to three shaping influences in the public (nightly) spaces of objects that do this in a not-so-obvious manner. Besides acting as a place to park a bike, there might be more to them than what can be seen at first sight. The first mentioned is art. Where public art pieces can be found in the three cities, they are far from obvious, or widespread (at least, in the areas of our research). Although the aesthetic role of public art will not be debated here, fact is that they, at least physically, shape public space. Besides the being-there of art pieces, they mark a spot in the city, thereby making it unique. Its non-functionality might be the only in its kind, as for the rest of public space, all objects have to be there for a 'good' reason; they should provide a service, preferably making money or repaying itself in the process. And the service that art can provide is hard to measure- surprise maybe, or reflection, or to present citizens with a shape or a thing that is out-of-the ordinary. Another effect of public art is maybe that it is the only urban furniture that defines a public place. By this I mean that where other infrastructure is replace-able and similar in every city, it is the artwork that makes a place unique, memorable[52].

The second picture in figure 8 reminds us that there is also urban furniture that just has to be there, for infrastructural reasons. The electricity box as shown is likely to be a control-point for public lighting or traffic lights. The last picture in figure 8 shows a billboard. Billboards and urban screens have taken up a considerable role in public space, where, together with facades and shop windows, they create a myriad of flat, 2d ad-spaces that the public has to endure. These images, especially moving images, have a forceful distractive shaping power in public space[53]. Large

commercial posters make sure that, even at night, it is almost impossible to not regard the commercial. Recalling the interactiveness of urban furniture, interactive billboards and urban screens might be a next step in trying to engage -and attract- the public into a specific action or topic. Next steps can be found in combining the digital and the physical in public space, especially in commercials (QR codes, temporal digital layers, location apps that only work on a particular spot in the city and so on). These 2d media can be used for multiple purposes, more than merely depicting commercials. Besides for instance news updates, or city branding, one recent development is that of a form of surveillance. In Rotterdam, sought offenders (or at least suspects) are being depicted on urban screens in the city. This creates a kind of most-wanted digital 'hanging', where profiles and pictures of suspects are fed into public space[54]. Here, we see first evidence of a merging of commercial- and surveillance space in physical public space, where, besides the urban-furniture, the content, or the message conveyed via these objects have an indirect, yet shaping role on how these spaces can be experienced. Thinking about chapter 1 and Latour's notion of the politics of artifacts, one could argue that these urban screens, once combined with institutions such as a local police, become highly politiced objects.

Figure 9 also reveals politicized objects, in the sense that via a physical form a regulation or rule is clearly communicated. This type of shaping of public space is maybe the most coercive, or forceful, because the physical design of these objects allow or disallow physical movement or activity. Things such as fences, barbed wire and walls shape

public space; it creates possible and impossible routes in public space. The first picture shows how in Rotterdam the Stadhuisplein, a central square in the nightscape of Rotterdam, is blocked from car traffic; the poles indicate that one can only access that square on foot or on bike (during the night, cycling is prohibited in this area). The second image shows a form of decorative fence-making that can hardly be called friendly. This particular fence was found in Groningen around the city hall, warning citizens that the fence, or demarkation, is indeed a fence, and not a place to sit on or to park your bike against. The third image shows a physical implementation of a policy to fight public urinating by de-cornering a corner. Where original architecture created 'ideal' places for fulfilling this need, added furniture was introduced to divert the problem to at least another location. These examples show another aspect of how objects shape the nightscape via rather forceful scripts, where certain actions or behaviors are deemed unwanted in our public space. The physical means shown are just some examples of coercing, steering, or communicating to visitors these unwanted actions or behaviors.

53. Where the topic of urban screens and remediation of public space are to my extreme interest, this thesis will not dive into this topic. See the urban screens reader at networkcultures.org (http://networkcultures.org/wpmu/urbanscreens/) for more debate on this medium) Last visited July 24, 2013

54. See f.i. this image of an urban screen in Rotterdam depicting offenders: http://nos.nl/artikel/367196-tien-overvallers-op-billboards-rdam.html July 23, 2013

7

8

figure 7;
urban furnitures related to specific services

figure 8:
'non-functional' urban furniture

figure 9;
obstructive urban furniture

9

2.2.2 Surveillance cameras and infrastructure

The final urban furniture I want to discuss here is one that is specifically designed to monitor and watch over public space in order to record unwanted behavior, possibly followed by an intervention: surveillance cameras and their supportive infrastructure. In the three nightcapes we have mapped, one important aspect was the mapping of CCTV infrastructure. If indeed surveillance has a shaping influence on the nightscape, what is the role of cameras in this shaping? As discussed in chapter one, the preventive effect as well the after-the-fact effect of surveillance cameras in urban environments is highly contested. Especially when entering into the night, the value and quality of footage starts to play a role in the argument against CCTV. Where this is a technological argument that undoubtedly triggers technological counter-arguments, more important is the aimed effect of these cameras on public nightlife. The earlier described critique of comparing CCTV cameras one on one with Panoptical models, where surveillance will be internalized (in a Foucauldian sense) can already face critique when realizing that, in order for an internalisation of control to take place, citizens have to be aware of CCTV cameras, just like the prisoners in the Panoptical prison need to be aware that they are being watched. Subsequently, in case that there is awareness of CCTV cameras and the exact locations in the nightscape, there is the question of doubt (this will be explained in chapter 3) on if and how these cameras work (see also Brands, 2013 on an extensive analysis of our research into CCTV experiences).

To gain better insights in the actual situation of CCTV cameras, Brands and I mapped all cameras, both public and private, that were visibly present in the public nightscape. Also, we have mapped the signs that indicate and warn visitors and perpetrators that CCTV is in place. Figure 10.1, 10.2 and 10.3 show the maps of cameras. Besides mapping the location and the directional angle of the cameras, pictures of every camera in sight have been taken from a visitor street-level perspective. Figure 10.4 is a screenshot of interactive software made to explore both the camera-maps and the related pictures. The maps show a very different spreading and saturation of CCTV cameras in nightscape areas. We distinguished four types of cameras in the nightscape. First of all, cameras can be instated and owned by local government and/or police force. These I call public cameras (although, weirdly enough, the footage these cameras produces, is not publically available). The second category of camera is privately owned. This means they are installed by a private party such as a club-owner or a restaurant. Although these cameras, by law, are not allowed to monitor public space, there are many grey areas where entrances to a venue for instance, but also larger parts of public space are being monitored by these cameras. By the adagium of benefit, this often is allowed. Both public and private cameras currently come in two variants.

Firstly, there are Pan/Tilt/Zoom cameras (PTZ). These are the most iconi-cal CCTV cameras. The operator can control and aim this camera from a distance in the freedom of degrees of panning, tilting and zooming in (to a certain extent). The second type of camera that we observed is a spherical camera,

55. See Baja beach club website (http://www. bajarotterdam.nl/home.html), last accessed 23rd of July, 2013

that has the possibility, besides PTZ, to have a 360 degrees angle of turning. Due to the blinded sphere in which these cameras are placed, the watched cannot see how the camera is positioned. This creates an opaque eye, resonating with the watchtowers in a Panoptical prison; because the watched cannot be certain if they are being watched, they will have to assume that they are. The final element that has been mapped are the signs indicating that CCTV is in place. In one instance (a casino in Rotterdam) this was a private sign. All the other signs we have encountered were public.

The first map (figure 10.1) shows the centre of Rotterdam. From all three cities here we found most cameras, both public and private. Most public cameras in Rotterdam are of the more-advanced type (the spherical camera) and they are placed at the most busy routes into the bar-areas. Moreover, on the Stadhuisplein (the square with the highest concentration of bars- and pubs in Rotterdam), there are multiple spherical cameras. In Rotterdam, we encountered many private cameras are of this type, where most of them are linked to nightclubs mainly (and a casino). We also found cameras in some awkward places (f.i. a camera aimed on a trashcan). The focus of the public cameras, and, in part, the private cameras as well, is on two main venues, or places in the Rotterdam nightscape; the Baja beach club[55] and the Stadhuisplein. It seems both the club-owners as well as the police want to have extra eyes on the street when it comes to these two places. The camera-signs can be found on the main in- and exit routes into the bar venues, but also on some venue locations, f.i. on the Stadhuisplein.

When mapping the camera landscape of Utrecht (figure 10.2.), a different image

emerges. Besides having far less cameras than Rotterdam, the main public cameras are mainly to be found on entry- and exit routes into the main bar venues, not on the squares of venues themselves. Also here, the private cameras are mainly to be found at nightclubs, or venues aimed at a large number of visitors. A large and rather dark square, Janskerkhof, is hardly monitored. Some private PTZ cameras can be found in alleys or watching entrance-gates (and thereby, a part of public space). The camera signs in Utrecht are places on strategic points; they can mainly be found on the edges of the bar venues and squares, making possible the argument that citizen could (or should?) have known that upon entering the nightscape, they will be watched. The signs were not found not inside these areas.

In Groningen (figure 10.3), the landscape of surveillance cameras reveals a widespread and diverse picture of cameras. Overall, we found more cameras in Groningen than in Utrecht, but still far less than in Rotterdam. The nightscape areas as researched in Utrecht and Groningen are approximately similar in size. The public cameras are mainly the spherical type, and are evenly spread throughout the nightscape. Most of the public cameras are placed at strategic points, where routes into the nightscape and/or the most busy streets come together Also here, private cameras were mainly found at nightclubs or late-night venues. Camera signs in Groningen are mostly concentrated around the main square (the Grote Markt), not on the square itself. In the most busy part of the nightscape, no signs indicating camera surveillance-presence were found.

Having discussed these three camera landscapes, what can be said in terms of the shaping role of these cameras in the nightscape? Their presence and their quantity are shaping in the physical sense; in light of earlier-discussed infrastructure 'that needs to be there', such as the electricity houses, often CCTV cameras and their supportive infrastructure (cables, mounting hooks, power supplies etc.) are filed as such; it is just there. Also in responses to why and where there is CCTV in our nightscapes, they are often described as a logical part of public space (see chapter 3). Besides the physical setup of these cameras and their interwovenness in city centre architecture, the question is if it affects its surroundings; does it shape human behavior? The double-sidedness of camera surveillance is that after some decades of installing and exploiting CCTV, visitors of nightscapes expect that there will be some sort of camera-surveillance present in the nightscape. Consequently it might lose its function as a preventive, panoptical instrument that internalizes control, just because it has been there for so long and its results are ambiguous (see f.i. Neyland, 2006; Hempel & Töpfer, 2004 or Hier, 2002). The attempt of this urban furniture to create a form of 'nudging without touching' might have lost its potential and effect. The CCTV camera might be experienced as a relic from the past, when a camera as an object itself was reason for doubt, fear or surprise. Still, it does shape the nightscape in the sense that indeed it has become almost a prerequisite for a nighttime economy: without CCTV cameras in place, something must be off. In chapter three, interventions and interviews with visitors of Dutch night-scapes

will shed more light on the question if this is actually the case.

A more general point to make concerning urban furniture, even works of art, is that apparently they have to abide by specific design guidelines or rules in order to survive. Whether it concerns objects that provide a service, that nudge or guide us, or that are there to monitor or coerce us into certain behavior, the design of objects meant for public space often is robust and vandalism-proof. Besides having to face natural elements, the human element in its worst condition is taken into account. In one of our most made, planned and designed environments, the city, especially the places of nighttime economies, have to bear the worst treatment. Especially in the objects that have to function as barriers and denies of entry we see unfriendly, harmful design (such as gates and spikes). But also the other objects discussed above such as signs and advertising as well as cameras are often designed and placed to be either out -of -reach of the human visitor, or well-equipped to withstand this visitor. If the nightscape is indeed made up of a interplay between humans and objects, we can question what this type of design invokes, allows or facilitates? If functional design leads to functional behavior, the question for both citizens as well as local governments is what type of behavior is pursued, or desired in out nightscapes? Remembering Akrich and the concept of script and looking at the examples as provided, there is hardly any urban furniture object that is 'free' of inscription or planned use (sometimes, a non-functional aspect can be found via pieces of art, or accidental or temporal interventions). In the balance between fear and fantasy that exists in nighttime

figure 10.1; surveillance infrastructure in Rotterdam centre. There are 24 public cameras, of which 18 are 360 degree-cameras. There are 16 private cameras, of which 3 cameras are 360 degree. 9 warning signs were counted in total, of which one sign was private.

figure 10.2; surveillance infrastructure in Utrecht centre. There are 7 public cameras, of which 4 are 360 degree-cameras. There are 8 private cameras, of which 2 cameras are 360 degree. 8 warning signs were counted in total, all were public.

economies, as pointed out by van Melik and van Aalst (2009), the majority of objects that shape the nightscape seem to be focussed on creating 'safety' and reducing fear, where objects of fantasy, if found, are highly controlled. These urban furnitures public space are put into public space by local governments and nation-wide (or wider) regulatory bodies. One could also argue that this responsibility lies partially with the users of public space, as was reflected in the calls for responsible citizenship in chapter 1. Not relying completely on responsible citizenship yet, local government in Dutch cities also have official regulators in the night in the shape of city stewards, city-guards and police officers. Venues often also have their own security personnel that, although officially not allowed to act as such in public space, also have their shaping role in the nightscape.

56. Programming and visuals made in Adobe Photoshop CS5 and Adobe Flash CS5. The upper left box allows toggling on- or off different camera- and camera-sign categories. Hovering over a camera, or camera-sign icon reveals the related picture of that camera or sign in the lower left box. Example of an interactive version and code available at http://www.stadsnachtwacht.nl/media/flash/rotterdam_cameras_opmaak2.swf
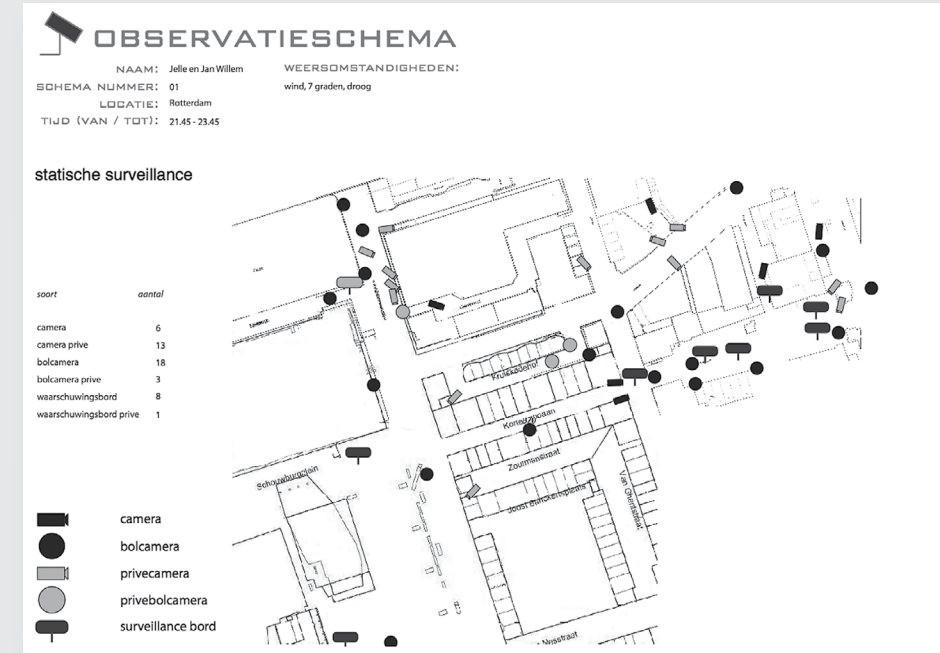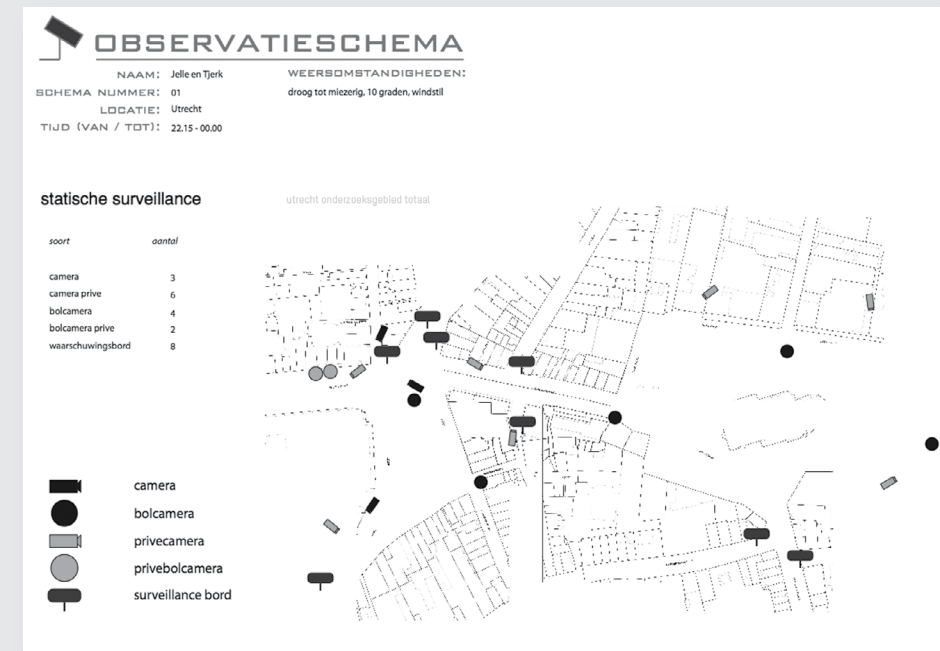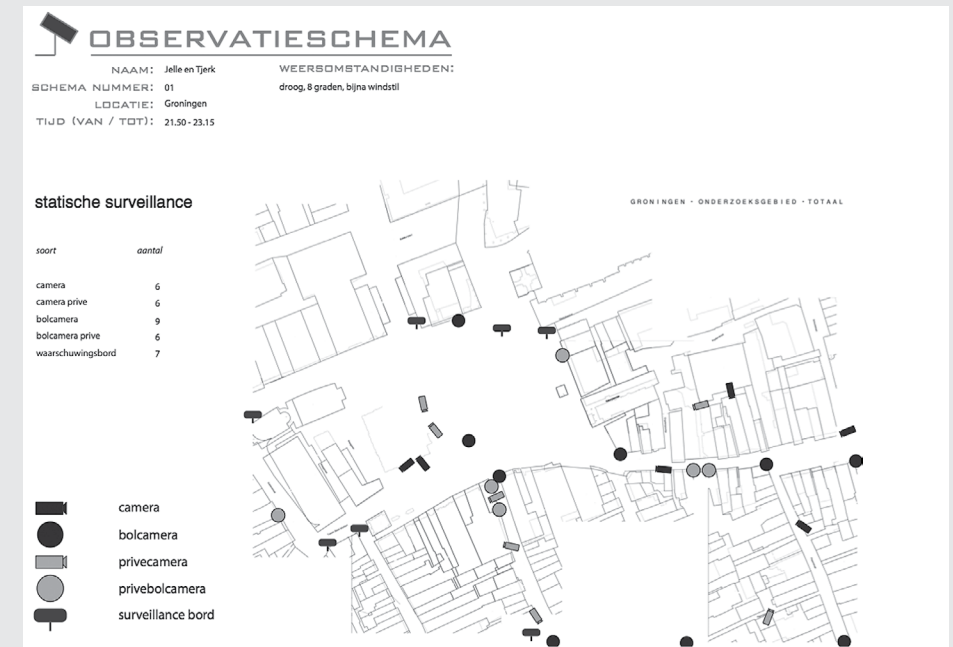

10.3

figure 10.3; surveillance infrastructure in Groningen centre. There are 15 public cameras, of which 9 are 360 degree- cameras. There are 12 private cameras, of which 6 cameras are 360 d egree. 7 warning signs were counted in total, all were public.

figure 10.4 Screenshot of software made to explore the cameras in the three city centers[56].

10.4

2.2.3 Surveillance actors and actants

Besides surveillance cameras that are present in the nightscape, we have also looked at dynamic surveillance practices in the nightscape. We have distinguished three types of actors in the Dutch nightscape that are involved in surveillance; police officers, city stewards, private security agents and bouncers. Their appearance, together with the stage props and tools they carry create a specific look and feel; an atmosphere that might work empowering for- or threatening to nightscape visitors. They are assigned with the task to guards their boundaries of publicness; of what is deemed safe and normal behavior, and what is out of those boundaries. In order to do so, they use different means and tools, that in their own right come with specific (positive or negative) perceptions and reactions on the public (think of a police-on-horse in a city square, for instance). In figure 11, an overview is provided of dynamic surveillance observed in the nightscapes.

In Groningen, there are more private security agents than there are public ones, although the numbers reveal a rather balanced picture. There was one private security officer that carried -and used- a camera. No cameras were observed amongst police officers. There were quite some police-cars and vans in the area, escially on the Grote Markt. From a central area on this square also police-horses were observed. In the smaller streets and areas, as well as on the square, police- bikers were observed. Roughly a quarter of the police officers wore clear and recognizable clothing; roughly a third of the private security agents were clearly distinguishable. 7 graffiti-spots were seen, 12 homeless people and 7 instance of soft drug use in the area (especially in the Papengang).

In Rotterdam, the balance between private and public surveillance (or safety) workers is highly unbalanced. A privatization of surveillance and security can be witnessed here, which is also reflected in the amount of public- and private CCTV cameras observed the area. Amongst police-cars and vans in the area, which were often located at crucial connection points (f.i. between the Kruiskade and the Stadhuisplein), several cameras were witnessed[57]. Roughly one-seventh of the police officers observed was wearing clear and recognizable clothing; amongst bouncers this was roughly one-tenth. Typical for Rotterdam is the fact that also private security deploys vehicles. Another unique aspect of Rotterdam is the presence of city stewards. These city stewards were mainly present on the Stadhuisplein as well as the Kruiskade- and the regions in between these locations. Unlike the nightscapes of Groningen and Utrecht, Rotterdam holds a car-friendly centre, allowing many places and squares to be accessed by car, by visitors, but also by police. Four instances of police-on-horse presence were observed, where the horses were used to either separate groups, or individuals from groups during fights. No graffiti was found in the nightscape of Rotterdam, possibly pointing to a strong cleaning-policy. 7 homeless people were observed in the area and merely one instance of public (soft) drug use.

In Utrecht, the amount of police officers is rather equal to that ofGroningen. The amount of private security agents is less than in Groningen (as a compareable

	total no. of police officers	on foot	on bike	on horse	cars in the area	vans in the area	weapons	bodycameras	recognizable clothing	protective clothing	communication tools
Groningen	81	22	6	10	13	9	15	0	17	5	8
Rotterdam	81	30	9	4	19	22	5	21	12	4	6
Utrecht	87	0	10	0	39	5	3	0	13	8	4

	total no. of city stewards	on foot	by car						recognizable clothing		
Groningen	0	0							0		
Rotterdam	16	12	3						2		
Utrecht	1	1	0						0		

	total no. of private security	on foot	by car				dogs	body cameras	recognizable clothing	communication	
Groningen	117	117	0				0	1	35	0	
Rotterdam	320	317	3				1	0	34	1	
Utrecht	93	93	0				0	0	29	0	

	police	stewards	private security
Rotterdam	81	16	320
Utrecht	87	1	93
Groningen	81	0	117

	mobile police cams	mobile private cams	police radio	private radio
Rotterdam	21	0	6	1
Utrecht	0	0	4	0
Groningen	0	1	8	2

figure 11;
observation table of dynamic surveillance in three cities

figure 12;
comparison of 'surveillance workers' in three cities.

figure 13;
ICTs in the surveillance landscapes

city in terms of size of the nightscape) and far less than in Rotterdam. In Utrecht, we noticed the popularity of police bikers. These bikers were being steered by both the central CCTV room and the police cars[58]. Compared to the other two cities, the amount of cars in the area, mainly on the Neude, is high. This also explains the high number of protection (helmets) present. One-sixths of the police force is clearly recognizable; amongst private security this is about one-third, which is substantially higher than in the other two cities. Merely one city stewards was seen. No mobile cameras were witnessed. Apparently, Utrecht also holds a strong cleaning-policy, as no graffiti-spots were found. 12 homeless people were counted. No instances of public drug use were observed. In all three cities, stationary police vehicles were present as a base-station in the nightscape for both police as well as visitors. Often places at central squares or connection points of visitors (the Neude in Utrecht, the Grote Markt in Groningen and the Kruiskade in Rotterdam), these base-stations shape the nightscape in the sense of visual presence of police force.

Besides the vehicles, other tools were mentioned. The difference of tools or means used per city also says something about the local surveillance landscape. Some stage props are of specific interest for this thesis, since they concern forms of ICTs that are a part of the surveillance landscape. In figure 13, the presence of two of these ICTs, mobile cameras and radio/walkie-talkies, are compared. The most striking in this table is the presence of 21 mobile cameras in Rotterdam, where other cities so far have refrained from the use of mobile cameras (which are not necessarily mobile CCTV cameras, see chapter 5).

In the private sector, only one mobile camera was witnessed. The reason for this is that most bouncers work at the entrance of clubs and pubs, where often there is a private CCTV camera in place. When both them as well as entering visitors are being watched, the idea of club owners can be that equipping bouncers with a separate camera is redundant[59]. The police-force in all three cities use walkie-talkies to communicate with both their colleagues in the area as well as with a central office during the night. In the private sector, this form of communication is not popular, often there is a internal radio-system in a club or bar. Both these ICTs have a shaping role on the nightscape, because they form technological networks in the nightscape where decisions and calls for action are communicated or monitored in a closed manner. Not reachable for visitors, or citizens, these private networks shape the surveillance landscape by defining locations of incidents, or points of interest, thus constantly shifting the focus of surveillance over the course of a night. While the forms of communication-over-a-distance such as walkie-talkie might be engrained in daily life in such a way that this is hardly a surprising artifact (and maybe even a bit redundant), the mobile cameras do represent a new form of surveillance that is worth looking into. Where CCTV cameras might be accepted as a part of the surveillance landscape, mobile cameras are forming new negotiations and touch-points of surveillance.

58. These insights were gained from field notes and interviews with police officers

59. During participatory observations concerning the bodycamera, I did witness multiple bouncers inquiring into the possibility to start using a bodycamera as well, mainly with the argument to have evidence in case of an incident at their doorstep.

60. Although it does not fit the scope of this particular thesis, an important theme in the SUN project is that of social sorting and marginalisation and exclusion in the nightscape. Much of the collected data serves the purpose of analysing these processes in nightscapes. A part of the findings as put by Schwanen et al, is given here, to be inclusive and to also explain the data as presented in this thesis (of which I use parts of for my analysis). "The differences in racial/ethnic diversity among the three cities were bigger than among sites within them and than over the course of the evening. Whilst there are differences between Kruiskade (site III) and the other sites in Rotterdam, diversity in this city is much greater than in Groningen and Utrecht. Perhaps most surprising is that Utrecht is the least racially/ethnically mixed, despite 22% of inhabitants being of non-Western descent. These differences become even clearer when the average shares of nonwhite visitors in general, blacks, and those of Arabic descent are considered. The respective shares for Rotterdam were 42%, 11%, and 19%, against 15%, 3%, and 8% for Groningen, and 11%, 2%, and 5% in Utrecht. The whiteness of Utrecht's nighttime economy primarily reflects the type of bars and clubs on offer there, which are oriented strongly towards highly educated, typically white, university students and/or urban professionals. This interpretation is not only supported by interviews with city council officials, but also by the fact that racial/ethnic diversity is greater in site IV (figure 14), where one club explicitly targeting a diverse crowd is located. Another reason for the more diverse population in site IV is its location on a major thoroughfare from the railway station to the (north) east of the city centre and the city, which means that more nonclubbers and bar goers were observed there than in other sites in Utrecht. Groningen resembles Utrecht, but its racial imbalance is weaker and concentrated around the market square (site III) where nightlife premises are also oriented towards a highly educated

2.2.4 Nightscape visitors and their stage props

The aspects of the nightscapes as discussed so far are all present for a reason; to steer, guide, facilitate, or monitor the users of the nightscapes. These users can be (and mainly are) visitors who are on a night out. However, they can also be citizens who are not there for entertainment, for instance passers-by or inhabitants who happen to live in these areas. As explained in the method section, locations of observations were chosen in such a way that mainly nightscape visitors were counted. Recalling the introduction, there are different rhythms in the nightscape. In figure 14, an overview is presented where the total number of visitors is given per observation location in the three cities. In figure 15, the visitor number are displayed per observation interval. Both figures show the share of women and racial diversity per count and the share of unaccompanied persons. The latter is then split up in the share of unaccompanied women and non-whites[60]. The data from our observations showed that:

"[...] the sites in Groningen were on average about two and three times as busy as those in Rotterdam and Utrecht, respectively (figure 14). Across all sites, the largest numbers of visitors were observed around Groningen's market square (sites III and IV), followed by Rotterdam's Stadhuisplein (site IV). Visitor numbers also varied over the course of the evening (figure 15). An inverse U-shaped pattern, with a rise until a peak around 0130 (period III) followed by decline was evident

in Groningen, whereas there was a continuous decrease in Rotterdam. Utrecht was positioned in-between, with a slight increase until midnight (period II), followed by stabilization and modest decrease from 0230 (period IV) onwards. These differences suggest that the evening economy is rather well developed compared with the night and late-night economy in Rotterdam. In terms of visitor numbers, Groningen has a more vibrant night economy (periods II–III) and especially late-night economy (periods IV–V) than the other cities" (Schwanen et al., 2012).

Concerning visitor numbers in relation to the different research sites, conclusions from the collected data show that:

"[...] if all else equal, the southeast side of Groningen's market (site III) and to a lesser extent Poelestraat (site II) attract the most visitors, and Rotterdam in general and Stadhuisplein (site IV) in particular the fewest. The lower numbers for Stadhuisplein and the western side of Utrecht's Janskerkhof (site II) indicate that there is little beyond the presence of bars and clubs (which is controlled through the number of bars/clubs variable) that attracts persons to these sites at night-time. From a temporal perspective, the largest crowds were observed on Saturdays although visitors tended to arrive considerably later on those nights than on Thursdays and especially on Fridays: only from round III onwards were /-90 more visitors observed on Saturdays. The positive effect for round I in Rotterdam

corroborates the earlier conclusion that Rotterdam has the strongest evening economy of the three cities." (Schwanen et al, 2012).

Questions of exclusion and marginalization based on the data as presented above are addressed by colleagues in the Surveillance in Urban Nightscape team. In Schwanen et al., (2012), rhythmicalities as observed, combined with data on gender, race, approximate age and group size form the basis of insights into processes of marginalization and exclusion in the nightscape. For this thesis, it is relevant to share the insights concerning possible relations between surveillance actors, their stage props and the amount of visitors. This can vary both per obser-vation location and throughout the three phases as distinguished in the intro-duction. From the collected data, the following relations between visitors and surveillance were found:

"There exist complex patterns of synchronization between the rhythms of visitors and of surveillance and policing. The number of police officers and private security guards is positively correlated with the number of visitors, but the equipment used offsets these effects. The number of police cars in a given and the preceding observation round is negatively correlated to the number of visitors. The wearing of communication devices (mobile phones, walkie-talkies) by police and of black attire rather than a suit by door staff and other private security guards is also negatively associated with the number of visitors. Finally, there seemingly are no direct

pace-making effects of disorderliness on visitor presence, as none of the relevant variables is included in the model. Only the rhythms of windy weather and food smells were systematically coupled to lower visitor numbers (Schwanen et al., 2012)."

Linking research on visitors and stage props, the following could be derived from the collected data:

"[...] The stage props (Goffman, 1959) police and private security guards use may well offset the inclusion resulting from more surveillance and policing agents on the street. Our findings thus challenge the belief that more surveillance and policing are a necessary condition for attracting more visitors and a more diverse crowd in terms of gender and race/ethnicity into a city-centre's nighttime economy (Schwanen et al., 2012)."

Next to surveillance personnel and surveillance-stage props such as CCTV cameras and police-vans, I observed that these visitors themselves were not only subjects of surveillance. The emerging presence of mobile phones carried by visitors presents a new hybrid in the nightscape that might play an important role in the shaping of the nightscape and visitor behavior. Although not taken into account in these rounds of observation, during these observations, I noticed the use of mobile phone in the nightscapes. Many of these phones are becoming small social media-portals, often equipped with one or more cameras. These stage props together with their users form potentially strong influencing hybrids in the nightscape.

(student) public. Changes in the patterns of racial/ethnic diversity change over the course of the evening are only modest (figure 15). In Groningen, a slight decrease in diversity occurs around 0100 hrs, whilst the converse is true for Utrecht; Rotterdam shows little variation over time (Schwanen et al., 2012). We observed a general under-representation of women: across all observation periods, the ratio of men to women was almost 2:1 (figure 14). Rotterdam exhibited the lowest gender balance, but there was sizeable heterogeneity across sites in Groningen and Utrecht. From a temporal perspective, the share of women decreased between the first and the fifth observation periods, but both the extent and shape of this pattern differed by city (figure 15). Only in Rotterdam did we detect the anticipated pattern of the highest numbers of women in the evening economy (period I), followed by lower shares in the night and late-night economy (periods II–II and IV–V, respectively). The pattern in Utrecht was more irregular, and in Groningen differences across the observation periods were relatively small. Variations in moving unaccompanied by all, female, and nonwhite visitors tended to be bigger within than between Groningen, Utrecht, and Rotterdam (figure 14). Nonetheless, temporal differences generally outweighed spatial differences. The most noticeable result, however, is that women were much less likely to traverse streets unaccompanied than men, particularly in Rotterdam. A roughly U-shaped relation existed between time of night and the share of unaccompa-nied persons across racial/ethnic and gender categories (figure 15): it was lower in the night economy (especially period III) than in the evening economy (period I), and increased substantially from period III to the end of the late-night economy. Temporal differences were, however, > smaller in Rotterdam than in Groningen and Utrecht." (Schwanen et al, 2012)

Table 1. Average scores on indicators of visitor presence per observation interval, by city and observation site.

	Number of people	Share of women	Racial diversity index	Share of unaccompanied persons	Share of unaccompanied women	Share of unaccompanied nonwhites
Groningen						
Site I	97	31.0	0.42	23.3	32.3	3.4
Site II	102	30.1	0.40	19.4	16.9	2.6
Site III	378	40.0	0.28	12.3	21.2	3.1
Site IV	381	38.9	0.28	14.3	20.3	3.5
All	268	36.6	0.32	16.4	22.7	3.4
Utrecht						
Site I	73	41.8	0.20	18.8	30.6	4.9
Site II	95	36.9	0.17	13.7	11.9	3.3
Site III	101	38.1	0.20	16.2	30.2	3.9
Site IV	98	32.9	0.38	19.9	30.5	3.9
All	92	37.4	0.23	17.2	25.8	4.0
Rotterdam						
Site I	84	30.5	0.61	19.4	27.4	2.5
Site II	116	33.5	0.59	16.1	20.3	2.0
Site III	125	31.3	0.69	16.9	16.5	1.7
Site IV	170	34.0	0.57	15.8	19.2	1.9
All	124	32.3	0.62	17.1	20.8	2.0
All cities and sites	161	35.4	0.39	16.9	23.1	3.1

Table 2. Average scores on indicators of visitor presence per observation interval, by city and time of night.

	Number of people	Share of women	Racial diversity index	Share of unaccompanied persons	Share of unaccompanied women	Share of unaccompanied nonwhites
Groningen						
Period I	176	36.4	0.35	22.6	5.1	38.1
Period II	232	38.9	0.37	17.3	3.1	24.5
Period III	393	36.6	0.30	11.4	1.8	16.8
Period IV	333	36.6	0.30	13.5	3.2	16.9
Period V	207	34.2	0.27	17.3	3.7	17.1
Utrecht						
Period I	95	38.0	0.21	20.8	5.8	28.1
Period II	106	42.7	0.20	14.7	3.0	23.2
Period III	104	35.0	0.26	10.7	2.3	20.1
Period IV	92	39.9	0.25	20.0	5.5	24.7
Period V	62	31.4	0.26	19.7	3.5	32.8
Rotterdam						
Period I	168	40.8	0.58	16.8	2.9	19.5
Period II	157	35.4	0.65	16.6	3.0	21.4
Period III	124	29.2	0.63	17.5	0.9	19.7
Period IV	94	27.4	0.63	16.0	1.2	18.1
Period V	78	28.5	0.59	18.5	2.0	26.0
All cities						
Period I	146	38.4	0.38	20.0	4.6	28.6
Period II	165	39.0	0.41	16.2	3.0	23.0
Period III	207	33.6	0.39	13.2	1.7	18.9
Period IV	173	34.7	0.39	16.5	3.3	19.9
Period V	116	31.5	0.37	18.5	3.1	25.3

Note. period I—2200–2320; period II—2330–0050; period III—0100–0220; period IV—0230–0350; period V—0400–0520.

figure 14 (table 1); visitor number per city, per research site

figure 15 (table 2); visitor number per city, per observation interval

2.3 Conclusions

In this chapter, I have argued that the physical setup and artifacts in a nightscape are important factors in shaping public space and the actions visitors can perform in these spaces. The research question this chapter has aimed to answer is "what physical objects and people constitute the nightscape and what new hybrid can be observed?"

The research sites have been mapped, based on observational data of three nights in three cities. The physical setup includes aspects such as city planning, facilities, public lighting and urban furnitures. All these things together have an impact on the experience of citizens; they partially determine how a nightscape becomes pleasant or safe. Also physical things, or stage props such as urban furnitures, act as touch-points of services or regulations in the nightscape aimed at guiding behavior of citizens. Some are government-owned and nudging. Some of those things have a particular surveillance-function, such as CCTV cameras. In all three cities, CCTV is a part of the infrastructure, where both private as well as government-owned technologies such as cameras can be found. Looking into assemblages of surveillance in these cities, it becomes clear that both static as well as dynamic forms of surveillance are shaped by the physical setup of the city centre (f.i. accessibility for cars, public lighting, facilities).

Besides the static presence of things, there are also dynamic factors in the nightscape. Visitors have been observed and via rhythmic analysis, insights about how people move about in the three phases of the night have been obtained (see Schwanen et al., 2012). One aspect of how rhythms change during the night is the presence of different forms of surveillance. The dynamic aspects of the surveillance landscape have been mapped and compared in the three cities, looking both at public as well as private forms of surveillance. In all cities, especially in Rotterdam, a move towards privatization of surveillance and security was witnessed. Not only the human-side of this surveillance landscape influences the shaping of the nightscape. Rather, the presence of things such as police-cars has a strong effect on ideas of safety and security in the night. The police, but also private surveillance agents make use of cameras, communication- devices and mobility-means to regulate these nightscapes. If the balance of surveilling actors is moving towards the private sector, as is the case in Rotterdam, this raises questions of responsibility for -and desirability of- privatization of public space and the notion of publicness in the night.

This responsibility is not solely delegated to human actors. In this chapter I wanted to move away from a purely human-centric analysis towards an analysis of humans and things. One heuristic can be found in the work of Latour, who introduced the concept of hybrids as unit of analysis (see chapter 1). Hybrids can be seen as mediators of social processes, whereby responsibilities of actions are distributed amongst human and object. Because a certain object or technology is in place that can do a certain thing, this creates a possibility (or affordance) for a human to perform this action. Projecting this on the nightscape, the urban furnitures as discussed, but also the technologies used by surveillance workers, reveal their shaping role. They have this shaping role because they allow or disallow and facilitate certain actions to be taken in public space. In that sense, they are things to think with (Turkle, 2003) and even more so, things to act with. They reveal and represent a certain politics (Latour, 2005). The physical things we can find in the nightscapes then are not only intermediaries that pass-on an action to another point, but rather mediators of action (Latour, 1999); by using a tool or technology, the user of that tool or technology also alters. A bench might invite to sit down, a camera might change one's mind on stealing a bike or a mobile phone might alter the way of deciding when and where to go out. Most importantly, these physical objects together with the people populating network of interactions that shape and alter acts and experiences of surveillance by nightscape visitor, which will be explored in the next chapter.

Comparing the surveillant assemblages present in these three nightscapes, Rotterdam, Utrecht and Groningen, we can see similarities in the way surveillance landscapes are made in Dutch city centres. When comparing the human-side of local assemblages, all three cities show presence of teams of police officers surveilling throughout the the entire night. Although the three city centres and nightscapes differ in size, the amount of police officers counts was roughly the same in all three cities. Despite the difference in both legal (bouncers and private security are officially not 'surveillance' or responsible for upholding law in the nigthscape) and geographical reach (the police is responsible for public space, while bouncers only watch over private spaces), still the human side of all three surveillant assemblages consists for a large part of private security in the form of bouncers. In terms of actants (things), there were similarities as well. All three surveillant assemblages include CCTV cameras, CCTV signs, police cars- and vans. Also, there are differences between these three cities; I will highlight the most distinct ones.

In Rotterdam, the amount of private security agents (either bouncers or privately-hired security firms) in relation to the amount of police officers present was significantly higher than in the other two cities. Rotterdam also is the only city where city stewards were observed. Similarly, police presence via police-on-horse was only witnessed in Rotterdam (although these police units are likely to be present in the other two cites as well). Looking at the material side, Rotterdam stands out for its high number of CCTV cameras in the city centre, both publicly and privately-owned. Moreover, this was the only city where cameras on vehicles were seen. Rotterdam showed a de-central organisation concerning locations of surveillance, with different 'base' places on the nightscape, where police cars-or vans stand idle. In Groningen, we observed a more constant amount and presence of police force on the ground during the night than in other cities. Due to its dense streets there was a relatively high number of police on foot. In terms of organisation, a central 'base' place was observed (on the Grote Markt). The surveillant assemblage in Utrecht is typical because of its relative high number of bikers (police on bike) in the nigthscape. Although its centre also contains narrow streets, many connecting streets in between squares are wide: this makes for an oversee-able nightscape, where both police-vans and bikers can

move quickly between local bar-areas and/ or squares. A base-place was witnessed on a central square (the Neude).

In the concluding remarks provided by Schwanen *et al.* (2012), a call is made to look into processes of resistance, of empowerment of nightscape visitors. One way to go about this is performing qualitative research into how visitors experience the nighttime economy and if, similar to surveillance personnel, visitors use certain stage props or tools to facilitate strategies of going-about in the nightscape. From the observations as discussed in this chapter, two main aspects caught my attention in such a way that they present relevant research lines in looking into how current landscapes of surveillance are changing. Observing visitors in the nightscape pointed me towards another stage prop that revealed an emerging presence during the night; the mobile phone. Another artifact of interest in this respect is the mobile camera or bodycamera that was used by the police force in Rotterdam. This mobile camera, which is currently still in a test-phase, will influence both the way police officers work with -and think about- surveillance and visual means, as well as have an influence on visitors of the nightscape and the experience of watching and being watched. These two emerging technologies will be further explored in part two of this thesis.

Part two: Sensing the nightscape

In this part, research subquestions 2 and 3 will be addressed:

"How are existing and emerging hybrid collectives experienced by nightscape visitors?"

"How do new hybrid collectives of humans and mobile technologies behave in the nightscape and how does this alter surveillance practices?"

Subquestion 2 will be addressed in chapter 3. This chapter aims to investigate the experiences of nightscape visitors in terms of safety and the awareness of surveillance, especially CCTV. Also, OCTV (mobile cameras) and responses of watching and being watched will be questioned. In chapter 4 and 5, I will address subquestion 4 and look into new hybrids in the surveillance landscape. Two emerging technologies were followed; the mobile phone camera used by visitors and the bodycamera used by police officers.

Both are camera technologies and both are used on the body and/on in close proximity of the body. The purpose of chapter 4 is to provide accounts of mobile phone camera use and via these accounts, provide new challenges or problems regarding surveillance related topics. Relating this to the concept of participatory surveillance, I will explain these accounts in terms of actions these camera-visitor hybrids perform and how they might alter existing ideas on what surveillance is, or might mean. In chapter 5, the police-worn bodycamera will be investigated by looking into policy, design and use of this emerging camera. I will discuss how the bodycamera alters work-practice of police officers, but also how the police officers-body-camera hybrid is changing surveillance in the nightscape.

Chapter 03

Mobile cameras as new technologies of surveillance?[61]

61. This chapter is based on the article Mobile Cameras as New Technologies of Surveillance? How Citizens Experience the Use of Mobile Cameras in Public Nightscapes, Timan, T. & Oudshoorn, N.E.J. (2012). Surveillance & society 10 November 2004), 167–181.

Introduction

In the last decade, industrialized countries have witnessed an increase in surveillance by different forms of technologies. As described in chapter 1, the increased fear in the West since the 'war on terror' has provided fertile grounds for surveillance industries to expand both in depth (advanced technologies) as well as breadth (an expansion of spaces to be 'surveilled'). Furthermore, in public space, we have seen an increase in Closed Circuit TV (CCTV) camera usage. However, surveillance is no longer restricted to fixed CCTV cameras. Since the introduction of personal media devices, including mobile phones equipped with cameras and pocket-size photo and film cameras, public spaces are invaded by technologies that bear the potential to act as surveillance technologies. Due to an increase in functionality of these devices, more and more mobile cameras are carried around by citizens which leads to an increase of bottom-up recordings (movies/pictures) of public spaces. These recordings can be publicly shared on local computers, between phones, or on the Internet, thus becoming a form of Open Circuit TV (OCTV).

Although both fixed and mobile cameras can produce images of public spaces, there are important differences between them as well. Whereas CCTV is put in public space by governmental or private sector agencies, thus representing a top-down form of surveillance, mobile cameras are used by individual citizens and represent a bottom-up form of recording and distributing images of public spaces. Equally important, there is a major difference in agency granted to citizens. Although both technologies enable surveillance of public spaces, CCTV cameras do not delegate agency to the public. In this form of surveillance, individual citizens are configured as passive subjects. In contrast, OCTV cameras configure the citizen as an active participant–the watched are equipped with potential surveillance tools. Consequently, surveillance is no longer solely in the hands of formal surveillance agents. To be clear, although OCTV cameras may be used as surveillance tools, they are not introduced as such. Mobile camera devices are used for a wide variety of purposes, particularly for the leisurely recording and sharing of images. Nevertheless, the capacity of OCTV to produce and circulate images of public spaces, including the people who populate these spaces, facilitates the use of mobile cameras as surveillance tools. In current urban nightscapes, which will be the focus of this chapter, citizens visiting these spaces are not only being watched by anonymous CCTV cameras but also by OCTV cameras of other visitors in the city centre during the night. These new recordings are increasingly used as a method of surveillance by institutions, such as the police, exemplified by the use of citizen-made recorders put online that enable the police to identify felons and victims for solving crimes (see chapter 1). Despite the growing role of OCTV in surveillance, most Surveillance Studies still focus primarily on CCTV and other top-down technologies.

This chapter addresses this gap by exploring how nightscape visitors relate to OCTV cameras. Although their recordings of these spaces maybe used as surveillance tools, citizens making these movies might not link their activities so strongly to the realm of surveillance. But even before the

act of sharing, the act of filming in a public nightscape can already have an influence on this nightscape and its visitors. We may thus expect that these bottom-up devices change the experience of surveillance in public spaces and current surveillance practices. The central question of this chapter focuses on how citizens experience these mobile cameras. More specifically, I aim to explore whether and how OCTV is perceived as a form of surveillance and how this compares to citizens' perceptions of CCTV.

3.1 Theoretical background

To capture the differences between top-down and bottom-up observing technologies, Surveillance Studies scholars have introduced new terminology for differentiating between forms of observing spaces. In this voca-bulary, the term 'surveillance' is restricted to refer to observing activities executed from above, e.g. organizations observing people. The current CCTV cameras exemplify this form of observing spaces that is also described as organizational surveillance (Mann et al., 2003: 335; Ball 2005: 105). In contrast, the terms 'sousveillance' and 'inverse surveillance' refer to observing practices in which the watching is performed by ordinary people, rather than organizations, and based on the use of portable recording devices rather than fixed cameras. Steve Mann and colleagues introduced these terms to problematize panopticon approaches to surveillance technologies by creating a space to think and act with mobile recording devices in public spaces (Mann et al., 2003: 333). Whereas the term 'inverse surveillance' refers to recording activities aimed to collect data about organizational surveillance, or actions of its proponents, the notion of 'sousveillance' reflects recording practices which do not necessarily involve any explicit function or objective. The terms sousveillance and organizational surveillance provide useful heuristics to understand how visitors of nightscapes experience the use of mobile cameras in public nightscapes and how this may be different from static cameras.

Although CCTV can be clearly classified as a form of organizational surveillance, the use and meaning of OCTV cameras is more ambivalent and not yet stabilized. On the one hand, the use of mobile cameras in nightscape spaces may be considered as a modified, mediated form of organizational surveillance in the case of police using the images of the nightscapes produced by citizens. In this context, the only difference with CCTV is that the images are not produced by an authority but by citizens themselves. On the other hand, OCTV cameras can also be considered as tools that support sousveillance because citizens use them to produce images of public spaces just for fun or to socialize rather than recording incidents that may require intervention by the police.

Although this vocabulary provides a useful heuristic to understand how visitors of nightscapes experience the differences between CCTV and OCTV, we should be careful to avoid the view that the use and meaning of technologies is only defined by the intensions of people pertaining to how, where and for what purposes it can be used–a view that seems to be adopted by Surveillance Studies scholars discussed above. We suggest it is important to adopt a perspective on human-technology rela-tions that takes into account both human and non-human actors as constitutive parts of technologies. As scholars in the field of Science and Technology Studies (STS) have argued, the ways in which technologies shape society and human behavior cannot be reduced to either human intentions or intrinsic capacities of technological artifacts (Hacket et al., 2008). Over the past decades, several strands in STS, most notably Actor Network Theory (ANT), have developed more symmetrical approaches

in which both people and things are considered active participants in shaping human-technology relations. To avoid a technological or social determinist view, ANT scholars suggest that agency is not an a priori (given) feature of an actor but is the outcome of the interactions between the heterogeneous actors in a network. Technologies only work when they are embedded in heterogeneous networks in which people, organizations, knowledge, skills and technological devices interact to produce a specific practice (Latour 1990, 2005; Law 1999, 2008).

I suggest that this approach is quite relevant for understanding current changes in the surveillance landscape described above. Rather than naming and describing a pre-supposed surveillance network consisting of a set of human actors with pre-described roles and agencies, and technologies with fixed properties, this chapter aims to explore what meanings of OCTV and CCTV are created in the interactions between human and nonhuman actors and what agencies and responsibilities are attributed to these constitutive parts. Following Latour I conceptualize OCTV and CCTV technologies as 'hybrid collectives': a set of human and non-human actors in a certain place and a certain time that create a unique set of values or possibi-lities (Latour 1992). The added value of conceptualizing OCTV and CCTV technologies as hybrid collectives is that it allows for thinking about human-technology relations that go beyond pre-given roles or topologies of people and things. Due to the variety of combinations of humans and non-humans, CCTV and OCTV collectives may involve different ways of interpreting what cameras do to visitors of urban nightscapes and vice

versa. The CCTV camera, for instance, is part of a collective where the act of continuous monitoring of a pre-defined spot in public space is delegated to fixed cameras and professional staff inhabiting control rooms, where recordings of public spaces are distri-buted within a closed system. In contrast, the OCTV camera participates in a collective in which actions are delegated to nightscape visitors who walk around with a mobile phone/camera that enables the production of fragmented images of public spaces which can be dis-tributed in an open, digital space. This begs the question, how do these different forms of hybrid collectives of people and technical devices facilitate moral issues unique to that collective? What's more, how are issues of privacy and safety enhanced or constrained by these collectives?

Using the metaphor of technologies as text (Woolgar 1991: 60), the following chapter aims to understand how nightscape visitors themselves read the differences between OCTV and CCTV technologies. After an explanation of the methods, the first empirical section of this chapter addresses the question of how visitors of urban nightscapes read the OCTV and CCTV cameras. What appearance, or presumed agency of these non-human actors, turns these different cameras into surveillance objects according to our respondents? We continue with an analysis of how visitors read the different forms of hybridity of the OCTV and CCTV col-lectives. Because these collectives differ in terms of visibility of human actors—the mobile camera user is making pictures in close reach of other visitors of the nightscape, whereas the staff operating the CCTV system is hidden from view—and the mobile and fixed camera

may also differ in their active presence in the nightscape, this section aims to investigate who or what is held responsible for surveillance. Are visitors triggered primarily by the differences between the cameras (mobile of fixed) or by who is filming or watching them? Because the enhancement of citizens' safety has developed into an increasingly important incentive for the introduction of CCTV cameras in public nightscapes, particularly prominent although not exclusively in the UK and the Netherlands (Hempel & Töpfer, 2002), the third section of this chapter presents an analysis of what OCTV and CCTV collectives do to nightscape visitors in terms of safety. To what extent do these hybrid collectives enhance or constrain feelings of safety that visitors of urban nightscapes experience in interaction with OCTV and CCTV cameras?

62. This fieldwork was conducted together with my colleague Jelle Brands.

63. Here, we also anticipated that respondents and re-sponses from the late-night economy were more difficult to obtain, due to visitors being under influence and/or not willing to co-operate (but rather wanting to go home).

64. For this intervention, we used a rather large handheld camera. Understanding the considerable difference with a mobile phone camera, thus leading to different results, the point of this intervention was aimed at understanding responses of nightscape visitors being filmed by other visitors and/or citizens. The 'exaggerated' camera used was needed to gain these responses. Moreover, in terms of research ethics, unlike a mobile phone camera, this camera allowed us to prove to respondents afterwards that we did not actually record footage.

65. The interventions were held in two cities: Utrecht and Rotterdam. Since the aim is not create a comparative study, rather to look into responses of CCTV and OCTV, in this chapter, only the responses collected in Rotterdam are used.

66. See tamsys.sourceforge.net/

3.2 Methods

Inspired by ANT, we[62] developed an intervention method that enabled us to study the interactions between human and non-human actors in urban nightscapes by confronting visitors of a specific nightscape with OCTV and CCTV cameras in a situated and contextualized manner. Using this method, information concerning the actual experience of OCTV (being filmed by another citizen) and CCTV (being monitored by a CCTV camera) was collected. The added value of this method can be found in the fact that the interventions are situated; the interven-tions were held in the actual nightscape where visitors go out. This allows for direct and contextual answers of respondents, rather than recollected ones (as in an interview). During 32 short interventions in public spaces during the night, visitors of nightscapes in Rotterdam, (a large city in the middle of the Netherlands), were triggered to offer a response to both OCTV and CCTV. These interventions were held during 2 weekends, on Friday- and Saturday nights in April, 2010, between the hours of 1000pm and 0100am (The specific protocol followed for an intervention can be found in appendix C). This time was chosen to collect respons-es from the evening- and night economy (see chapter 2)[63]. In selecting potential respondents, we followed a protocol of 'every n-th person is asked'. Via this rule, respondents were selected randomly, there-by avoiding bias or preference in terms of age, gender and ethnicity. During these interventions, we asked visitors at a specific spot within close proximity of a CCTV camera how secure they felt. Importantly, at this stage in the method respondents had not been notified

about the CCTV camera under which they stood. Subsequently, a handy-cam[64] (see figure 1) representing OCTV, was pointed at them and again the question was asked how this affected their feelings of safety and what else this visual recording did to them. They were then asked whether they were aware of other cameras recording visual information. Finally, they were made aware of the nearby CCTV camera.

The empirical research was situated in the city centre of Rotterdam[65], the Netherlands. This area was considered appropriate for our study given that repeated on-site observations previously conducted had shown that a high number of CCTV cameras can be found in the city centre of Rotterdam (see chapter 2). The recorded responses were transcribed and coded in TAMS analyzer[66]. The coding was based on questions regarding experiences of CCTV and OCTV. The data presented in this chapter follows the structure of presenting responses of CCTV and OCTV on similar questions. Statements from transcribed responses are represented in visual over-views to provide a reflection of multiple responses (rather than thick descriptions of a selected amount of responses). These responses are mapped 'roughly' and explorative (e.g. not exact). The visual representations can hold multiple statements from one respondent.

The first line of responses is based on how the different artifacts are 'read' by the respondents in terms of physical appearance, agency of the camera and the destination of footage. The second line of questioning and responses deals with responsibility of filming and if this respons-ibility is delegated to the camera, the human or to the combination of human and camera, according to the respondents. The third and final line of questions and

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responses deals with how CCTV and OCTV relate to respondents' feelings of safety in the nightscape, mapped on a scale from nega-tive to positive).

In the next section the analysis of the empirical study is presented by describing how visitors of the nightscape in Rotterdam reacted to the OCTV and CCTV cameras used during the interventions. In the concluding section I will summarize our major findings and reflect on the insights gained pertaining to new, emerging human-technology collectives in nightly public spaces.

figure 1 & 2;
The type of camera used during the interventions and the location in the nightscape of Rotterdam where the interventions were held[3].

3.3 Mobile and static cameras as technologies of surveillance?

In order to explore whether and how the respondents of our study perceive mobile cameras as technologies of surveillance and whether and how this differs from the ways they experience static cameras, we first present our findings of how the respondents read the artifacts. What aspects turn these cameras into surveillance objects, according to our respondents?

As shown in figure 3, in the case of the mobile camera, the artifact is recognized as being a real and present camera ('that camera'). Also, the type of camera used for this method is recognized ('such a an amateur camera'), implying that there are different types of camera and this is a recognizably specific type of camera. Another reading performed by a respondent is that the camera is an amateur-camera, and that it (the reaction of the respondent) would be different 'if it was a professional camera'. Respondents also made clear statements about the agency of the camera. The fact that there was no red light flashing, indicating that the camera was apparently off, triggered the attention of the respondents: 'if it were on' or 'it is not on'. Most importantly, the ways in which the respondents read the OCTV camera is not restricted to the visible features of the camera. As figure

3 shows, the respondents also expressed concerns about what will happen with the images recorded by the mobile camera. The reading of the OCTV camera is thus not confined to the non-human actor but explicitly addresses the human actor. The statements listed at the right side of the chart show that respondents do not trust the person making pictures with his mobile camera, in which uncertainty about what he will do with the recordings plays an important role. Moreover, these remarks suggest that the respondents expected a certain goal or intention of the person making pictures with the mobile camera, a reason for capturing a certain event, not only for the sake of filming, but also for some form of processing of these images. Consequently, the issues raised by the respondents here concern the 'final destination' of these images, which one of respondents linked explicitly to issues of privacy. These readings of the OCTV hybrid collective thus reveal that visitors of the nightscape experienced feelings of uncertainty about where the footage will end up and how it will be used, an issue that will be discussed further in the following section of the chapter.

reading the artifact
OCTV

physical —— *digital*

such an amateur camera,
if it were a professional camera
it is not on
if it were on
would aim a camera at me
it is aimed down right now
it does get recorded
it is being recorded right now
as long as he will do nothing with the images
where the images will end up
What are you gong to do with it
what he will do with it
I don't know what will happen with the images
something is then controlled
it is a piece of my privacy

figure 3;
Reading the
OCTV artifact

But let's first take a look at how the respondents read the CCTV camera. Compared to the OCTV camera, the CCTV cameras are not directly recognized by the respondents. This was the case even thoughwhen we asked respondents to look for a CCTV camera in the proximity they could almost all point one out (e.g. 'these dome-cameras over there'). As in the case of the mobile camera, none of the participant reactions revealed doubt about what the artifact was or could be. Equally important, many respondents attributed agency to the CCTV camera: 'it records everything' or 'it only records', as well as what can be done with it, e.g. 'rewind images' or 'only reviewing'. Figure 4 shows also that many respondents also included the footage in their reading of the CCTV camera. Some respondents answered that they expected a specific reason for filming public space: 'they can find the perpetrator' or 'as a victim, you would have evidence'. Further, some respondents clearly articulated trust in what happens with the images: 'it will be handled in a trusted manner' and 'the footage can't get anywhere else'.

Significantly, the latter remarks are in contrast with readings of mobile camera footage, where the main concern was where the images will end up, or what is done with the footage. Another point of contrast is that, while in both cases a human behind the camera is acknowledged, the role of authority plays out in two directions. In the OCTV case, the human behind the lens is an issue: 'as long as he will do nothing with the images'(figure 3). In the case of CCTV, the human behind the camera is expected to do something with the footage: 'there is somebody behind the camera' or 'there are constantly people sitting there and

watching us'. From the perspective of these visitors of the nightscape, the surveillance role of CCTV camera technologies in public space might be found in the fact that one cannot read from the outside what happens inside. The cameras might record images and operators might watch these recordings but the act of visual recording and watching remains invisible. In terms of hybrid collectives, the difference between OCTV and CCTV is that the former constitutes a collective where a human behind the lens can be asked for clarification on the intentions of filming. Although in the case of the CCTV collective the intentions of both human and non-human actors might seem clear, this collective is much less transparent in its workings. In terms of surveillance, a tentative conclusion is that respondents perceive both cameras as surveillance technologies; however, issues raised concerning privacy were only arti-culated in the OCTV case.

reading the artifact
CCTV

physical ——————————————————————————————— *digital*

they hang
camera that would hang
    cameras installed
      when cameras where not yet installed here
      if there would be a camera installed here
      there must be a camera installed here somewhere
            a policecam in the city
          There are security-cameras hanging in the area
              a corner where there is no camera-surveillance
              You're not going to stand underneath one
                These dome-cams over there
                    there is is somebody – behind the camera
                    there are constantly people stting there and watching us
                        being filmed
                        filmed
                        Because it is being recorded
                        Well, it records everything
                        it only records
                          you can always review
                            proof for later,
                            they saw the footage afterwards
                            reviewing footage afterwards
                          they can find the perpetrator later on
                            well, it is not HD
                              if it would be watched all the time
                              that only two minutes later someone will arrive
                              so they can track you everywhere
                              as a victim, you would have evidence
                                  the footage can't get anywhere else
                                  it will be handled in a trusted manner

figure 4;
Reading the
CCTV artifact

3.4 OCTV and CCTV as hybrid collectives: Who or what is held responsible for filming?

Since respondents considered both OCTV and CCTV as surveillance technologies, it is important to question which constitutive parts of these hybrid collectives they hold responsible for making images of public space: the human actors, the non-human actors, or the hybrid collective as a whole. As part of the intervention method we therefore probed the nightscape visitors, after they noticed the handheld camera, about being filmed in public. In their answers different types of actors came to the fore. In figures 5 and 6 the answers are classified on the basis of the type of actor mentioned. The first category includes answers in which the camera is pointed out as actor, the second comprises answers that refer to a hybrid collective, and the third consists of statements that refer to the human behind the camera as main actor.

The first category of figure 5 shows how respondents grant agency to the OCTV camera. The mobile camera is seen as the actor ('this camera records', or 'cameras in themselves'), ignoring the human behind the lens. However, many respondents also mentioned human and camera together, as if they were one. The second category of figure 5 shows how respondents ascribe the act of filming to the human and the camera. Although at first glance phrases such as 'if somebody starts filming you' or 'that he points a camera at me' seem to attribute agency to human actors, the act of filming is specifically mentioned due to the recognition of a camera in the hands of the human. The human holding the camera is thus seen as a collective that can film. Although seemingly a minor detail, this hybridity marks a crucial difference in responsibilities; it is not the isolated human that is questioned here, but the human-camera collective. In the third category, respondents ascribe agency solely to the human, ignoring–or at least not mentioning–the camera as the active component of the technology. Respondents often refer to otherness and personal space, as is evident from remarks such as 'somebody who is watching me', 'I don't know who you are' and 'somebody enters my personal space'. In these relations the other is invading through the act of filming. Although a camera is needed to trigger this feeling, the instigator for this action is not in any sense ascribed to the camera; technology is seen as neutral. Respondents mention the intentions of the human as decisive for considering OCTV as invading and annoying, or assistive and aiding in feelings of safety ('if the camera belonged to the police, then it would help'). A comparison between the three categories of figure 5 suggests that most respondents hold the human behind the camera or the hybrid collective responsible for filming.

who is resposible for filming
identifying actors

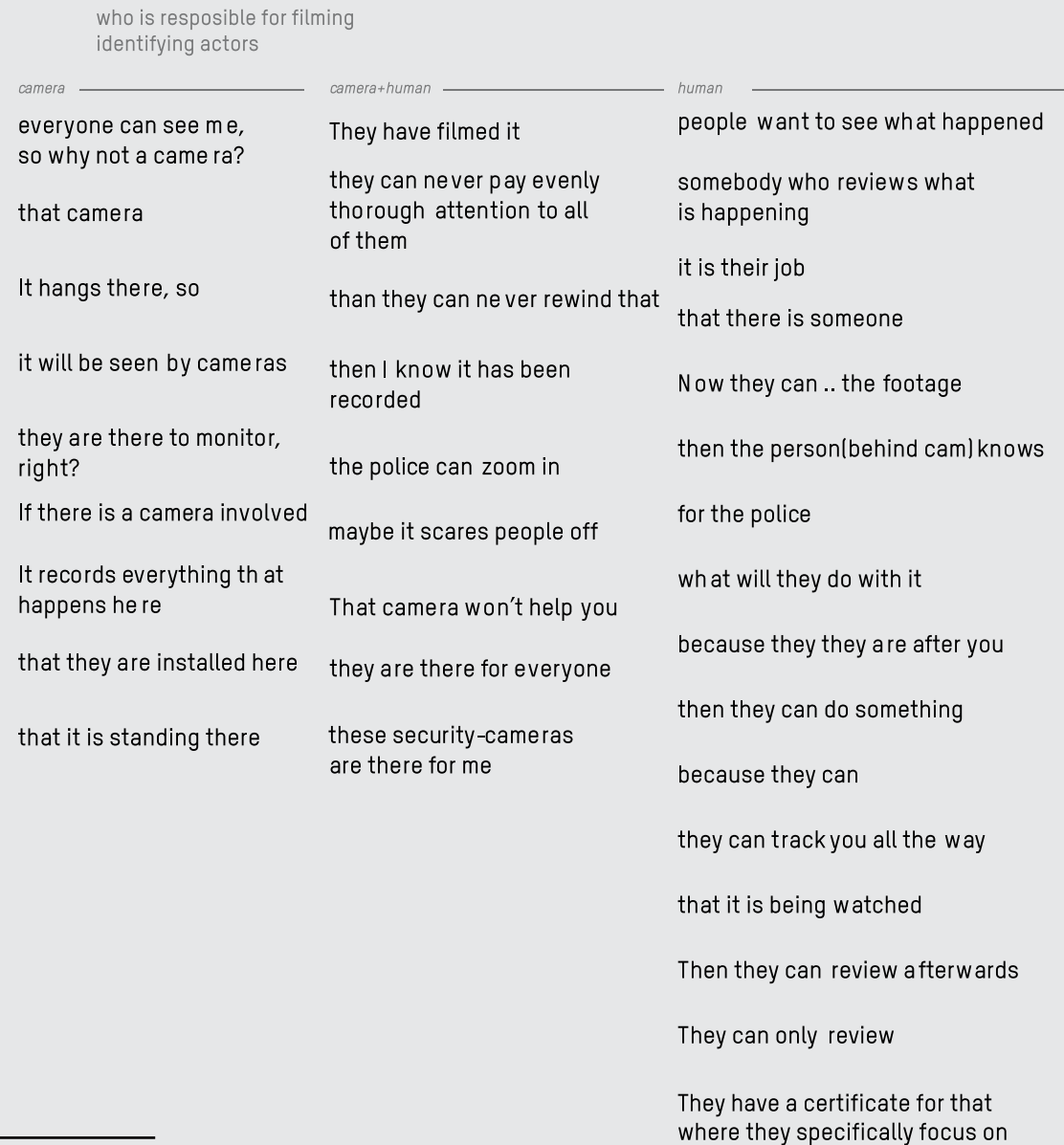| camera	camera+human	human
everyone can see me, so why not a camera?	They have filmed it	people want to see what happened
that camera	they can never pay evenly thorough attention to all of them	somebody who reviews what is happening
It hangs there, so	than they can never rewind that	it is their job
it will be seen by cameras	then I know it has been recorded	that there is someone
they are there to monitor, right?	the police can zoom in	Now they can .. the footage
If there is a camera involved	maybe it scares people off	then the person (behind cam) knows
It records everything that happens here	That camera won't help you	for the police
that they are installed here	they are there for everyone	what will they do with it
that it is standing there	these security-cameras are there for me	because they they are after you
		then they can do something
		because they can
		they can track you all the way
		that it is being watched
		Then they can review afterwards
		They can only review
		They have a certificate for that where they specifically focus on

figure 5. Responses to CCTV and agency distribution

Compared to the OCTV case, respondents grant more agency to the CCTV camera. When looking at the first category in figure 6, we see that quite a few respondents attribute agency to the camera as a separate entity: 'that is it standing there' and 'it will be seen by a camera'. Here, the camera itself is mentioned as being capable of acting. This acting is sometimes passive: 'it hangs there' or 'that is it standing there' and sometimes active: 'it will be seen by the cameras' and 'it records everything that happens here'.

However, similar to OCTV, many respondents attribute agency to the human behind the camera as well. The third category of figure 6 shows that they relate the CCTV camera often to a type of worker, or a type of work that is associated with the CCTV camera, where the camera serves as a tool for these workers, for example, 'somebody who reviews what is happening' or 'then the person behind the cam(era) knows'. Here respondents also refer to the role of footage and how the CCTV system works. This is evident for instance in the remarks 'where they specifically focus on' and 'then they can review afterwards'. Compared to the human as actor, the collective of human and camera is mentioned less often as an acting party. One typical remark is that 'they can never pay attention to all of them equally thorough', which points towards human and technology in a co-operative manner whereby both camera, screen and human interpretation are needed in order to make the system function. In two cases, a clear connection was made between the watched (the respondent) and the CCTV camera: 'then I know it has been recorded' and 'these security cameras are there for me'. What happens here is

that these respondents make themselves part of a collective, by including the CCTV camera in their experience of the nightscape. In other words, they become 'users' of these cameras. When comparing these types of granting agency to those discussed in the case of the mobile camera, a clear difference can be seen in how respondents position themselves vis-a-vis possible acting entities. Exemplary for this difference is the response to OCTV: 'he can now see me everywhere' (figure 5) compared to a response to CCTV: 'they can only review'. Here, we see a difference in framing of the object who is acted upon. In the OCTV case more responses point towards being filmed as a way of becoming an object: a passive victim of the unclear intentions of the human behind the lens. Considering CCTV, fewer responses are linked to the individual as an object in a negative sense.

Summarizing the findings listed above, it can be concluded that in the OCTV case as well as the CCTV case respondents hold the human behind the lens and the human-camera collective responsible for making recordings of the nightscape. It was only in the case of the CCTV that respondents attributed more agency to the camera. In contrast to what has been described in the introduction, differences in visibility of the mobile and fixed camera thus cannot explain what parts of the hybrid collective are held responsible for filming.

who is resposible for filming
identifying actors

camera	camera+human	human
camera that records	if somebody would film on you	if you would have asked permission
this camera	if somebody would point a camera at you just like that	somebody who is looking at me
cameras in themselves		as long as he...
cameras themselves	I'd rather have you not filming	I do not know what he wants
	that he is pointing a camera at me?	I do not know who you are
	That he is filming it	if it were the police
	That he films	a stranger
	He can film if it were up to me	somebody enters my personal space
	he rewinds	well, there is now someone who
		he can now see me
		he recognizes me
		he can

figure 6. Responses to OCTV and agency distribution

3.5 OCTV and CCTV as technologies of safety

Because policy discourse considers CCTV cameras as important technologies to increase the safety of citizens (see chapter 1), a third step in our analysis was to explore more in detail whether and how the respondents associate either mobile cameras or static cameras with their personal safety. Do respondents make this connection and, if so, how do they articulate the relation between cameras and safety?

In figure 7, all responses are mapped to the question 'does this mobile camera do something to your feelings of safety?', followed by the question 'what else do you think about such a camera?'[67] Responses are mapped from negative on the left to positive on the right. Most answers concentrate around the middle and left of the middle. In the middle, there are relatively indifferent responses ('I don't mind' , 'the same feeling'), slightly leaning towards the negative ('little more nervous', 'feels like being watched'). On the left side of these reactions, stronger statements can be found ('I am more afraid', 'I find it annoying'), but also more subtle expressions of unease ('I feel slightly more uncomfortable' or 'I was scared for a moment'). On the positive side of the chart, only four respondents link a mobile camera to feelings of safety ('I even feel more safe' , 'feels safer', 'it increases'). Two responses classify this being filmed as 'exciting' and arousing 'curiosity'.

Based on the assumption that an increase of feelings of safety is usually included as one of the possible effects of surveillance technologies, the answers of the respondents seem to suggest that being filmed by the mobile camera of another visitor of the nightscape does not enhance their feelings of safety. Most intriguingly, respondents do not articulate any views that suggest that they assume the camera is just for fun. Reactions such as 'are you filming me for fun?' for example, were absent. A preliminary conclusion we might draw from this is that respondents do not consider the mobile camera to be a form of sousveillance (Mann et al., 2004), i.e. a technology that is used for leisure and socializing. In contrast to the reactions of the mobile camera, respondents were more positive about the CCTV cameras when asked how this technology affected their feelings of safety (figure 7, 'Mobile camera and responses to safety' on former page).

In figure 8, answers to the question 'does this camera do something to your feelings of safety?' are plotted in the same manner as figure 7: from negative remarks and connotations to positive ones. The figure shows a tendency towards neutral, mildly positive, and very positive associations between CCTV cameras and feelings of safety. Many responses can be found in the middle, which suggests that for many respondents CCTV does not make a difference in enhancing their feelings of safety.

67. Because the question about safety sometimes triggered more than one response, the number or responses is higher than the number of respondents.

Responses to mobile camera and feelings of safety.

figure 7:
OCTV and responses to safety[67]

However, many respondents also stated the opposite. On the right side of the chart, two very positive responses can be found: 'now that I consciously know that there is a camera, I do feel safer' and 'yes, it makes me feel even more confident'. Equally important, figure 8 also shows numerous mildly positive responses, such as 'I think it helps', or 'I kind of like it' and 'I think it is positive'. Remarkably, only four responses were very negative. Nevertheless, when comparing the responses to the CCTV cameras with the responses to the OCTV camera, there is greater consensus among the respondents that CCTV may contribute to increased feelings of safety in public nightscapes. Moreover, the fact that CCTV triggered less negative responses than OCTV suggests that the respondents seem to view static cameras as generally making a positive contribution to safety.

68. Because the question about safety sometimes triggered more than one response, the number or responses is higher than the number of respondents.

Responses to CCTV cameras and feelings of safety

negative ———————————————————————————————— *positive*

If something happens, yeah, then it happens

Now that I consciously know that there is camera, I do feel safer

No, I don't know

Yes, I would feel more safe

I feel watched and I do not like that

I think it helps

Ehm, no, yes, I think it is positive

it is annoying

No, I did not even notice the camera. That says it all, doesn't it?

Hmm yeah in some cases

No, not really

intuitively not

I kind of like it

I do not think it will make such a diference

ehm, I think it makes a little difference

It works better (on me), because I do not live here

For me, it is still the same

it does not help in advance

No, I still feel equally safe

I already felt safe; I don't think the camera will change anything

Yes, then, I think so

No, I think feelings will stay the same

Absolutely. Yes , see, it does have a purpose.

Yes, of course, because even if something happens, you have evidence

CCTV is a confirmation that it can only get safer

No, because if something happens, it is already too late

No, I absolutely do not feel safe because of the camera

No, it makes no difference for me

Yes, it makes me feel even more confident

I don't have any problems with it

it does not do much to me

figure 8:
CCTV and responses
to safety[68]

Conclusions

In this chapter the aim was to explore whether and how mobile cameras in public space are experienced as a form of surveillance by citizens in public nightscapes. By confronting 32 people in the city centre of Rotterdam at night with a mobile camera and a CCTV camera, responses were gather-ed on how citizens relate to these technologies. Rather than analyzing these answers in terms of organizational surveil-lance (the CCTV camera) and sousveillance (the mobile camera), which are both terms that focus on human intentions, we con-ceptualized OCTV and CCTV as hybrid collectives which allowed us to go beyond human intentions and pre-given topologies of people and things. One of the major findings of our empirical research is that, as with CCTV, OCTV cameras are also considered surveillance technologies. While in Surveillance Studies these mobile cameras are often referred to as a form of sousveillance (Mann et al., 2004), our analysis suggests that the mobile camera is experienced as a form of surveillance. By opening the black box of these non-human actors, the chapter showed important differences in the ways in which OCTV and CCTV are read and understood as surveillance technologies. In the case of CCTV, the respondents did not have any doubt about the both the physical make-up and the destination of footage. In the case of OCTV, uncertainty of what happened to the footage triggered negative responses among the respondents. Although the physical make-up was clear to all respon-dents, the destination of footage was not, and this aspect made respondents feel 'surveyed'. We thus can conclude that

the mobile camera acts in a surveying way given the invisibility of making things visible.

With this, a counter-intuitive aspect of OCTV can be observed as well. While mobile cameras can be considered a more democratic technology compared with CCTV because they allow for bottom-up control of camera (what is filmed) and footage (what will happen with the images), in contrast to the closed and black-boxed technology character of CCTV, this openness creates uncertainty. The majority of our 32 respondents experienced this uncertainty as unpleasant and unwanted. Most importantly, this un-certainty was often coupled with privacy concerns. These privacy concerns, how-ever, did not evolve due to the physical presence of the camera or the active presence of the film-maker but were rather the result of the possible non-official uses or dissemination of the footage. A possible explanation for this difference between CCTV and OCTV can be found in a more established trust in the Dutch government in taking care of CCTV footage versus a fear of the lack of control when it comes to new media. An openness in data (in this case OCTV footage) means less control over data.

Another important finding is that the respondents not only considered the mobile camera as a form of surveillance but that they experienced this surveillance as being stronger than the use of OCTV cameras, particularly when it concerns privacy. The respondents did not articulate any concerns related to a privacy violation of CCTV but instead emphasized how the technology enhanced their feelings of safety. In contrast, the case of the OCTV revealed the reverse picture. We might explain these contrasting findings by

concluding that the mobile camera, and other new media, pose a threat to issues of privacy and liberty of action in public spaces, whereas CCTV does not. That being so, we should be careful here because this conclusion reinforces a technological determinist view of technology. In line with the ANT approach developed in this chapter, we conclude that these differences cannot be explained by the intrinsic pro-perties of these technologies. We therefore need another explanation and suggest that the concept of domestication (Silverstone, 1996) provides a better heuristic to under-stand the different ways in which the respondents relate to OCTV and CCTV. Because CCTV cameras have now become part and parcel of everyday life in public spaces, citizens, or at least the respondents in this research, don't question or expe-rience these technologies any longer as unpleasant or threatening their privacy. In contrast, mobile cameras and cameras in mobile phones are relative newcomers in public spaces. Moreover, the hybrid collectives in which these cameras act, in term of how the footage can be distributed over many different social media (including YouTube and Facebook etcetera), are much less transparent and not (yet?) stabilized as in the case of CCTV.

Moreover, I should be careful to conclude that the ways in which citizens relate to mobile cameras is the same every-where. In this respect it is important to notice that the specific places where the mobile cameras are used may also play an important role in shaping the experiences and values created in the OCTV hybrid collectives. As one of the authors has argued elsewhere, places matter in shaping user-technology relations (Oudshoorn 2011; 2012).

Adopting this techno-geographical approach, we may wonder what expe-riences and values will be created by OCTV hybrid collectives in other places. During demonstrations, for example, participants might relate to mobile cameras in a dif-ferent way, where they may experience feelings of safety when being filmed by other participants, because this ensures that possible abuses of power by police can be documented independently. In this context, mobile cameras might appear as empowering technologies while these hybrid collectives can be understood as a form of inverse surveillance. We conclude with suggesting that the ANT approach developed in this chapter provides an important heuristic to investigate this flexibility. By conceptualizing OCTV and CCTV as hybrid collectives that may take different shapes in different places, we may improve our understanding of the current changes in the surveillance landscape.

Chapter 04

Participatory surveillance in urban nightlife districts

Introduction: Nightlife and technologies of safety

The former chapter described how nigthscape visitors interpreted and experienced the presence and use of CCTV and OCTV cameras in the city centre of Rotterdam. Whereas OCTV cameras are important actants in this nightscape for a long time already, mobile phone cameras as potential tools of surveillance can be considered as newcomers (see chapter 1 and 2). This chapter addressed this new hybrid collective and shifts the focus of analysis from how nightscape visitors experience the use of mobile cameras by others (chapter 3) to the active use by nightscape visitors themselves. Although mobile phones are introduced as surveillance devices, the possibility and potential responsibility for citizens, to act with this tool in the public space has already been called upon by local governments in Dutch cities. In a recent campaign by the Dutch government (see also chapter 1) a set of guidelines was presented on how to act in case of an emergency or incident in public space. Besides staying with the victim and remembering perpetrator features, taking pictures or making movies of the situation was put forward as a 'call-to-arms' from the government to exercise responsible citizenship (see f.i. Helgesson, 2011). In the campaign it is assumed that the mobile phone, equipped with a camera, is something everybody carries and is able to use, and that the act of taking pictures

or making movies is a normal thing to do. This campaign points to a new form of governing in public spaces, where, in a neo-liberal fashion, governments are relying more and more on 'citizen responsibility', in this case in creating safe and pleasant public spaces. Taking pictures thus becomes a way for citizens to exercise their responsibility.

In this chapter, I focus on the use of mobile phone cameras by nightscape visitors in Rotterdam. My hypothesis is that this hybrid collective gains presence in the surveillance landscape because the mobile phone camera potentially grants more power to subjects of surveillance via citizen reporting, bottom-up recording and sharing of content. However, it also creates new responsibilities (as a good citizen you must film an incident) as well as new vulnerabilities (you might become a target of aggression because you film). The chapter aims to understand how the new human-mobile-phone hybrid behaves in the nightscape and how this alters surveillance practices.

4.1 Participation and surveillance: New questions for the public nightscape

The combination of mobile phone cameras and social media platforms is relatively new. The mobile phone has become a platform for and of attention, of media consumption, and consumption through media. Besides these aspects of social media, my interest in this chapter lies in media making in public sphere. Authors such as Ling and Green show how the mobile phone has changed and is changing the public sphere in terms of mobility, identity and experiences of geography, to name a few, often stating the positive effects of mobile media in public space:

"The metamorphosis of space and time has consequently modified the statute of the presence and absence of individuals in social space, the relation of citizens with public space, and has interacted notably also in the role played by the mobile in the strengthening of the democratic process" (Green, 2002).

Although events such as 'the arabic spring' can be seen as providing evidence for this claim[69], my focus is neither event nor activism-based, rather I want to look at the mobile in a normal, nightly setting. How the mobile actually contributes, or at first interferes as an actant in processes of democratization, remains a question that needs to be addressed. Looking at the nightlife district visitor and the emergence of the mobile camera in relation to responsible citizenship, the mobile phone camera can also be interpreted as a 'potential helper' in surveillance and monitoring. Users of mobile phone cameras in these spaces might be active in night-logging; creating footage of what happens on a specific night (see. e.g. Mann et al., 2005). In surveillance studies, the use of mobile cameras by citizens is often considered as a form of sousveillance (the use of cameras by citizens to watch other citizens - Mann et al., 2004) or as inverse surveillance (specifically and purposely watching the watchers - Mann et al., 2004; Koskela, 2004). In the previous chapter I have argued that this is not per se the case: these concepts are deficient in both theoretical and practical terms. There is another form of acting with a mobile camera to be found in public nightlife. Rather than contesting or ignoring surveillance, bottom-up data such as movies or pictures that are somehow shared and made accessible to others can serve a complementary role in the surveillant assemblage (Haggerty & Ericson, 2000). Theoretically, we can speak of participatory surveillance (Albrechtslund, 2005; Koskela, 2009, 2011). As described in chapter 1, Poster and Albrechtslund (2008) understand this participation as empowering: end-user or citizen engagement in surveillance contributes to a democratization of

69. See f.i. How networks changed the world TM Chen - Network, IEEE, 2011 or New Civic Voices & the Emerging Media Literacy Landscape .P Mihailidis - The Journal of Media Literacy Education, 2011 – jmle.org and many more (techno-optimistic) views on the role of social media, mobile phones in the Arabic Spring movement

technology. Although participation in surveillance can occur in many forms, I focus on the making and sharing of footage (pictures or videos) recorded by visitors in public nightlife districts. The sharing of such content and making it available to others implies an act of subjection to potential surveillance; citizens volunteer not only to watch but also to be watched. By whom the footage is watched, and where it ends up, is out of control of the person who shares his or her data (see chapter 3). Equally important, participation can happen intentionally and unintentionally; the content-maker may, or may not have intended the footage to serve surveillance purposes. If, for instance, footage is shared on Facebook with friends, does the sharer know the reach of this material? Moreover, when making footage on a night out, can the maker of this footage be held accountable in all circumstances? Once the record-button is pressed, one is in some form or another participating to surveillance by recording a human activity of that night out. Once material is shared, it is researchable and indexable by many other actors.

This is where my understanding of participatory surveillance differs from earlier definitions: the question of control over one's data. If the act of recording a human activity can be construed as empowering and as part of a bottom-up, anti-organizational surveillance discourse, the act of sharing also brings about a set of new consequences. The advantage of going beyond the concept of participation as merely positive is that this phenomenon can be re-evaluated in light of critical thinking in surveillance studies (Koskela, 2008; 2011). Moreover, it can inform governmental attempts by local policymakers and other stakeholders

to create 'safe' and 'pleasant' nightlife districts. Treating participation in symmetrical terms allows us to shed light on the degree to which and how citizens-cum-mobile phones as responsible and made-responsible actors are co-opted into the surveillance and production of safe nightlife districts. Therefore, the question of this chapter is how and to what extent do citizens participate in the surveillant assemblage by using mobile phones.

To answer this question, I will first specify the theoretical framework that informs the analysis. The chapter then continues with a script analysis of a typical mobile phone camera, in order to provide a basic understanding of how mobile phone cameras introduce new programs of actions and responsibilities for citizens in relation to surveillance in urban nightscapes. I then discuss in-depth interviews with Rotterdam citizens who use mobile phone cameras, exploring whether and how the programs of action inscribed in mobile phone cameras are actually used, and if users of these phones link their mobile phone camera activities to surveillance at all. The interviews will be discussed in two different sections; the first will deal with the actual night out, meaning the time and place mentioned by interviewees as being in the city. The second part will deal with the 'aftermath' of the night out, where reviewing, reliving and sharing of footage take place. The chapter will conclude with a discussion of the potential role and influence of new media and the notion of participation in the discussions about surveillance-technology landscape.

4.2 Theoretical framework

4.2.1 Mobile phones and public spaces

The role and influence of mobile phones in public space has been a widely debated topic since their emergence. In Western, or at least Northern European societies, mobile phones have had a non-neglect-able role in individualism, changing the nature of social meetings and social settings (see f.i. Fortunati, 2007). Scholars from a wide variety of disciplines have been involved in both making and reflecting on mobile phones[70]. Without discussing all literature on mobile phones in public spaces, it suffices here to point at the most relevant issue for my case; that of the blurring of boundaries of the public and private, of organizational surveillance and social media. Whereas mobile phones in relation to surveillance are discussed by f.i. Koskela, 2008, Stelmaszewska et al., 2008; van House et al., 2005; Miller et al., 2007, Ribak, 2009; Pain et al., 2005 this study is particularly aimed at the interaction between the mobile phone camera and its user. In order to do this, a turn is made towards script analysis.

4.2.2 Hybrids and scripts

Following ANT I conceptualize mobile phones and its users as hybrid collectives. This conceptualization is important because current discourses on mobile phones and surveillance tend to blackbox the technology (chapter 1). This chapter aims to include the technological artifact in the analysis by investigating how the mobile phone mediates human actions. As has been described in chapter 1, the idea of script (Akrich, 1994) offers a way to describe mediations between humans and artifacts in terms of a 'film or theatre script'. The artifacts that surround us have certain actions prescribed in them that tell users how to act with them. During the design process, artifacts are inscribed with a set of rules, or logics, on how to interact with them which results in a certain program of actions (see also chapter 1). Latour (1992) describes this inscription process in terms of 'delegation': designers delegate specific responsibilities to artifacts and/or humans. Users are then influences by the 'programs of action', although they may modify or resist this pre-scribed use as well. By making a script analysis, a first exploration is provided into how the design of the mobile phone influences user behavior, and how that shapes potential participation in the nightly surveillant assemblage.

70. f.i. In Geography (Electronic and face-to-face communication in maintaining social relationships Tillema, T.; Dijst, M.J.; Schwanen, T. Sociale Geografie en Planologie (2008)) or in Physics (Uncovering individual and collective human dynamics from mobile phone records Journal of Physics A: Mathematical and Theoretical Volume 41 Number 22 Julián Candia et al 2008 J. Phys. A: Math. Theor. 41 224015 doi:10.1088/1751-8113/41/22/224015). However, this list can be expanded into sociology, design, ICT, architecture, surveillance studies and so on.

71. See TAMS analyser website: http://tamsys.sourceforge.net/

4.3 Methods

To explore the role of the mobile phone in the nightscape, I used two methods: script analysis and semi-structured interviews.

First, a script analysis of an exemplary and average camera phone is presented as an introductory example of what programs of action are provided to users of current mobile phone cameras. The analysis provides an explorative yet general impression of what users are expected to do when they create, manipulate and share (audio) visual footage. It offers a background for the subsequent analysis of user practices involving mobile phones.

Secondly, drawing on semi-structured interviews, I explore actions and practices of camera usage in nightscapes. Interviewees have been recruited using different methods (mostly via contacts from earlier research (see chapter 3) and via snowballing, asking the interviewee to provide names for other potential interviewees). The interviews have been conducted in the centre of Rotterdam. The interviews were held in the nightlife district, and audio recordings were made of the interviews with permission of the interviewees to record the interviews and to transcribe the recordings. Six visitors were interviewed about their use of mobile cameras on a night out. In the interviews I explored whether and how mobile phone cameras are being used (see appendix D for a list of questions).

After transcriptions, I used TAMS analyzer software to explore the interviews[71]. A topic list and a code scheme were developed by close-reading the transcriptions from the interviews. Queries were performed on the transcriptions across interviews using the topic list. For reasons of anonymity, fake names, or only first-names are used in the transcriptions.

4.4 Script analysis of a mobile camera

Potential contribution to participatory surveillance is dependent on the programs of action provided by the applications of the mobile camera. The script analysis of the mobile phone applications provides a basis for embedding and explaining the actions of users. A short overview will be given on the program of actions in order to narrow down how the artifact-side of the human-camera hybrid may shape potential participatory surveillance. Due to the diversity of mobile phones and the rapidly renewing and overlapping generations of technologies that are being developed for mobile media devices, the analysis can only be done in a general manner. All participants in my small-scale study owned a mobile device equipped with a camera[72]. For the script analysis I have selected the iPhone 4 and its standard camera application. This model was also the most commonly used mobile phone among my respondents.

The first step in the analysis is a consideration of the main menu of the iPhone 4: how can the camera be found? The physical presence of the camera is transformed into a set of pixels as 'just another' portal; there is no physical button that directly accesses the camera (see figure 1). If the camera application is opened, a screen is presented where different options are displayed (see figure 2). The option to take a picture is provided at the bottom centre of the screen. On the left side of the capture button, the option to go to the 'camera roll' is shown. In the camera roll, the user can review, delete and share the pictures or movies that have been made. The touchscreen, in combination with camera functionalities, makes for some new choices on how to provide user feedback on what is actually happening, in comparison to analogue, or even purpose-built digital cameras. The capture button of the traditional camera used to have a physical sound and feel when being pressed. The physical feel of taking a picture would tell the user that a picture was actually being taken. On the mobile phone, the physical feel of taking a picture is replaced by a 'button', which turns grey when touched (see figure 2). Another aspect is that sound is added that resembles the click of a button. The sound reminds the user that a picture is actually taken, and is an added feedback moment to 'pushing' the button. In addition it lets the approximate surroundings of where the mobile phone is used know that a camera has just been used (or is being used). The auditive signal thus has repercussions that go beyond a feedback signal to the user and the device. It communicates, 'beware, you might be in a picture'. This can put the owner of the device, as well as the people in his/her surroundings in an awkward situation (Oudshoorn, 2011), where attention is drawn to the human-camera hybrid. The repercussions of the auditive signal might be more prevalent in a private or silent setting. However, in the nightscape it is often noisy. The relative small size of a smartphone and the lack of auditory feedback allow users of mobile phone cameras to take pictures or record movies unnoticed.

1

2

3

figure 1;
an iPhone 4 home
screen

figure 2;
the camera home
screen

figure 3;
sharing options of
a iPhone 4s, 2012

Once a picture or movie is made, it is stored in the camera roll. In this roll, an overview is provided of recently made items and options are provided regarding what to do with the footage. The program of action so far directs the user to make content and to review it locally. Theprogram of action, however, also provides options to share content non-locally. The interface provided on this particular phone is depicted in figure 3. Items can be mailed to one or multiple contacts, sent via text messaging or tweeted[73]. Out of the six options provided, three are dedicated to sharing. This raises questions as to how many times these types of sharing capabilities are actually used as opposed to other forms of sharing (f.i. via a Facebook app or downloading to a computer). The new directness and sharing brings about new issues concerning the role and effect of visual content in and of public spaces. Related to participatory surveillance, it means the user is able to share content directly rather than keeping it on the device. The nudge embedded in the program of action probably results from commercial considerations. Yet, recent discourses and governmental attempts to make citizens responsible via contributing to surveillance, such as highlighted in the introduction section of this chapter, capitalize on the sharing capacities built into the latest generations of smartphones.

73. The Twitter option is interesting because it showcases how a commercial sharing platform has made its way into the core of an operating system so that tweet is deemed similar in hierarchy to a mail or a text message.

74. The descriptions of these participants date from 2011. Only first names are used.

4.5 On users and mobile phone camera practices

Having described the programs of actions embedded in a typical mobile phone camera, I go on to explore the interviewees' practices involving their mobile phone cameras: do they accept, modify or resist the programs of actions inscribed in their camera devices? A series of interviews will be analysed, in which topics of participatory surveillance were discussed. In the analysis a separation is made between mobile phone camera and data use during a night out, and after a night out. First, I will introduce the participants.

One interviewee is Bart[74]. He is 34 years old and he has been living in Rotterdam for the past eight years. Most of his friends live in Rotterdam too. He usually goes out on Thursday nights with his music friends to participate in jam sessions, or on Fridays with his other friends. Most of the time they go to Rotown or Vagebond, which are small, alternative venues near the city centre. He carries an iPhone 4. A second participant is Christina she is a 25-year-old female student, who has lived in Rotterdam for the past twelve years. She goes out about twice a week and often visits the Wittedewit, which is a concentration of alternative clubs and bars at the edge of the city centre. When she goes out in the city-centre it is usually to a cinema or a theatre. She uses an iPhone, but does not know what generation or type. Then there is Marieke. She is 20 years old and lives near Rotterdam. When she goes out in Rotterdam, she often stays with a friend who lives there. When they go out, about twice a month, they visit the Oude Haven (cafes) or the Centre (clubs) and often until 4 or 5 AM. She does not know the brand of her phone, but she does know it holds a camera, which she uses. Wouter is another participant. He is 26 years old and recently moved to Rotterdam. He goes out about twice a month. When he goes out, he prefers to go to small bars and/ or dinner, but not necessarily in the city centre. He carries an iPhone. Suzanne has been living in Rotterdam for seven years. She is 27 years old, and she is out around twice a week. She is often found in the city centre, visiting cinema or theatre. She does not like clubbing. She owns a smartphone equipped with a camera. Lucas is 28, and he has been living in Rotterdam for a couple of years. When he is in town, he follows his friends, or goes to places recommended by friends; this can differ from a dinner to a night of dancing He always carries his phone with him when he goes out.

4.5.1 Mobile phone use in the nightscape

4.5.1.1 Frequency and types of use

To understand how the interviewees use their mobile phone, it is important to know if these participant bring their mobile phone into the nightscape at all and if so, how often they use it. Christina explains:

C: Yes, well, most of the time I don't (take my phone with me red.). Often, when, uhm, you are with someone or you are meeting up with someone you don't know that well, I use it to kill time. That I do use it for […]

In a similar fashion, Lucas states he takes his phone with him regularly:

L: I always carry my phone. And of course, it should be that, might you get lost somewhere, that you can make a phone call. That's quite useful.

Another participant, Marieke, states:

M: I always take my money and my phone with me. I think I use it about four times a night.

In fact, all of these participants mentioned the mobile phone as a part of a standard checklist of things to bring before closing the door (the other two are keys and money or a bankcard). The phone is used for many things sometimes to look something up, sometimes to kill time. In many instances, it has a constant presence during a night out. The mobile phone here is not only a multi-functional tool, it also serves as a toy,

or as distraction when being in a bar. In light of participation in the nightscape, this shows that non-deliberate, or non-planned use also occurs. Concerning planned, or conscious use, I asked how often the mobile phone is used during a night. Bart explains:

B: Well, I use my phone to call obviously and to text where everybody is, sometimes to take a picture, and... sometimes to check or exchange things online such as someone's phone number, to check mail. I do take my phone with me into the club or bar, where, if we sit down, it is often at the table because I like to be able to see if I have a new message, for instance. If I have to go to a toilet I am taking it with me.

Lucas shares a similar observation:

L: If you've got nothing to talk about with someone, or just for the time being. It has become sort of a replacement for having a beer, or something. I mean, very often, it's just nice to hold on to something.

Both mention a variety of functionalities of the device that they use. These use practices exemplify how the mobile phone not only invites users to follow the program of actions as described above, but that it supports other actions as well. In this respect, the mobile phone must be considered as a 'multiple' artifact, or platform, rather than being single-purpose and clearcut. In its multiplicity, my focus is on how mobile phone usage can become a potential surveillance artifact. Via sharing locations, for instance, or sharing images.

If indeed the mobile phone in the night is used in multiple ways, one of these ways is to take pictures or to make movies.

4.5.1.2 Camera use

Questions of camera use become important in light of surveillance in two ways; one is the making of picture or movies during a night out and the second is the reviewing and sharing of this footage. As described above, both actions are in-scribed in the mobile phone camera. The question is whether nightscape visitors follow the program of action and if so, how and why they make and share pictures. Lucas states:

L: Well I do make pictures or movies during in-between moments.

Christina, however, resists the use of the phone camera during a night out:

Chr: I am not the kind of person who grabs her phone and turns on the camera when something happens.

For her, the activity of going out and the possible use of cameras by visitors are not coupled tightly. She refers to 'when something happens', which she positions as something negative, and not fit or appro-priate for recording. To my questions about mobile phone camera use and sharing Bart responds:

B: Uhm, well, quite regularly... I'm not the one who records everything and puts it on Facebook.

He links using a camera directly to sharing of content - an activity from which he

distances himself. As to why he takes pictures, Bart states:

B: I usually take pictures of unexpected events, that I really like to do. If, for instance, there is something in a bar or in on the street that reminds me of someone, then I think: "I have to take a picture!" […] and then I email it to that person […]

Wouter has a similar response to why one would take pictures in public space, especially during a night out:

W: I don't do that in a group-context. If I make pictures, it's often detail-things; pictures of things that struck me, or that I found funny. Or if it reminds me of something or, if I see a name or an object that reminds me of someone, then, I make a picture of that.

Both Wouter and Bart rework the action of taking pictures into capturing 'unexpected' events and atmospheres. They refer mainly to taking pictures and both do not mention making movies at any point. For these two users, it is not about registering the mundane, rather, they use their own cameras to capture the unexpected, or out-of-the-ordinary, or when a memory or thought is triggered. So far, no clear links have been made to negative events, surveillance or incidents and personal cameras. In that sense, the idea of consciously participating by recording incidents or fights does not seem to be a part of the use practice of mobile phone cameras for these users.

4.5.1.3 Responses to the act of taking pictures and filming

In order to explore the making of footage from another perspective, I asked the interviewees whether they have had experiences with responses of others to their use of their mobile phone camera? And vice versa, did it trigger certain responses in them to be filmed, and it that sense, watched by other citizens via mobile phone cameras? Suzanne explains:

S: Well, yes, if someone would really take a picture of me, then I would feel uncomfortable. Unless they would have asked permission before. Of course it happens that you end up in someone else's picture accidentally. This also happens when you take a picture yourself and then you also do not go around ask everyone in the street for permission. So in these cases I do not think that others have to ask me for permission.

In terms of etiquette, or what is deemed normal when it comes to using a mobile phone camera in nightly public space, the unspoken rule expressed here is that it is generally accepted to be in other's pictures. However it is only accepted as long as one is not the focus, or the main topic of the picture. It can be expected that the use of cameras and the sharing of content varies widely amongst users. For instance, the awareness of a camera in her close proximity is a reason for Christina to be a non-user:

Chr: [...] I have the impression that taking pictures is an interruption [...] I'd rather be experiencing a situation than to capture it [...]

(the camera) is in between the situation and me [...]

For Marieke responses on camera use tended to be positive:

T: Have you ever had responses from people?
M: Yes, often positive responses

Here it is the unique user/camera setup that supports the program of action of taking pictures, and it is this unique combination that triggers response. For Marieke the response of the person(s) in front of the camera is something normal: as something to not be worried about, where Christina points at a distortion of the moment. This point at a larger question of not only why mobile phone cameras are used, but also what this does with a situation. Bart defines a very specific situation:

B: If I indeed get a response, which is rare, it is because people don't like me taking pictures of something [...] nobody ever comments on me taking pictures in bars or public spaces. Also because, I think, I don't take pictures of (groups of) people. Although I think it is allowed to do so, I focus on pictures in which I can recognize myself, so pictures of me and my friends.

He explains that he tries to avoid potential responses by making sure that what or who is in view is always someone or something he can 'relate to'. Here another perspective is taken on the norms of mobile phone camera use. He shows a level of anticipation of the consequences of camera use in public nightlife, not taking the making of movies or pictures for granted at all.

Nonetheless, Bart also remarks that it is not really necessary to take the 'subjects' of camera use into account in public spaces or bars, as nobody really cares in those specific contexts. The reasons for using a camera, mostly to take pictures rather than to shoot videos, also vary between these users, however Marieke and Bart both provide the reason of capturing context - to memorize the night.

4.5.1.4 Types of content and use of footage in the night

Besides memorizing the night (which in some resonates with surveillance because it concerns collecting visual evidence of human activity) – to recollect what happened, there might be other reasons to share pictures. One interviewee points out that the focus of his footage is on things rather than people. Therefore when he takes pictures, it not really relevant for those surrounding him:

W: So, when I take pictures, its often of things and surroundings. So its not that I attract attention of others' by taking pictures.

His images are made for his personal interest and collection, and not meant to be shared widely. Besides making pictures or movies, the program of action of the mobile camera allows for direct reviewing as well. Bart was the one of the few who mentioned reviewing footage during a night out. The main reason for directly reviewing images is linked to fun and entertainment:

B: This is highly dependent of the scene I am in. Musicians I know, for

instance, care a lot about exposure, so they like to review pictures directly. In my other social group, it is more a thing to review after.

In this case, users mainly follow the program of action to capture, store and carry information that might be valuable later on. Also here, none of the responses mentioned reviewing in light of incidents or in any surveillance-related manner. Direct sharing or posting of footage on the Web, or on any other sharing platform, did not occur either. In that sense, the program of action of sharing directly is not a forceful script. Reviewing images is done to 'check the picture' on the spot, or to retrieve information (e.g. a map or bus schedule). The participants also ignored the program of action of editing footage on the device itself. Seeing how immediately sharing footage is not something the studied participants did, I explored how and where footage might otherwise be shared.

4.5.2 Role of footage after the night: Sharing nightscape footage

4.5.2.1 Reasons and places of reviewing

When urban nightlife consumers, including the study participants, take pictures or make video on a night out, they presumably have some goal or intention in mind for this content. However, in the act of sharing, content and intention become separated. Where any third party gains access, control over this data is lost. This is where another part of the surveillant assemblage enters the picture of the usage of mobile phones and sharing platforms. In this section, I question to what extent sharing of nightscape content takes place, and to what extent the interviewees connect this to surveillance or surveillance-related topics. Marieke has never faced any negative consequences from sharing content or watching others' content:

M: I like it (reviewing other's pictures)
T: You have never heard negative stories?
M: Well, not really. I like to see pictures of others; it gives me an idea of the night.

For her, pictures serve the purpose of recalling a night. Not all pictures, however, end up being deemed relevant, important or nice to share and relive the night. The selection and sharing process is a group process in her friend group:

M: Yes, well, the ones we like end up on Facebook or Hyves

T: And who decides this?
M: We do that ourselves
T: [...] And if you review images, do you do that alone or with friends?
M: Well, it depends. If we see each other at school the next day, we review collectively.

Reviewing is sometimes done collectively, to relive the night together. Other camera users, such as Lucas, points out some moments of reviewing images the next day, however, the context is individual:

L: It's more like, how to phrase it... often you forget that you've made pictures. At least, I do. And then it's nice to review images the day after; that can be fun. Then stories reappear.

Other responses show that also here practices of use, in this case reviewing images, vary widely in term of time and moments to review:

W: Well, yes, I am not such a fan of reviewing images. Only after 5 years or something. Then it becomes interesting to me again, then it becomes fun, but close to the moment itself. It (reviewing images) is not really on my mind.

Reflecting on these different practices of sharing and reviewing, the case of Marieke, through some form of debate or discussion (often online/ in a chat) the group involved in that night determines what goes on sharing platforms such as Facebook or Hyves[75]. Users thus move towards other platforms of media, and ignore the program of action of sharing on the mobile phone. Forms of self-censorship

and sharing and a set of values on what is a 'good' representation of that night are part of the process of participation here (see e.g. Miller & Edwards, 2007). The 'life' of the images once they have been posted online is not a lengthy one (see Van House & Davis, 2005, who mention a 'short' life of images for the moment and a 'long' life for memories). Shortly after the pictures have been shared, they are reviewed in the company of friends at school or alone behind a PC. In other cases, reviewing happens on the device itself, where the moment of reviewing varies from a day to a matter of years. The human- camera hybrid, but also, the human- data storage hybrid expands far over the time of content-making. In light of participatory surveillance, questions of accessibility start playing a role, where some content made that night is reachable for others, or third parties interested in this data, and some data remains hidden. In the case of sharing via social network sites or other online platforms, processes of self-censorship and selection also play a role in determining what ends up on the Web.

4.5.2.2 Practices of sharing and deleting

Once online, footage is open for others to see. However, on many social network sites, privacy systems and security measures are in place to control the scope of visibility of one's data. If indeed user-generated content is used by surveilling parties, questions of ownership and control over one's data become pressing. Actions such as tagging, deleting, or resetting privacy settings of data (in this case images or movies) are often part of the possibilities of social network sites. I asked

interviewees if they were ever asked or if they themselves asked others to delete footage:

T: Did you ever receive a request from friends to delete a picture?
B: No, never
T: And the other way around? Have you ever asked someone to remove something from Facebook, for instance?
B: Well, I am not on Facebook, but I would check it regularly... I can recall asking someone to not publish a picture, [...] but that was IP-related.

Via his designer background Bart explains his awareness and knowledge of IP[76] and the implications of the Internet's openness. He keeps in mind potential IP infringement or misuse of his pictures, and does not have to worry too much about these matters as he has deliberately chosen not to be on Facebook. Also Lucas recalls one instance of a request to delete a shared recording:

L: I uploaded a movie once and then I received a text message asking me to remove it.

Other participants, such as Wouter, showed no concerns surrounding aftercare of shared data:

W: I am not really ashamed of anything, so... In that sense, there are always people who do not want for certain things to end up on Facebook. Well, that does not hold for me.

This non-concern about privacy and the sharing of data is countered by another extreme of the spectrum of use of social

media; non-use. Although Christina is aware of searching and looking up content made by friends, she has no experience with participation-by-contribution in the pool of data:

Chr: Ohw, I am really bad at that. I would not even know how to upload anything.
T: And in your friend-group, is the Internet ever used to search for movies or pictures?
Chr: I think so. but I don't do that so much. Via Facebook, maybe...

This quote highlights another aspect of participatory surveillance; social network sites allow one to be a watcher without being watched. In the public nightscape, there is still a possibility to refuse, or react on another citizen who is pointing a camera at you; once data is shared, it becomes impossible to see who is looking. Besides these online social media sites, mobile phones allows for other forms of sharing. Bart already explained his absence from Facebook, while on the other hand he makes pictures for others. He sometimes shares images by showing them on his mobile phone:

B: [...] Yes, if I am with friends occasionally, or at work after the weekend, then I share... I show my pictures [...] Just on my phone; if they have accidentally been put on my computer, then I show them on my computer [...] No, no I don't put things in the Internet [...] the tricky thing is that once you upload something, you lose control over it. Especially when it concerns personal things, like pictures

or mutterings [...] I like to have control over my data.

Taking a dichotomous stance towards this Web of on the one side providing him work, but on the other side trying to diminish use or presence online in private and rendering himself 'old-fashioned', Bart does not partake in social media first and foremost to keep control over when footage is reviewed, and who is watching it. In light of participation and surveillance, he chooses to make clear the boundaries on who is allowed to be part of his visual log.

One issue that emerges from the analysis is that control over one's data is an important concern for some, while for others it is not something they care about. Delving into this boundary of where the openness of data does become problematic, Lucas highlights:

L: It does not really matter so much to me. But at some point it does, when it concerns a work-context, in which people deem it important to keep things private. And I put more things online than most people.

Concerning sharing practices, Marieke only reflects on the purpose of images for herself and does not mind using social media sites, whereas Bart values control over data and consciously keeps his footage local, thereby also selecting and determining who gets to see his content. Marieke and Wouter contributed to the pool of potential surveillance data and do not care about the after-life of their footage. Lucas points out that in cases of a work context, privacy and control over data becomes and issue. Also non-use due to a lack of understanding the mechanisms of

77. Although highly relevant for expanding the type of research as presented in this chapter, this is beyond the scope of this chapter.

social media occurs, as exemplified by Christina.

Sharing is thus multi-faceted and does not necessarily mean opening up to any third party; the hybrid of visitor-camera can take on many forms, also in notions of sharing. The mobile phone camera allows for multiple ways of dealing with footage after a night, with scripts such as sharing, sharing locally, or putting everything online. The temporality of the purpose of footage is a theme that emerges in relation to participatory surveillance and mobile devices. After footage has been made in the nightscape, it is reviewed, selected and shared in multiple ways and via different strategies. Not having discussed the scripts of social media sites in relation to privacy settings and control over data in detail here[77], the interviews did provide data that allows for discussing the boundaries of use of data. This can shed light on the concept of surveillance and shared data.

4.5.2.3 Footage ownership and boundaries of use

When Christina was confronted with a case of organizational surveillance (the police uses YouTube footage uploaded by consumers of urban nightlife like herself to reconstruct an accident and identify suspects), she pointed out the following:

C: Well, that's a human response I think, to combine things and that you try to achieve the best possible results with the means available. If you look at it from that perspective, it goes- it is really a one-way stream. But the other way around does not go; that as a public you

would have the rights to access police footage – if you ask me.[...]. If the police would use YouTube to fix a problem or find a perpetrator, that's fine. But the idea that information is so open and exposed, thats a bit, uhm, double.
T: And who should protect that limit, on what is open and what not?
C: You can't! That's the whole infinity of the Internet, of media, for me. And I would not consider myself as a person who can protect that border. It has drowned me, you know, already.

She understands participation in surveillance as a phenomenon from which one cannot opt out, although she would like to. Her view on participatory surveillance is double-sided: it consists of both the idea that it is hard to be against the use of third-party photos and videos for solving crimes, and the view that it is not desirable for all information to be open and accessible. Christina feels that it is impossible to guard the limits or boundaries of control. She continues by explaining that in her view footage made of public space can belong to the police, but footage made by the police can never be accessible to the public. This is indicative of the role of the new hybrid of visitor-camera: the power relation to organizational surveillance remains asymmetrical. Marieke has her own view on (non) participation:

M: What I put on my mobile phone does not end up on the Internet unless I want to.
T: So you control the footage?
M: yes
T: What if the government would make use of your footage?:

M: Well, I can make a picture of an incident.. But they don't own nor control these images.
M:[...] If it serves the right purpose, or goal, then its no problem, I guess.

Although sharing pictures of the night is part of her ritual of going out, she still feels in control of her data, and clearly she is the one who decides what goes online and what does not. More importantly, the action of sharing does not entail that the footage is no longer her property. Besides property rights, the usefulness of this type of footage is questioned, stating that images made by her cannot be of any value for surveillance.

However, when it serves a good purpose, she is fine with police looking at her images. This point is not shared by all participants. Wouter points towards the possibility to de-share:

W: So, the moment you become recognizable, you should have the possibility to remove it, that's how I see it. The moment you become recognizable via technological means, you should also be able to delete that- to say that you do not agree.

In this quote, the boundaries of use of other's data for surveillance purposes is set to a reciprocity of possibilities, or options to deal with data; of being able to negotiate over one's own data. As shown in the script analysis, the mobile phone script does not alert users in any form about the potential consequences of sharing their data. In terms of participatory surveillance, not informing the user about the possibility to

de-share, or to disallow the use of data for surveillance purposes leaves the data of mobile phone users relatively unprotected, and therefore accessible for surveillance. In order to explore to what extent interviewees were aware of these risks, issues of data ownership of mobile phones were compared with that of a known surveillance technology, namely CCTV.

4.5.3 CCTV Recordings in public space

By relating the question about mobile phone recordings in public space with that of CCTV cameras, reflections on ownership and use in light of surveillance were captured. The interviewees did not often create relations between mobile phone recordings and surveillance. A comparison with CCTV might trigger different views on interviewees' own data. When asking to whom CCTV footage belongs, Suzanne responded:

S: I think that is a very good question, because I think these images should belong to everybody. Not per se only belonging to the one who put the camera there, because the camera is placed in a public space. These images, although collected by the police or government, should belong to everyone, and maybe it should be possible to, if something happened to you, that you can browse through this footage.

The response shows uncertainty and speculation about this ownership. Is footage made in public space also owned

78. For a similar criticism on ANT, see f.i. Haraway (Haraway, D. J. (2008). When species meet (Vol. 3). Minneapolis: University of Minnesota Press) or Murdoch (Murdoch, J. (2001). Ecologising sociology: Actor-network theory, co-construction and the problem of human exemptionalism. Sociology, 35(01), 111-133.)

by the public? Suzanne points to the fact that if this would be the case, this footage should also be open for the public. Also Lucas is not sure who owns CCTV footage:

T: And who owns these images, according to you?
L: That's a good question. I think they belong to the local, or the national government. I do not really know how that works.

Despite attempts to inform the public about CCTV being in place in most night-scapes, and the relative awareness amongst citizens of CCTV cameras being in place (see chapter 2 and 3), rights and responsibilities concerning this footage often remains vague. In that respect, there is a lack of clarity about the ownership of both mobile phone- and CCTV recordings. Bart is the first to reflect on both bottom-up shared content as well as CCTV:

B: As a matter of fact these images belong to the public space, so if it concerns a picture of a group of people, the images belong to whoever made them. If there is zooming in on specific individuals or if people are being tracked, then, if I am not mistaken, the image rights are with that individual [...]

The image then, according to Bart, is owned only by the subject if he or she is clearly recognizable. Moreover, as long as footage is recorded in the public space, similar laws on image ownership apply to both mobile, citizen-made footage and footage from CCTV cameras. As far as the mobile camera interface is concerned, there is a lack of feedback on image

ownership. Neither the mobile devices nor the platforms on which content is shared, provide the user with information regarding image ownership. The scripts of sharing found in these mobile media devices are in sharp contrast to the non-existence of guidance on controlling image ownership as well as the complete silence on notions such as de-sharing. The diversity in use practices shows that programs of action of making content and sharing content is interpreted in various ways[78].

Conclusions

This chapter aimed to understand how mobile phones and its users as hybrid collectives behave in the nightscape and how this changes surveillance practices. More specifically, I explored how the mobile phone camera allows or disallows participatory surveillance, and if and how forms of participation actually occur. Although bottom-up camera use can be seen as equal to CCTV in terms of 'a camera being present in the public nightscape', participatory surveillance differs in terms of purpose of the footage as well as control over this footage. The interviewees all had experience with the mobile phone camera. Different strategies and types of making and sharing footage were found, so the program of action inscribed in the mobile cameras' soft- and hardware does not seem to lead to a single manner of use. Contributing to existing research on the experience and influence of mobile phone technology on public spaces (see f.i. Ling and Yttri, 2002; Green, 2002; Castells, 2007), I have tried to expand the scope of this research by not only looking into positive effects, but to also incorporate new threats for privacy and safety via new forms of surveillance through mobile phones, and mobile media. This explorative study on mobile phone use in the nightscape contributes to literature on mobile phones and surveillance by providing a glimpse into user practices of mobile phone cameras in the nightscape. Although making or sharing of footage occurred amongst the participants of my study, it was not in any way linked to recording incidents or disorderly conduct. However, the mobile phone camera is

being used and footage is shared. This shows that participation in the form of making and sharing audiovisual material of the night does in fact take place. In that respect, the mobile phone-visitor hybrid becomes a touch point for surveillance in the nightscape.

On the basis of this analysis, I suggest that the ways in which citizens participate in newly emerging surveillance landscapes is highly dependent on their level of understanding of the logic of new media technologies. Actions with-and reflection on-the mobile phone camera differ widely already amongst the participants in this explorative study. The higher the knowledge level of aspects such as the script of the camera, image ownership and the logics of sharing of content, the more the dichotomy between possible empowerment of mobile media devices versus the possible threats of these devices for a certain individual become clear. Already amongst a limited number of interviewees, a wide variety of mobile phone- and social-media knowledge was observed. In relation to questions of surveillance, creating more awareness of the effects and consequences of making and sharing visual data might prove to be important to enable nightscape visitors to make informed decisions about taking and sharing pictures of the nightscape.

Reflecting on the script of mobile phone cameras, the programs of action found in typical smart-phones are strongly aimed at convincing users to share as much content as possible (for studies on practices of sharing, see also Stelmaszewska et al., 2008; van House et al., 2005; Miller et al., 2007). Because sharing clearly has commercial value, users are not at all guided in de-sharing, or in controlling

the scope of their shared data. It can hardly be a surprise therefore that participatory surveillance in this explorative research turned out to be existent only in an unintended manner: insofar as footage was shared, interviewees did not link their actions with intentions to contribute to surveillance and regulation of the public space. At the same time however, this footage is a part of the pool of data that third parties (such as police) can use. Seen in this light participatory surveillance is not necessarily empowering and positive, as the act of participating via the sharing of footage takes place in a new-media-web of uncertainties and asymmetries. On a larger scale, both organizational surveillance networks in nightlife districts and the visitors of those areas are dealing with a new actant that has the potential to alter the lived experience of these spaces.

Chapter 05

Policy, design and use of police-worn bodycameras

"Outside, in the street, I activated the camera. In the hallway there were two suspects of abuse. The two were upstairs to report it. [...] The two suspects, who were aggressive towards Lucky (the name of the club) and towards us, especially after they heard that they were arrested and that they had to go to the police station with us. When I told them that I was carrying a camera that was recording both their image and their voices, their behavior changed and they calmed down. Both suspects accompanied us quietly to the police station." (Rene Damhuis, Police Officer regio Twente, 4th of November, 2012, appendix E)

Introduction

In the former chapter, the mobile phone-visitor hybrid was discussed. Another new combination that has made its entry in Dutch nightscapes is that of the police officer-bodycamera hybrid. In this chapter, the process of how this new hybrid made its entry into the Dutch nightscape will be investigated. In the Netherlands, police-worn bodycameras (the bodycams) have been tested and deployed since 2009. Their introduction followed after rumors of positive test results of bodycam practices in the UK. Although this camera is single-purpose in the sense of functionality (to record the moving image), its use is multiple; evidence gathering on crime scenes, surveillance by bikers with cameras, police officers on foot with bodycams[79]. The latter two types of use are under investigation here, since they are the two modes witnessed in Dutch nightlife districts (chapter 2). The question is how this bodycam made its introduction in surveillance practices in these districts. What does this new surveillance artifact do in use practice and how did it come into being in the particular way it is now? To answer this question, I will focus on three groups of actors that are involved in the development and use of the bodycamera in the Netherlands. Firstly, policy makers and the places where needs and regulations (in other words, design requirements) of the camera have been issued. Secondly, the designers of the camera will be addressed and the choices they made in both soft- and hardware development. Thirdly, I focus on practices of use by police officers to see how the bodycamera changes their work practice. Comparing these different actors, the chapter aims to understand

which meanings and practices of use of the bodycamera are articulated and stabilized in Dutch nightscapes and how this alters surveillance practices.

5.1 Theoretical starting points

The bodycamera as a tool in the nightscape is still in a test-phase in the Netherlands. Therefore, it provides an opportunity to investigate this new artifact during its development and introduction in the nightscape in an early stage of development. For designers, this test-phase might bring to light technical implications (e.g. questions of robustness, image quality or usability) that can be fed back into design or policy. However, when taking a broader perspective, this camera artifact will, in one way or another, also alter the socio-technical landscape of the night once it is introduced and used in nightlife districts. By this I mean that a new technology such as the bodycamera will have an effect on existing networks of technologies and humans. As explained in chapter 1, technologies are never a standalone, nor are they neutral. Rather, from its first beginnings it is entangled in a web of other artifacts, systems and decisions, where both humans and things have their say. In this case, debates, laws, pre-existing technologies and standards, to name a few, all preceded the call for production of this artifact. They become actants in a network that affects different stakeholders, places and practices. It gets its shape and meaning in different parts of the network. The relevance of taking this perspective rather than just stating that it is a police officer with a camera, is that this hybrid creates a certain typical configuration of action capabilities and a specific delegation of responsibilities (e.g. Latour, 1992 or Akrich, 1992). The added value of the notion of the hybrid is that these responsibilities lie neither fully with the user (e.g. the police officer) nor the artifact (the bodycamera) – it lies in the combination of these two.

Another point of departure is the idea that objects are not singular in purpose or meaning. Rather, they can constitute different meanings dependent on the context of use. Where an artifact may be perceived as 'normal' or 'making sense' in one context, in another it might be surprising, or unexpected. Not only in functionality, but also in meaning, an artifact can mean different things in different places, situations and actions (Oudshoorn, 2012; Pinch and Bijker, 1987). One way of laying bare these different meanings is to turn to the concept of 'objectual practice' (Knorr-Cetina, 2001). This notion refers to the idea that there are different practices around the same object. By looking into the artifact through different contexts and phases, this enables to see how a technology shapes meaning in each particular practice. The bodycamera as a technology thus displays forms of multi-stability (Ihde, 1986), where in one context, the bodycamera is seen as clear and straightforward, while in another context, the bodycamera might cause friction. These contexts all have their influence on what the bodycamera will be, and will do, in the nightscape.

Concerning the question how meaning is inscribed, Akrich and others have introduced the concept of script (see also chapter 1 and 4), that argues that designers of (technological) artifacts inscribe their meaning in technological devices and thereby communicate to the user what it should do, or how to interact with it (see Latour/Akrich, 1992). How users actually interact with the technology once in practice often differs from what designers or engineers inscribed in these technologies. One of the concepts that provides a heuristic tool to investigate these 'alternative' scripts is that of multiple users. Oudshoorn (2012) emphasizes the importance of focussing on technology with multiple users.

In this chapter I compare objectual practices of the bodycamera from three perspectives; policy, design and use. The main question is to see what this new artifact is supposed to be doing according to the different stakeholders or actors. How is the meaning of the bodycam articulated differently by policymakers, designers and end users? Turning to surveillance and the network of human and nonhumans that are responsible for surveillance in the nightscape, I question which forms of surveillance are being articulated. Looking into the objectual practices in the layers of policy, design and use can shed light on how this articulation of surveillance actually takes place via processes of the stabilization of responsibilities and distribution of agency. In the next section the methods of research are described, in which the steps are explained to unravel the objectual practices of the bodycamera.

5.2 Methods of inquiry

The bodycam is a mobile camera, and by this mobility it introduces a different notion of a 'surveillance' camera in public space than the static, and literally top-down CCTV cameras normally present in nightlife districts. Via the method of 'following-the-actor' (Latour, 1996), it became apparent that this bodycam was used in an experimental manner (e.g. as a pilot project) in Dutch nightscapes (see chapter 2). Where quantitative research has been done in terms of performance of this bodycamera ("Rapport Beke" by Ham et al., 2010,(in Dutch)), the approach taken in this chapter aims to provide an in-depth qualitative analysis.

I will follow one particular type of bodycam; the Zepcam. This bodycamera system was developed in 2009 by the Dutch company Zepcam based in Amsterdam. The bodycam was developed as a wearable camera system for law enforcement. This can be for instance police officers on duty, forensic research or surveillance. Whereas the Zepcam company started in the high-end extreme sports cameras, the Dutch government asked them in 2009 to develop their technology for a different market; that of security. Currently (2012), the company of Zepcam holds 80% of the bodycam market in the Netherlands[80]. Recent developments with respect to the technology point to the implementation of live-stream capabilities for these cameras[81].

Via a multi-sited case study (see e.g. Hine, 2007), I investigated the network around the development of the bodycam in the Netherlands. By starting at one actor, the Zepcam company, I applied a snowballing approach to see where the actors would send me. I have looked into all three 'phases' of the trajectory of technology development; policy, design and use, both separately and in an integrated manner. Via interviews, observations, document analysis and artifact analysis I have tried to capture multiple perspectives and meanings regarding the bodycam.

In order to assess policy around the bodycam, I have looked at preliminary law and regulation as well as internal documents circulating in the Netherlands concerning the do's and don'ts of body cam use[82]. Also, I draw from two interviews with policymakers (police Holland-Midden, 2nd of October 2012 and Taskforce GTPA, Rotterdam, 11th of September 2012) who were involved in experimentation with the bodycamera.

For the design part, I have interviewed the CEO of the Zepcam company (3rd of March 2012) concerning the specificity of the assignment of creating a bodycam and the rather strict design guidelines that surveillance technology such as the bodycam entail for designers. Also, an interview was held with a police officer who played a significant role in development of this bodycam in terms of user requirements and testing. Moreover, an artifact analysis has been done via the methods of script analysis (Akrich, 1992) to see how certain requirements are inscribed into the artifact by designers of the Zepcam bodycam.

Finally, by turning to use practices of the bodycam via interviews and observations in the night, I captured what meaning and practices of use emerge with regard to this technology. Interviews were held with one bodycam user in Enschede (11th of September, 2012) and two in Rotterdam (1st of December, 2012).

80. See http://www.zepcam.com/upload/content/Verbinding03-zepcam.pdf Last accessed July 24, 2013

81. See e.g. The Zepcam company website http://secure.zepcam.com/content/zepcamlive.aspx Last visited 17-01-2013

82. See appendix F and G, which are the only existing legal documents concerning the bodycamera in the Netherlands at this point.

figure 1;
the Zepcam body camera as tested in Dutch nightscapes. From left to right; the wristband, the interface/battery box and the collar-camera.

2200 to 0600, 10th of November, from 22.00 to 03.00). Interviews were processed using TAMS analyzer[83] software. Coding schemes were developed by the researcher, based on an earlier-developed topic list prepared for the semi-structured interviews conducted in this research. This topic was discussed internally with the SUN[84] research team. In order to conduct the interviews and observations, no ethical clearance was required by the university. By discussing with police personnel before-hand, both for the interviews as well as the observations, verbal informed consent was obtained. Concerning the interviews, I was allowed to make audio recordings and to use real names in transcriptions if necessary. Concerning the observations, I was also allowed to be present at briefings, take field notes, and be a part of a surveillance team during the night. Agreements were also made concerning me keeping distance in case of an incident or when force was needed.

In the next section, I will look into the objectual practices of policymakers, designers and users of the bodycamera by discussing them one by one. In every section I will return to the question which forms of surveillance are articulated in these practices.

83. http://tamsys.
sourceforge.net/ Last visited
July 24, 2013

84. See http://www.
stadsnachtwacht.nl/team
Last visited July 24, 2013

85. Wet voor Behoud van
Persoonsgegevens, the
Dutch law on personal data
ownership, see (http://
wetten.overheid.nl/
BWBR0011468/geldigheids-
datum_14-01-2013) (last
visited 14th of January 2012)

5.3 The body-camera according to policy makers

Insights from the field of STS have taught us that every time a new artifact is introduced in society, it will shape, or be shaped by social actors and institutions, including law and regulation (see e.g. Pinch & Bijker, 1987; Law & Singleton, 2005). When it concerns surveillance technology that will be used in public space, one can imagine the need for regulation and law protecting both surveyor and surveilled is pressing. In these laws and regulations we can find articulations of specific goals of the artifact, and certain delegation of responsibilities. What kind of agency is attributed to the new technology; what is the technology supposed to do in the public nightscape? And what kind of surveillance is articulated?

5.3.1 Goal of the bodycamera

Surrounding the bodycam, no clear law or regulation in relation to surveillance is in place yet. This in itself is not surprising, since the bodycamera is an emerging artifact and similarly to the introduction of the CCTV camera, legislation lags behind and is based partially on experiences in practice. In the Netherlands, the documents that do exist are modifications of several existing laws concerning cameras in public space, privacy, police law and WBP[85]. What is to be found in these documents are the goals the bodycam has to serve. The following are mentioned:

1. **Reducing violence against police, and the recording of violence against the police;**
2. **The recording of offences, as well as the registration and identification of suspect(s);**
3. **Registering disturbances of public order;**
4. **Promoting the sense of security for police;**
5. **The use of captured images as supportive evidence in criminal investigations. (appendix F, page 1)**

The first goal hints towards another aim than surveillance per se. The idea for developing this camera is not in the first place for the safety or surveillance of citizens. Rather, it is deemed to protect police officers from violence. To be more precise, the camera has to contribute to diminishing violence against police. In the second place, the purpose of 'registering illegal acts and activities, as well as identifying suspects' is put forward. Here a specific type of surveillance activity is

emphasized, namely that of registering. In the goals that follow, feelings of safety for police officers and maintaining public order are mentioned. This slightly hints at a preventive function of these cameras. However, nowhere does it become explicit how this camera is to achieve these preventive goals.

From the point of view of policy-makers, the bodycamera cannot be seen as a 'mobile CCTV camera' because the goals as described above clearly show that the main interest put forward is for the camera to act as an aid to the police officer; as an empowering tool even. Citi-zens, or at least the subjects of this camera surveillance, are not mentioned in any sense. This is confirmed by one of the policymakers involved in the first pilot in Rotterdam:

M: [...] Rotterdam joined one of the pilots to test the bodycamera also in Rotterdam, one of the major forces in the country, where there is a lot of violence against police officers, to reduce that violence in any case...
T: that was the main reason for the bodycam to be used?
M: Yes. For us it was [...] We did not think of detection or surveillance, of course that's one of the... if you use the camera then you see that it does contribute, or it is at least helpful in capturing images that can help you later in tracing (interview policymaker, Rotterdam, 11th of September 2012)

Here, the respondent implicitly points out to the notion of function creep[86] (Lyon, 2001), where the first goal of the camera was indeed protection of officers, but it turned out to be good for other things as

well (in this case recognition and tracking of suspects). In the same policy document, the following aspects of the camera and of the validity of footage are mentioned:

Camera recording should take place in the public space. These recordings can only be made by employees of Police and the Special Investigating Officer (BOA's). For this type of camera-/footage-registration there consists no other legal basis other than that mentioned with respect to investigators acting under article 2 of the Police Law. These can be paid and unpaid officers, as long as they are a part of the so-called Special Investigating Unit (BOA's). It should be noted that the officer, if possible, always makes clear that he or she is recording. The storage of images, and its processing, falls within the scope of the Police Data Act (WPG) Art. 8 and 9 of the WPG. ("Juridisch kader mbt inzet Bodycameras, appendix G, page 1")

As this quote illustrates, the made footage does fall under the law of surveillance footage. Nevertheless, when footage is made, it does not become part of 'standard police data'. The law for data protection (WPG) still applies. The execution and evaluation, however, of how this law is implemented in case of the bodycamera is the responsibility of the officer at hand. In several documents that are currently available, laws and regulation described, or set out, have as of yet not found their way to court. In the Netherlands, a system of jurisprudence is active and for that matter, regulations and pre-law becomes law. As a consequence, the bodycam is as yet deployed under

86. In the context of surveillance studies, the term function creep refers to the notion that once a surveillance technology has been developed and put into society, users, or stakeholders, discover additive functionalities via the device and start deploying those (e.g. speed-cameras that are also used to track license plates, and that then leads to tracking down suspect vehicles, or, in this case, a bodycamera that can also be used as a surveillance camera).

the regulation of 'police equipment', and has to abide by the law for personal data protection. Besides the current issues and problematics surrounding data protection in online law (which will not be discussed here), the bodycam does not fall under the laws and regulations of CCTV cameras. The rationale behind this is that CCTV cameras monitor public space and serve the purpose of surveillance, where the bodycamera can only be used when the user (the police officer) decides that a situation needs to be recorded. In other words, the responsibility for deciding what is worth recording lies with the police officer. Moreover, the bodycamera is there in the first place as a safety-tool for police officers, and not as a surveillance camera. The regulations and pre-laws that do currently exist have implications for what this bodycam is and how it should be designed and how it should be used.

5.3.2 Challenges for design

As the above quote shows, there is no legal grounding for the use of the bodycam apart from article 2 of police law. This absence of specific regulation delegates the responsibility of dealing with the footage made to both the designers and the users of the camera, where the designers have to make sure that somehow footage is safely stored and not tampered with, whereas the users of this camera have to be convinced that the camera actually does as promised: to store footage in a safe way. Further questions rise here including whether the designers of the camera have to 'protect' the footage against its maker and whether a user is allowed to delete, or otherwise manipulate footage made by the camera. A Rotterdam policy maker states:

T: [...] and when it comes to truth-finding, well that is of course... images are manipulative course
M: Yes, and that is why I say the time of recording should run along in the video. The date must be visible, so that there can not be any cutting or editing... In all our footage, a timestamp should be visible. We explicitly took that into account, because we do not what to create any possibility of cutting-and-pasting in our footage... If we make footage, then it has to be the footage. [...] The reason leading up to an incident, what exactly happened, up to the arrest eh... uhm and possibly also the transportation of the suspect... this all should be part of the footage. There is no cutting and pasting. (interview policymaker, Rotterdam, 11th of September 2012)

The footage that comes from the police must be the footage. Here, the responsibility for making this happens lies in the system and should be inscribed in the system by designers. A clear demand for design is stated here; the date and time stamp should be present in the footage. Another related demand emerges here as well. To what extent should the surveilled, in some respect also a user of this camera, be notified and assured of the 'correctness' of the camera? Indeed, there is a line in the policy document that emphasizes the importance of visibility for the camera-subject (the viewed, or the surveilled):

It should be noted that if possible, the officer always makes clear that he or she is shooting video. [...] The use of the cameras should be expressed clearly and without ambiguity to everyone who partakes in an incident or conversation. This can be via verbal communication or a batch of inscription which is clearly visible to everyone. (appendix G, page 1)

This raises the question of how to design a 'visible' camera. Here as well, the responsibility of making the act of filming clear to the surveilled is delegated to the users of the eventual camera, not to the designers of this camera. There is no clear-cut understanding of what visibility means and when this is achieved. Concerning storage and ownership of footage, a reference is made to the law of police data. Furthermore, some standards are introduced:

The storage of images and their processing are falling within the scope of the Police Data Act (WPG) Art. 8 and 9 of the WPG. [...] Inside the Police, the images are stored on a so-called stand-alone machine without an Internet connection, in a secure, locked room in the police station. (appendix G, page 1)

Regulation states here that footage made by the camera should be stored locally, on a device or machine that is not connected to networks of data (e.g. the Internet). Here we see that the bodycam is by regulation already not a stand-alone artifact, rather, it operates in a network of actors[87]. Who or what is responsible for the guarantee of data safety remains unclear; should the bodycamera detect networks and say 'no' when trying to download data? Or should there be a protocol for the officer who wants to see his or her recordings? Here, an extensive list of requirements and a comparative study into potential solutions is provided by the Dutch police force[88] in a 'practical user guide' concerning mobile cameras, including guidelines of both footage quality and storage safety. This report has been circulated[89] amongst police departments that were using body cameras or were about to. It covers many practical issues concerning camera performance, ergonomics, systems demands and expected costs. In that sense, this report can be seen as an extensive design guideline, although surveillance-related specifications were not included (except for storage safety issues).

Concerning the type of surveillance that is articulated during the objectual practice of policymakers, the meaning is first and foremost to protect police officers. How these cameras should accomplish this protection remains unclear. Either potential offenders back off due to the insight that the police officer is wearing a camera, or the police officer and/or camera have to communicate its presence

87. The quote states that data from the bodycamera (footage, sound etc.) should be saved on a 'stand-alone' machine, and this might seem in conflict with the statement I make that the bodycamera is not a stand-alone artifact. Here, we see two jargons collide; 'stand-alone' in ICT terms means that the system's power, processing- and data storage are on the same device and, are not dependent on other systems. Here, it also means that the system on which bodycamera- data is saved, is specifically not networked. The statement made about the bodycamera not being stand-alone stems from the field of STS, where I want to point out that the bodycamera cannot be analyzed as a sole technological artifact. Rather, it acts in a network of artifacts and humans.

88. See 'Praktijkgids mobiele cameratoepassingen', 2010.

89. Unfortunately, this document is not publicly available.

and function somehow. Both options assume a preventive working of cameras in public space. Another way the camera could protect is by collecting footage that can be analyzed afterwards; to collect pictures and find 'mugshots'. In this case, the bodycam does become a mobile CCTV camera, however not acting under similar laws of privacy and data protection.

The objectual practice of the policymakers shows that some responsibilities of making the bodycam become the object that the policymakers want are delegated to designers. Both for the physical design of the camera and the processing and ownership of footage, policymakers set specific constraints. It has to be visible, or at least the user of the camera should be clear about actually carrying a camera. Data needs to be stored in a safe place, on a non-networked compu-ting device. Under normal conditions, the device can only be used in the public sphere.

These sometimes general statements point at a camera-development process that has to incorporate certain responsibilities into the camera, while delegating others to the user of the camera – the designers have to translate these general statements into very specific functions. Therefore these statements can be seen as guidelines for the camera developers. The type of surveillance that is inscribed in the bodycamera by policy is that of evidence gathering and protection of 'surveillance personnel'. The 'watched' of the bodycamera are not mentioned. Also, specific camera functions or benchmarking with existing surveillance systems is not mentioned. In that sense, the bodycam is placed outside regular surveillance measures and technologies.

5.4 The bodycamera according to designers

Turning towards the design of the bodycam, the goals as set by policymakers create certain design guidelines or principles that have to be translated into the functional design of the camera. How did designers convert policy-based design demands into the device? What kind of agency is inscribed in the object, and what agency is delegated to users? Also, reflecting on the notion of surveillance and the earlier-mentioned potential function creep of this device, we can ask what kind of surveillance is articulated in the practice of design?

5.4.1 Guidelines

If we look at the development of the Zepcam bodycam, the design guidelines were indeed based on the demands provided by policymakers (see former section). These demands were transformed by Zepcam into their own design guidelines for the camera (taken from the interview with the CEO of Zepcam, 3rd of March 2012):

1. **It (the bodycam) should be reliable and open;**
2. **It should not trigger negative responses;**
3. **It should allow for different access levels (to the footage);**
4. **It should provide good image quality, since 70% of use is at night;**
5. **It should act as a an objective witness[90];**
6. **It can be used as a training tool;**
7. **The camera also should collect evidence, or at least make reporting on an incident more easy and more reliable (than a written report).**

When comparing these design guidelines with demands made by policymakers, a more practice-based and user-centered interpretation of the original policy guidelines emerges. Designing a reliable and open camera means that the camera should be able to endure the conditions of the nightscape (for instance rain, shocks, fast movement, bad lighting conditions), and under these conditions it should always function when needed. What exactly is meant by openness of a camera, is not clearly defined. This leads to questions for whom it should be open, and what should be open. Stating that the bodycamera should not trigger negative responses links up to the goal of diminishing violence against police personnel; the first goal set by policymakers. The camera should not only not trigger, it should help in diminishing violence against police officers. Collecting evidence is a direct translation of a policy demand, and linked to the design demand of an 'objective witness'. The objective of high image quality as set by the designers meets the demand of policymakers to capture potential crimes and incidents in public space as well the demand to gather evidence and to capture disturbances in public space. Although no hard technical demands are provided by policy, it is evident that image quality needs to be

90. A police officer explained during an interview the notion of tunnel vision: he referred to the adrenaline that occurs when police officers have to act in case of an incident or emergency, often blocks their 'objective vision' and that the camera could help clarify in hindsight what actually took place.

91. Mugshots are photographs or in this case stills taken from video footage, of suspects and/or criminals.

92. The Zepcam camera together with all its specification was sent to the researcher. Data stems from visits to the Zepcam company.

sufficiently high, especially since 70% of use takes place at night (interview Zepcam CEO, 2012). As a consequence, the camera needs to be of high quality, which means the battery size increases. From a surveillance perspective this implies that the bodycam is a different type of camera than the fixed (CCTV) cameras in terms of visibility. One of the consequences is that the footage is of such a quality that using it for 'mugshots'[91] and face recognition becomes a possibility. Without entering into a technical debate, the point made here is that because the device allows for high-resolution footage, it also allows using it for this purpose.

5.4.2 The bodycamera

How are these design guidelines inscribed in the artifact? Before starting this analysis, it is useful to provide a short description of the actual bodycamera as introduced in the Dutch nightscape in 2009. Although other cameras are available on the market, the camera I am analyzing here was the main camera used for first testing of bodycameras at Dutch police forces. The version of the camera analyzed[92] can record footage up to 4 hours in a row, in both normal and night-vision mode. The camera can be set to record audiovisual footage, or visual only (figure 2). The footage can be reviewed and tagged both on the spot and once it is downloaded. The camera is separated in three parts; the actual camera/lens, which is connected to the second part; the battery and the interface. A third element is a wristband-shaped remote control. Also there is a set of small accessories (clips).

The first design guideline described above, regarding reliability and openness of the camera, relates to issues such as user experience of the device (easiness of use, interface design, battery life), but also to the liability of the device and in that sense, to feelings of safety of the user. The founder of the company explained that besides the basic elements, the use of the camera was highly dependent on the accessories that allowed for different ways of wearing the camera (interview CEO Zepcam, 3rd of March 2012). Put differently, if the camera is to be worn, this is highly dependent of the different possibilities to wear it in a comfortable way. The designers inscribed this requirement by providing users with different ways of carrying the camera, via different clips in which the camera can be put (figure 3). Wearing the camera should also not be a risk, meaning that when the bodycamera is worn in public space, it should not form an extra threat or danger for the police officer. A physical manifestation of this risk is for instance the connection cable between the camera and the interface box; it can be grabbed by others and even be used to strangle an officer. Whereas at first this was a fixed connection, during user tests it became apparent that this cable could be pulled, and used against the police officer. This was confirmed by a policymaker who was part of the first test phase of the bodycamera:

T: Because you could pull it (the camera-wire)?
M: Yes, that we have critically examined in the beginning (policymaker in Rotterdam, 11th September, 2011)

The designers made this cable breakable in the middle, making sure that if the cable is being pulled, it snaps in two parts (rendering it harmless for the police officer).

To accommodate the demands as discussed above, in particular 'not triggering negative responses', the designers provided a wristband-like remote control. The wristband was introduced to allow for direct recording (rather than opening pocket, getting out the interface box, finding the right menu, and pressing record). Besides improving usability of the bodycamera, this wristband also creates the opportunity for the user to record footage secretly, i.e. without the watched being aware of the recording. This wristband, although not intended to support this type of use, holds this affordance (Gibson, 1977; Norman, 2001). The wristband and thereby the possibility to make recordings in a secret manner, can be considered as conflicting with policy and law demands.

5.4.3 Transparency of the camera

The design guideline of creating an 'open' device, meaning in this case a communicative device that should make clear to the user, but also to the watched, that a camera recording is taking place, is delegated to a blinking LED in the wristband. One can question if the chosen solution of one blinking led is indeed sufficient to meet the policy and law demand that camera recordings should always be made clear and visible to the potentially watched. The designers here chose to implement this via a wearable sign, or as part of the uniform (see figure 4) This can be seen as the equivalent of CCTV signs that can be seen in Dutch city centers, to warn the public that surveillance cameras are being deployed.

The actual camera does not provide any feedback. Once footage is made, the different access levels to the footage becomes relevant; who can do what with the content? As interpreted by designers, access control resonates with the demand by policy to let the camera be an 'evidence collector', for footage needs to be untampered and clean. In order to retrieve footage for evidence or reporting, the camera interface allows for the tagging of footage (see figure 5). This means that on the interface box, the user can retrieve and select a part of the footage made and give it a name tag. Once the data is downloaded onto a computer, the user can search for the tag instead of reviewing the entire footage made. Actions such as tagging can only be done by a specific user. Once the device is back in the station, only a local administrator[93] can access and delete footage. Via these types of access control,

93. Often an officer with a higher rank, for instance the chief of that night, or a dedicated ICT officer.

figure 2;
camera settings

figure 3;
the Zepcam clip and cable/connector to the camera.

the demand of creating a camera that acts as an objective witness is met.

In order to make sure that footage cannot be tampered with, the user of a specific camera is linked to the device via a unique code. The interface box of the camera automatically locks after a programmed time (say 5 minutes). Now, the user has to re-enter his or her code in order to access the interface box (see figure 6).

5.4.4 Inscribed responsibilities

As described above, the police officer as a user of the bodycam is in charge of deciding when to record what. However, once recorded, responsibility for the footage lies with the local administrator. In order to make sure that footage is indeed processed (e.g. saved or deleted) by the local administrator, the artifact has been inscribed with an overwrite function; after a given amount of hours, footage is automatically deleted, without inter- ference of either user or administrator. The designers inscribed into the interface box a divided responsibility between the police officer, the local administrator and the artifact; decisions of making footage are with the user, where the wristband with LED feedback and the tagging of footage provide this action. The proces- sing of footage is partially delegated to the device itself as well as to another actor (the local administrator at the police station).

The camera interface box does provide settings for different access levels. The potentially watched are protected due to a built-in safety concerning the storage, which means if the camera gets lost or stolen, the data is not readable. Concerning the processing of footage once back at the station, the designers delegated this re- sponsibility to local ICT departments and/ or supervisors of that night. (see figure 7).

Although not all aspects of the soft- and hardware design of the camera have been discussed, the examples above show how policy demands for the bodycamera have been inscribed into In the first case, responsibility of providing valuable footage lies partially with the artifact (automatic recording) and partially with the user (directing the camera in the right way).

	police officer	local admin	supervisor	bodycamera
recording	X			X
tagging	X			
downloading		X	X	
deleting		X	X	X
reviewing	X		X	
deleting				
assigning users		X		
change settings		X		

7

4

5

6

figure 4;
Notification of bodycamera integrated in a uniform. This exam- ple is meant for the UK market, where interestingly, the bodycamera is categorized as a CCTV camera. In the Netherlands, a sign is worn over the uniform.

figure 5;
tagging possibilities

figure 6;
unlocking the camera

figure 7:
delegation of body camera responsibilities

This automatic recording also implies a constant monitoring of the police officers' actions. The second scenario, which is opted for in case of the Zepcam, delegated the responsibility of what is recorded to the user.

The choice of basing the bodycamera on an existing extreme-sports camera can be interpreted as using an off-the-shelf solution, where existing solutions are tinkered into a new functionality. In this case this leads to a camera that indeed is robust and ready for use in all kinds of weather conditions, for instance. However, the issue of notifying that a camera is in use, or the processing of footage afterwards are not taken as core design goals or guidelines. Rather, these guidelines stem from the 'extreme-sports camera', where the camera is not used as surveillance tool, but as a sports-recording event, where users deals with footage on their own computer, for instance. In that respect, the camera is aimed solely at the wearer of the camera and the processing of this footage afterwards. Again, the 'watched' or the subject of surveillance of this camera is not taken into account. Indeed, it is stated that the camera should be open and transparent, but in practice the physical camera is black and hard to distinguish in the night. As an accessory, there is a wristband that should be worn by the camera user to notify potentially watched. The type of surveillance articulated during the objectual practice of the designers is twofold: the bodycamera was created as an objective camera artifact to protect police officers but it can also be used to monitor and record citizens.

5.5 The bodycamera according to users

After describing how the bodycamera came into existence via policy and design, I now turn to the objectual practice of police officers who use the bodycam in order to see if and how the ideas of policy and design resonate with the surveillance practices of Dutch nightlife. As shortly mentioned in the method section of this chapter, I accompanied a team of police officers equipped with a bodycam on two different nights. These surveillance rounds started at the police station, where a briefing was given on the upcoming night. During these briefings, teams of two were formed that worked as a fixed team for that night. I accompanied such a team from the briefing until the closing time of the local nightlife district.

5.5.1 Preparing for the night

The use of the bodycamera started already at the end of the briefing, where the amount of bodycameras for that night were dividid amongst the teams. Because these briefings are held just before a round of surveillance, there is an equipment-check before going onto the streets. Decisions are made quickly during this check, as I observed during such a briefing:

94. Point derived from multiple interviews (see method section). There is a work-document circulated amongst police forces on practical tips in bodycam use. However, this document is passed on via word-of-mouth and is not formalized or spread structurally.

"Well, you see, (police officers tries to show me footage of the night before), ohw... this one does not work. (to a colleague) Do we have another one? No? Ah, well, then no camera this night." (police officer during observation in Enschede, 3rd of October, 2012)

Although this team was assigned a bodycamera, they do not take the time to re-check why their camera did not work, or even to substitute it with another, working camera. Compared to other equipment officers have to carry, the bodycamera is treated as a last-minute issue, that does not hold top priority when preparing for a round of surveillance. Due to these kinds of instances of unreliability, the demand for bodycameras has diminished since its first appearance in Enschede, as well as in Rotterdam. A Rotterdam police officer explained:

" We used to have 150 cameras, but now, there are only 10 left that work. I do get a lot of requests, but I have to sell 'no'... we have had lots of reliability issues with these cameras..." (interview with police officer in Rotterdam, 1st of December, 2012)

Although police officers thus do ask for the bodycamera, reliability of the camera puts a major constrain on its use. However, the restricted use of the bodycamera was not only related to reliability problems. A project leader and police officer involved in introducing the bodycamera in Rotterdam explains:

M: " So yes some colleagues were reluctant to use the camera, others were not. Enthusiastic colleagues, less

enthusiastic colleagues" (interview policymaker, Rotterdam, 11th of September 2012)

Non-use was thus not only caused by reliability issues. Obviously, there were differences in expectations of what the camera could do, how it would help a police officer on duty. In order to take doubts away, or to make the choice to start using a bodycamera more easily, bodycamera training courses were planned. As a police officer in Rotterdam explains, these courses were in the making and had taken place a couple of times. He continued by stating that due to financial reasons these courses had not become structural or continuous. Instead, introduction tended to take place via practical tips from former or current users. Attempts to formalize these user instructions have been undertaken, but with limited success[94]. A policymaker confirmed that district coordinators had been assigned with the task to distribute tips on how to set up the camera, how to aim it and what kind of factors influence the recording process. This resulted in recommendations, for instance to not film against the light, or to confirm the angle and direction of the camera by checking it on your screen. The introduction of a new piece of surveillance equipment, then, has not been taking place structurally. Moreover, the meaning of this camera in terms of purposes or objectives have not been communicated clearly or in a centralized manner. Another reason for reluctance of use, is that the bodycamera indeed can act as an objective witness; the bodycam is not only a surveillance tool for nightscape- visitors, but also for police officers themselves. A user states:

The police officers thus state the importance of staying in control over what is being recorded. The reluctance of using the bodycamera seems to be partially due to unclarity concerning control and self-surveillance.

5.5.2 In the night

When a camera is taken into the nightscape, the user has to go through a series of steps. The company Zepcam provides users with a manual (figure 8) explaining these steps. First, the camera needs to be connected to the extension cable and this cable has to be connected to the battery-interface box. The remote control can be worn on the wrist. Setting up the camera can involve an extra step, depending on how and where the camera is worn. Different clips are available that allow for different ways of carrying the camera. This includes the possibility to wear the camera on a helmet, on the chest, or on a collar of a shirt or jacket. The last step is that during rounds, the physical camera, by law, should be worn in such a way that it can be seen and recognized as a camera.

If officers decide to use the camera, they set up the camera before or at least at the beginning of a surveillance shift. I noticed during my observations that connecting the camera to the interface box seemed to be difficult, especially in combination with the activity of verifying the right angle of the camera. Since the box is tucked away inside a jacket, adjustment during a shift means 'undressing'. This was considered by a team of police officers during one of my observation rounds to be 'unprofessional' whilst on a shift. Still, this undressing and adjusting was needed while being on a round. In one instance, a police officer noticed a wrong setup of the bodycamera by a colleague:

"You are not wearing it correctly, you have to hide the cable... that can be dangerous, man! Make sure that the wire is under your coat .."

ZEPCAM

1. Zepcam T1-XT recorder
2. Zepcam Live module
3. Zepcam Remote control
4. 2A USB Charger
5. USB cable
6. Video cable
7a. Zepcam Bulletcam
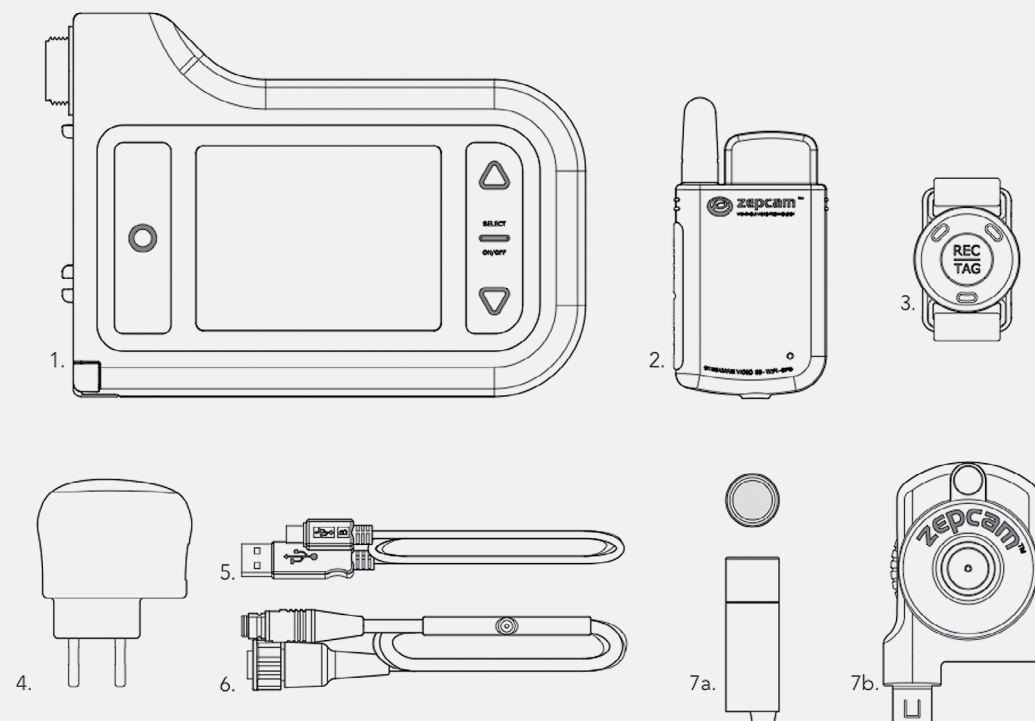7b. Zepcam Clipcam
8. Diverse mounts

figure 8;
setup of the camera
according to Zepcam.

"Let's see if it (the camera) is aimed correctly" (jacket open, box out, login, check, lock device and back into the jacket). (Field notes Enschede, 10 November 2012)

This example shows that the bodycamera does need attention during a shift whereas attention might have been needed elsewhere. The bodycamera demands extra attention and care during police work, but does this extra work translate into more safety, or to a higher prevention of violence against police offers? During my observations, there were only a couple of instances where visitors of the nightscape recognized the bodycamera as being a camera. During instances of violence that I witnessed, the camera was switched on most of the time (in one instance, it was forgotten). However, this had no influence on the behavior of the citizens who were acted upon. Recalling that the first policy-demand was that of decreasing violence against police officers, a police officer emphasized that the bodycam did not protect police officers against violence:

"No, it does not help to diminish violence against police officers, it remains a combination of human being and camera, and it is hard to prove that there were fewer incidents against police personnel due to the camera. It (the camera), however, is very good for evidence collection." (interview with police officer in Rotterdam, 1st of December, 2012).

Here it is stated that the camera does not help in diminishing violence against police officers, however, it is not directly clear what the camera does in terms of preventiveness. Similar to discussions on CCTV and its preventive function (see e.g. Brands, forthcoming), the prerequisite for preventiveness is awareness and visibility; if citizens cannot see, or do not recognize the bodycamera as a camera, how can it work preventively? As described earlier policymakers clearly aim at a preventive function of the bodycamera. However, this implies a highly visible camera, or at least a clear form of communication towards the potentially watched that a bodycamera is in place. While both policymaker and designers have attempted to incorporate this visibility towards the watched, many police officers revealed that this visibility is not always desirable, often the opposite. During my interviews and observations, I noticed that visibility of the camera plays an ambivalent role amongst police officers. Sometimes, the emphasis of the camera was put on prevention and awareness amongst citizens that a bodycamera is in use:

"When we say that they are being filmed then they become quieter" (police officer during a round in Enschede)

"Especially with youth groups, after a few months of use, they knew that if we were coming with a camera, that they had to be on the move. [..] They would say: "Hey there is Robocop!" And then they put on their hoodies in order not to be recognized, and off they went " (interview with police officer in Rotterdam, 1st of December, 2012)

According to these users it works preventively, but only with potentially watched that are already familiar with the artifact. The bodycamera, however, was not always labeled as having a preventive function, sometimes not at all. Both quotes (that there is a camera and that potentially watched are being told that they will be filmed) refer to the physical presence of the camera as performative, not necessarily the recording or making of footage. On the other hand, during observations and interviews, the bodycamera allows for different types of surveillance use, where also the lack of clear rules or protocol concerning the bodycamera is used in favor of the police:

"Sometimes you want to record secretly, and sometimes you don't. In the nighttime district, we do make clear that we record." (interview with police officer in Rotterdam, 1st of December, 2012)

"Often, it is useful if people do not know they are being filmed" (interview with police officer in Rotterdam, 1st of December, 2012)

"The bracelet (that notifies that a bodycam is in use) is never worn" (field notes from observations in Enschede, 3rd of October, 2012)

"Often people think that this (the actual camera) is a microphone" (field notes from observations in Enschede, 3rd of October, 2012)

The first two quotes and the last one show that often the camera is not recognized as such and that this is deemed convenient by police officers. The third quote shows that parts of the equipment are sometimes not used, such as the bracelet. This bracelet has a feedback function both to the police officers as well the potentially watched. First of all, this has implications for a potential preventive function of the camera; if indeed visitors of the nightscape do not know that the object is a camera, how can it work preventively? Consequently, this obscureness of the camera allows police officers to make secret recordings: the responsibility of choosing to do so lies with the user of the camera; the police officer. This introduces another objectual practice of the use of cameras in the nightscape, where it is not al all about the possible preventive function of cameras, but about its potential to monitor and surveil.

Compared to a CCTV camera, which is monitoring constantly, the bodycamera is used incidentally. The camera is used to record footage only a couple of times a night (from observations in Enschede, 3rd October, 2012). The recording of a shift (a shift can last up to 8 hours) provides only minutes of footage. The design requirement of tagging, thus interacting with the interface box, hardly occurs during a surveillance round, simply because the attention of police officers is constantly on the street and on the radio (e.g. portofoon) . Users explain:

"The (functionality of) tagging is useful, but you still record only 5-10 minutes per night, so you can review the complete footage easily" (field notes during briefing - observations in Enschede, 3rd of October, 2012)

"No, during a round of surveillance we never really tag" (interview police officer Rotterdam, 1st of December, 2012)

The bodycam thus is used 'on the side' and occasionally, at least according to observations done. During the incidents in which the bodycam was actually used, the camera was quickly switched on before an intervention began. The policy demand of monitoring public space, or even capturing incidents does not find itself completely reflected in these use practices, because the camera is not set to record constantly; neither is the camera always switched on in case of an incident (it sometimes gets forgotten in the heat of the moment, as mentioned before). Designers tried to delegate this responsibility to the device by programming a buffer. This means that if the camera is set to record, it already recorded a certain amount of time (10 seconds) in advance. This is called a loop recording (see figure 2). Despite this buffer, the bodycamera in use practice is not always capturing when and what users wanted to have captured. Concerning footage captured, police officers have the option to review footage on the spot. However, this never happened during my observations. If there is footage that needs reviewing, this is done after a round of surveillance, back at the station.

5.5.3 After a night

Once back at the station, the footage has to be dealt with. Different protocols have been witnessed and reported upon during my observations and interviews. In Rotterdam, all recorded footage is downloaded by an officer that is specifically authorized to do so. Tagged footage, or footage that is deemed relevant to keep, according to the bodycam-user's report of that surveillance round, is kept for review. The rest is deleted. In Enschede, the bodycamera footage that is deemed valuable or relevant, is downloaded on one computer. This computer is not connected to a network, and in this respect, abides to the protocol as set by policy. The footage then is reviewed by the bodycam user together with a superior officer. Footage is sometimes deleted or stored on a local folder. Once in a while, the footage that is no longer necessary is deleted. This shows that already within two police stations, practices surrounding footage processing are highly varying. Only parts of the protocol as set by policy are followed. One reason for the difference of dealing with footage is how the bodycamera fits within the local ICT infrastructure. Two bodycam users state that although the bodycam was a welcome piece of equipment, the difficulty to get to the data on one's own PC (e.g. ICT infrastructure) is a setback.

[...] "It should be easier to empty that thing... to get the footage off" (interview with police officer in Rotterdam, 1st of December, 2012)

Another reason is that footage can only be treated as official evidence if it is properly secured. As of yet, bodycamera footage has not been used in a court case, according to a Rotterdam policymaker (interview, Rotterdam, September 2012). The securing of footage is a policy demand, and design has translated this by creating a system to make sure that data can only be downloaded on a specific computer, by a specific user. The footage however, is not always so well-protected in practice:

T: [...] how are things setup concerning the backend and image storage of the bodycamera... are there specific systems that have been devised for this?
M: [...] Well, we are just a little country with various service areas within the police force. For something to be developed and then implemented on a small scale with the proper support... well that turns out to be very difficult to arrange in practice. So you need to work with different means, such as laptops etc. One solution is to store images and footage on hard disks... that is what we have done so far... (policymaker Rotterdam, 1st of December, 2012).

"There were clear demands and a protocol (of dealing with footage), but it was very cumbersome..." (interview co-ordinator bodycam Rotterdam, 1st of December, 2012).

Local machines and programs were used to manage recorded footage. Plans made by policymakers to create a centralized and closed (or at least controlled) way of dealing with bodycam data in practice boil down to an off-the-shelf-type of solution, of making due with infrastructure already in place. Once footage is downloaded from the bodycamera and has entered in the local ICT infrastructure, it can circulate and serve different purposes. First of all, footage made by these cameras is used (and useful) in identifying perpetrators after a night out, according to users. But the footage also ends up in other parts of police work. One moment where police officers get to review their own footage is when detailed reports have to be written on the surveillance round. A police officer in Rotterdam responds:

"You must type your report, and then after, you get access to the camera images of that night. You should not let your story be influenced by these images" (interview with police officer in Rotterdam, 1st of December, 2012)

The protocol as put forward by the police officer is to first draw up a report from one's own memories, only to fill in the blanks via bodycamera footage. In that sense, the camera is not seen as objective witness, or not valued over the perception of the user. Some users state that it indeed helps to clarify details and re-evaluate situations with hindsight. Here, the design guideline of creating an objective witness becomes ambivalent; one the one hand the report of the police officer is the first source of truth, on the other hand the footage does alter the police officers' perception of what happened. Besides the importance of the account of the police officer on incidents, footage is used as a reliable source of data:

"We have resolved a lot of cases by using images of the bodycam" (interview police officer Rotterdam)

"We use the footage to make screenshots. We review them during briefings" (field note during observations, Enschede, 3rd of October, 2012)

Here, we see that the goal of evidence gathering and visually capturing of suspects is foregrounded. While the contribution of the camera to police work during a surveillance round remains debatable, the camera has apparently considerable value as a capturer of perpetrators. It must be pointed out, however, that this happens in a non, or semi-regulated way, whereby the scope of use of footage differs per location. The bodycamera and its footage reveal an experimental character in police work practices. This means that the meaning and the role within the nightscape also differs per location, where the camera serves an ambiguous role as both a visible tool aimed at crime- and incident pre-vention, but it also proved valuable as an obscured recorder.

The type of surveillance articulated in use holds somewhere between monitoring and profiling. Although the camera is not recording constantly, the moment an officer decides to switch on the camera (for which he or she probably has adequate reasons), the camera does not only record the subject of bodycam- surveillance, but also (maybe unwillingly) the surroundings of this subject. When switching on the camera, in practice the subject and its surroundings are not always notified (and sometimes preferably not notified). On the other hand, the use practice also shows that once notified that a camera is recording the interaction between officer and subject, the camera is performative, in the sense that it does alter behavior, and, from police officers' reports as mentioned earlier, in a positive way.

The preventive function of surveillance, heavily debated in the case of CCTV, does seem to resonate with the bodycam. However, no direct links were found between the use of the body-camera and a diminishing in violence against police officers (see rapport Beke 'cameratoezicht in beweging', 2010 for a quantitative study on this subject).

95. The Zepcam, see http://www.zepcam.nl Last visited July 24, 2013

Conclusions

In this chapter, I have sketched the process of introduction of a new technological artifact in the Dutch night-scape' the bodycamera. I have analyzed one type of bodycamera[95] introduced in the Netherlands based on documentation, interviews and participatory observations. My question was what the police officer - bodycamera hybrid is supposed to be doing according to the different stakeholders or actors. How is the meaning of the bodycam articulated differently by different relevant stakeholders of the bodycamera? By following the objectual practices of policymakers, designers and users of the bodycamera, I have distinguished three practices in the development process that seemed crucial for this development.

For policymakers, the bodycamera should protect the user (in this case, police officers) against violence directed at them. As a secondary function, it should record public events, and visually capture suspects. The purpose of the bodycamera is already multiple at the moment policy-makers draw up a list of 'functional' demands for the camera. Drawing on a combination of existing surveillance- and police laws, the proposed artifact already on paper has to compromise between being a tool for police officers and a mobile surveillance camera.

For designers, the camera is a variant of, or evolution of an extreme-sports camera. This process of development is characterized by a form of building on an off-the-shelf solution, where a known solution is taken as a starting point for a new market. Choosing a matured, existing technology that is relatively easy to modify into a new artifact influences technological choices in the development process. Robustness, reliability and usability are important goals for design in this case, and using a technology that has already proved itself helps in achieving these goals. Informed by policy, the designers also emphasized footage security and access-control to footage made.

For users, the most important meanings of the camera are evidence gathering for their own acting, as well as capturing suspects and feedback on acting. Also, easiness of processing data (and the lack thereof in the current camera) turned out to be an important factor in deciding to use the camera or not.

On objectual practices and articulation of meanings

Having taken the theoretical perspective of the objectual practice (Knorr-Cetina, 2001), I revealed meanings of the artifact articulated in three different layers of practice: policy, design and use. Throughout the process, the bodycamera shows signs of multi-stability (Ihde, 1986), where the bodycamera is treated differently in different contexts. During the practice of police officers for instance, a different artifact emerges than as proposed by policy or as inscribed by design. We see here that the model of "inscription via designers, description via users", as proposed by Akrich, is incomplete in analyzing the bodycamera. Rather, in emerging, government-initiated surveillance technologies such as this, I showed that policy, design and use all have a shaping role in what this bodycamera does once introduced in work practice. The work of Knorr-Cetina offered a conceptual frame via the notion of objectual practices; my analysis via this concept showed that the bodycamera reveals different meanings in respectively policy, design and use.

Where theoretically, scholars from different disciplines have stated that meanings are inscribed into the artifact by designers and that users are scripted in a particular way by these designers as to how they should interact with the artifact (see Latour, Akrich, 1992), the difference in this case and in this analysis is that the artifact is a surveillance camera that has a particular, almost linear, development process from policy to design to users. Designers in this case are also clearly configured (Mackay, 2000; 752) by policymakers. On the side of users,

the bodycamera, as other surveillance technologies that are being deployed in public space, turned out to be explicitly multiple. Equally important, the users of the bodycamera turned out to be explicitly multiple; an officer wearing the camera as user, a local administrator manipulating footage as a data-processor, the potentially watched and captured of this camera as implicated actors (Clarke, 1998). As shown in this chapter, the process of meaning inscribing as posed by Akrich and Latour thus can be questioned; there are far more actors and actants at play that influence meaning-inscribing than (merely) the designers (see e.g. Oudshoorn and Pinch, 2003).

What does this mean for surveillance?

Reflecting on the objectual practices of policymakers, designers and users I conclude that these practices resulted in important differences in what the police officer- bodycamera hybrid should do or contribute to surveillance.

Equally important, the new artifact arrives in an array of tools that aids the police officer on duty. This police officer is part of a larger network of actors and actants that are involved in safety and security in nighttime districts. In this surveillant assemblage (Haggerty & Ericson, 2000, see also chapter 1), this can be seen as a new actant that alters the entire assemblage by making video surveillance mobile and literally grounded. The three objectual practices discussed all reveal a different articulation of how the bodycam would fit within the surveillance network.

According to policymakers, the camera should first and foremost be a protective measure for police personnel and is considered to be more of a self-surveillance measure against the (violence of) public. Side-effects, according to policy, can be indeed the recording of suspects, and the monitoring of public space. In that sense, the bodycamera reveals similarities with classical CCTV cameras, the only difference being mobility.

Turning to design, the focus lies with reliability, data protection and user ergonomics. Also, the option to have a live-stream of bodycamera footage connected to a (CCTV) control room is being introduced. This would mean that besides the public, the police officer is also under surveillance. Here, the influence of other

emerging technologies in public space can be seen; all kinds of 'social' media services and networks of streaming data also occupy these spaces (see chapter 3 and 4). Part of these services and technologies can be seen as a new type of surveillance, where sharing of data and participation via social media produces a large amount of potential surveillance data. Where one would expect the bodycamera to follow the logics of this new surveillance, data management and storage of bodycam-footage still takes place in a closed manner and from that perspective, the bodycamera resembles current practices of CCTV surveillance and image storage. However, in data management, lots of leaky containers (Lyon, 2006) emerge due to local protocol and local practice.

In use practice, emphasis is put on the preventive function via actively pointing out that a camera is recording. The added value of recorded footage lies for instance in the ability to use earlier described mug-shots from recordings or to evaluate incidents for training purposes. The type of surveillance articulated here is the bodycam as an extra tool that resembles CCTV surveillance of monitoring and identifying. However, the fact that the shape and the type of camera does not resonate with the idea of a CCTV camera, nor with that of a mobile phone camera, allows the police to secretly record citizens. As a consequence, there exists ambivalence concerning privacy, the ownership and protection of footage made by this camera.

In terms of delegation of responsibilities such as notifying that a camera is in use or the processing of footage, the responsibility for correct use of the camera is largely put at the end user. Where this is not problematic in itself, when looking at the type of surveillance that is expressed

here, it does have consequences for the regulation of privacy and clarity towards both the user (police officer) as well as the potentially watched.

How special is the bodycamera in this process?

The bodycamera is a example of a typical development process, where policy makers have an idea of what the artifact should be: in their objectual practice, they already inscribe meaning into the artifact-to-be. Once passed over to design, pre-existing technology and local knowledge and expertise of the design team together with government-demands influence the meaning that is inscribed into the artifact. Finally, users interpret and alter meaning of the artifact, where meaning is formed via repeated exploration and use of the bodycamera. These users are not (comple-tely) free of choice in using this artifact; it becomes a (semi) compulsory part of the work practice; police officers are asked to bring a bodycam on a surveillance round; it is not obligatory.

Many other technologies in surveil-lance have probably developed in a similar fashion; looking at CCTV development, also phases of policy, design and user can be distinguished, also with different objectual practices that had an influence on why CCTV is the way it is now. Also here, off-the-shelf solutions and current state-of-affairs in law and technology will have been used as starting point for development. What makes the development of this particular bodycam special, is that the main criteria for choosing a certain company was based on demands of robust-ness and usability (along the lines of 'if in extreme sports one can handle that camera, it must also be suitable for police work'). These seem to be good criteria to start from. However, both policymakers who initiated this project and the designers of this camera did not take into account

the multiple- nor the implicated- users; not only does the bodycam and the footage it makes imply different types of users within the police-force and amongst dif-ferent police forces, it also implies taking into account the watched, and their rights and responsibilities when it comes to surveillance. The bodycam is an example of how a new surveillance technology is introduced and how this introduction alters the Dutch nightscape.

Discussion: The body-camera as standard equipment?

Regarding the bodycamera and the analysis provided in this chapter, it must be stated that the bodycamera is currently in an experimental phase. Since its introduction in 2009, several tests have been undertaken at different police departments in the Netherlands, with conclusions varying per experiment. In order to answer the question if the bodycamera will become a part of police practice in Dutch nightscapes, its development must be placed in its historical context and in the current state-of-affairs within different departments of policing in the Netherlands.

After a rather successful first introduction of the bodycamera in Rotterdam in 2009, the continuation of the bodycamera project encountered some resistance. Political resistance rose in Rotterdam in the wake of a research report (rapport Beke, 2010), in which the researchers pointed out that no convincing causal relationship could be established between bodycam use and a decrease in the number of offences against police personnel. Since this decrease of violence was the main goal set by policy, and this goal was not clearly reached, continuation of the project became doubtful. However, many users of the bodycam articulated, and reported on, another view; the camera increased

feelings of safety and had a positive impact on the work-practice of police officers. The meanings these users ascribed to the camera turned out to be quite different from those as articulated by policy. Here, already there is a conflict of focus on what the artifact 'bodycamera' is, and what it does.

Another issue that rose in this process was data management. No clear protocol has been stabilized in practice (see 'Cameratoezicht in beweging, 2010, p49); this leads to different local practices surrounding the securing of data and eventually its value and usability for legal processes. Given recent contestations, we may wonder whether normalization of bodycam use can be expected? Will the bodycamera eventually become standard equipment? In this respect, police officers reacted rather ambiguous. On the one hand, there is a notion that in the next standard uniform for police officers, a camera will be included. On the other hand, police officers do point out that in the end the camera is a gadget that indeed might have some advantages, the main job remains human, and that is about approaching people in the street, person to person[96].

The bodycamera may have been introduced with enthusiasm, after having faced work practice of a couple of years, this enthusiasm changed into skepticism and reluctance for a part of the users. As new meanings and new purposes for the camera arise, so do the places and instances where the bodycamera is used. This can be, but not necessarily is, the nightscape. Whether the camera provides enough basis to 'stabilize' and survive as a standard piece of equipment for police officers depends on many factors, of which some have been discussed above.

What seems like a logical next step is for design and policy to look into the objectual practice of police officers to see in which direction(s) the bodycamera is going.

Part three: Probing the nightscape

In this part, research subquestion 4 will be addressed:

"What is considered to be good surveillance in Dutch nightscapes by relevant stakeholders?"

Having looked into separate technologies and the experiences of users with these technologies, a broader perspective is chosen in this part by involving stakeholders in the Dutch nightscape into a debate about (good) surveillance and responsible innovation. This is done in chapter 6, via the organization of a Constructive Technology Assessment (CTA) workshop. In this workshop, stakeholders from the field of policy, design and use of the surveillance technology, specifically but not exclusively the bodycamera, are brought together to explore and think about current- and future surveillance landscapes. It provides an insider/expert view on the Dutch surveillance landscape in terms of what technologies are considered as influential in shaping that landscape according to them. Moreover, insights can be gained on what is deemed good surveillance from the viewpoints of these stakeholders. Contrasting this to other findings in this dissertation, this will serve as the basis for drawing conclusions on my research questions and making (design) recommendations for Surveillance in Dutch Urban nightscapes, which will be the focus of chapter 7.

Chapter 06

Engaging stakeholders in a debate around Dutch surveillance technology

97. http://www.nwo.nl/en/research-and-results/programmes/responsible+innovation Last visited July 22, 2013

Introduction: Responsible innovation in surveillance

Urban nighttime districts in cities are one specific place where surveillance technologies can be found. Besides technologies such as Closed-Circuit Television cameras (CCTV) or public lighting, recently new technologies have emerged in these 'nightscapes' (Chatterton & Unsworth, 2004). In previous chapters, two of these new technologies have been discussed; the mobile phone that is carried by visitors of the nightscape and the police-worn bodycamera that made its introduction in Dutch cities in 2009. Via an approach that can be seen as 'following the actor' (Latour 1992), these new technologies and its stakeholders have been investigated. This was done from a micro-perspective in which individual actors and actants were observed, interviewed and analyzed. Being part of the program Responsible Innovation of the Netherlands Organisation for Scientific Research (NWO)[97], this thesis also aims to address a meso-perspective on (potential) innovations for surveillance practices in Dutch nightscapes. This chapter aims to address the question of how different stakeholders assess the past, present and future of different surveillance technologies. What has changed according to them, and is new media and mobility an issue? If not, what are current issues or points of focus for these stakeholders? This question is addressed via a stake-holder workshop, in which participants are involved in the analysis of surveillance technology in an active manner; in a process of 'making' and 'doing' responsible innovation. Besides an active reflection on current surveillance practices, I can investigate what is deemed good sur-veillance by the participants by providing these stakeholders with possible surveillance-futures . To be able to do so, I aim to bring together different perspectives and practices of relevant stakeholders in the Dutch surveillance landscape via a structural method: Constructive Technology Assessment

First, I will discuss and explain why the CTA method is of specific relevance in analyzing surveillance technologies at this point in time. Then, empirical data is presented as a discussion of both the pre-engagement (te Kulve & Rip, 2007) and preparation of the workshop, as well as the actual workshop. Finally, based on this data, insight will be provided both in terms of content (concerning stakeholder expectations for the future of the Dutch surveillance landscape) and in terms of method (concerning the contribution of this specific workshop design to the body of CTA-methods and possible alternative methodologies for engaging with stakeholders).

6.1
On methods

6.1.1 Bridging events and responsible innovation

In earlier chapters, emerging technologies of surveillance were discussed and analyzed based on research methods that can be considered as reflexive; via different methods the researcher processed data gathered from several research sites. In this chapter, a process is described where relevant stakeholders from the Dutch surveillance landscape engage in generating and making data themselves. Whereas the move from reflexive research to a 'make' perspective is broadly defined in the NWO Responsible Innovation program as research that considers the ethical and social aspects of new technology from the design phase onwards (NWO MVI introduction), the interpretation given in this chapter is that a first step towards responsible innovation can be to facilitate interaction between different stake-holders in society that deal with a certain technological innovation. Bringing together these different perspectives to anti-cipate futures can contribute to change technology development in a way that is more relevant or better connected to stakeholders' views (Genus, 2006). These interactions can be seen as bridging events, where experts of science and technology ('insiders') in one way or another encounter laypersons ('outsiders') that are affected by new science or technology (see figure 1). Garud and Ahlstrom (1997) point to key differences between the in- and outsiders

of a technological innovation. Where insiders often think in narrow, scenario-based applications, outsiders assess the new 'thing' with which they are already familiar. During bridging events, the world of in- and outsiders are mutually probed, and this is where new visions, or anticipation of a new technology takes place.

One approach that has thoroughly explored the goals and methodologies of creating bridging events, is Constructive Technology Assessment (CTA)(see Fischer and Rip, 2012). CTA stems from the field of Technology Assessment (TA). Coming from the scholarly strands of STS (see chapter 1), TA aims at anticipating impacts of new science-and technology in society. TA emerged in the 1950's as a way for governments to develop policies about risks and opportunities of new science and technology. Its goal was to learn from past mistakes, to avoid future disasters and to facilitate a soft landing of technology in society. Where this assessment took place in an after-the-fact manner, in the late 70's, Constructive Technology Assessment was introduced (see f.i. Rip et al, 1995), aiming at a more prominent role for assessors, or gatekeepers, in the technology development process. This meant increased participation for societal actors (such as researchers and policymakers), rather than this after-the-fact assessment. The problematic aspect of this constructive part is that the boundaries of influence are delicate: when a new technological or scientific field is emerging, it is still hard to assess its consequences, when it is full-grown and existing the assessment is again after-the-fact and there is less or no space for intervening and steering the technology development process on more desirable paths (the so-called Collingridge

selection

- comparative thinking
- large sample
- generalistic foci
- broad criteria

outsiders

enactment

- scenario thinking
- small sample
- particularistic foci
- narrow criteria

bridging events
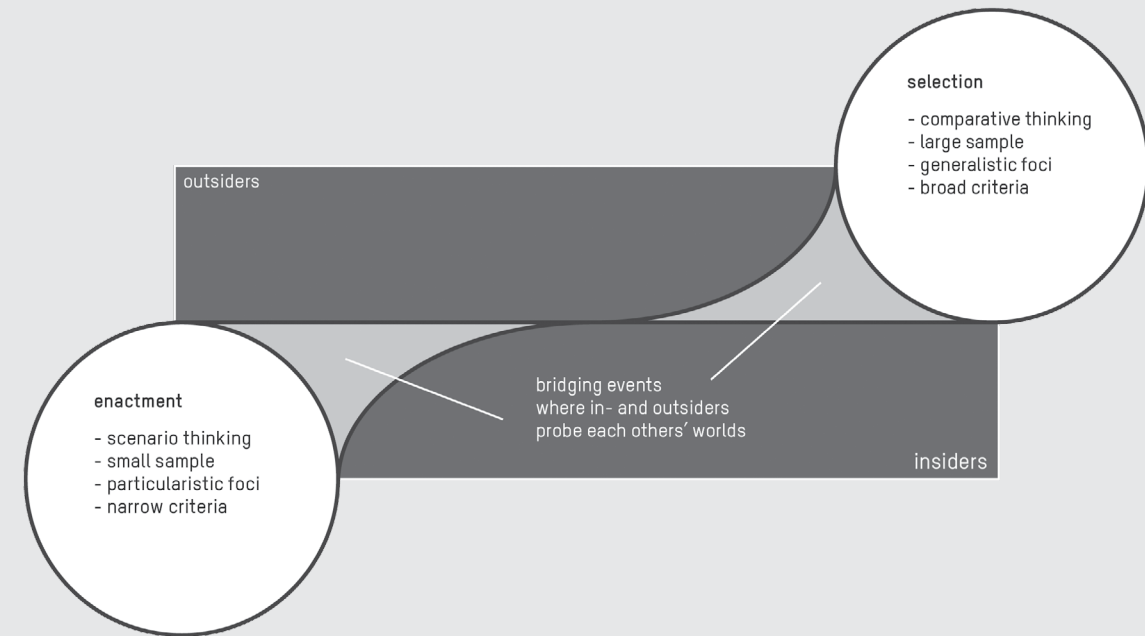where in- and outsiders
probe each others' worlds

insiders

figure 1;
locations of
bridging events
(remade by author,
based on original by
Garud and Ahlstrom,
1997)

dilemma (Collingridge, 1980). One place where this problem becomes apparent is in the methods of assessment and the engagement with the actual stakeholders. Aligning different stakeholders in early phases of the process of technology development can break this dilemma and can create a better understanding of both technological and societal expectations of the innovation that is under discussion.

A typical CTA workshop offers a protected and heterogeneous space, where actors can express their ideas and expectation via discussions. Often small in group size, it is aimed at creating qualitative discussions, where there is room to develop arguments. Accompanied by at least one facilitator and one analyst (often the CTA researcher and instigator of the workshop), the participants in this workshop are seen equally im-portant stakeholders and to some extent representatives of certain worlds (industry, science, end-users, policy makers and so on). Via the use of methods such as socio-technical scenarios,vignettes or other forms to engage stakeholders, positions, arguments and ideas are being probed about possible futures of a certain scientific or technological innovation. The workshops aim at triggering the participants to, 'in a deliberative setting, articulate their position, defend their arguments, criticize and learn from others' (Lucivero, 2012, pp. 109). CTA aims both to intervene as well as to understand the innovation process. This combination of interventionist and analytical objective as set by the researcher also reflects in the workshop itself, because there is mutual learning amongst stakeholders about the content of an innovation, but simultaneously about its process, and its steer-ability. The goal then, of a CTA workshop as an intervention, is to create

a level of 'anticipating, learning and enhancing reflexivity' (Schot and Rip 1997) amongst stakeholders. Questions of alignment or divergence between stakeholders and the possibility of materialization of expectations (te Kulve, 2009, pp 139) about new technologies such as the bodycamera, are sought to be answered via the CTA method. This materialization takes place in discussing, expressing and aligning expectations during a workshop. By close-reading the discussions between stakeholders, key insights into a broader vision of what surveillance technology is, what it does and/or what it should do according to these stakeholders, is created.

The CTA approach adopted in this chapter aims to involve three types of stakeholders from the Dutch surveillance-technology landscape: designers and engineers, policymakers and surveillance practitioners. Concerning the dynamics of in-and outsiders, the designers in this case can be seen as the insiders, as they are involved in the making of surveillance technology, where the other twogroups are confronted with ready-made surveillance technologies, and in that sense are presented with 'black-boxes'. Although the distinction between in- and outsiders thus seems to be rather unambiguous, it can prove relevant to look at how stakeholders phrase their arguments; from their professional perspective, or from the perspective of a citizen, and to what extent they incorporate technologies in their arguments?

6.1.2 Combining CTA and design research methods

Where methods of conducting research on practices of technology can rely on more or less formal methods[98], capturing, or even influencing future visions on (surveil-lance) technology needs a different approach. Where one can state that this can also be done in an interview, the limits of interviews are that one can only capture de-contextualized and reflexive know-ledge.If the researcher wants to get beyond the type of reflexive response, 'classical' research methods might prove insufficient. Here, I turn to a graph (figure 2) that stems from the scholarly strand of 'design research' that depicts different types of research methods linked with the type of knowledge that is gained.

In this (simplified) figure, research methods used in (technological) design teams are listed. Amongst design scholars, it has become apparent that involving stakeholders (often end-users of consumer electronics) in different phases of the project leads to better insights, and eventually better, or more successful artifacts. The incorporation of stakeholders has even evolved to a strand of design called co-creation, where end-users become part of the professional design team (see f.i. Mulder, 2012) Without delving deeper into design research debates, the point to get across here is that inclusion of different stakeholders is already common practice in the tech-nological domain of (interactive) product design. The question here is what kinds of methods or techniques are needed in order to get tacit and latent knowledge of the research subjects. In design and co-creation literature (f.i. Visser et al., 2005),

scholars refer to this method as generative sessions. Where in figure 1 these generative sessions are broadly defined, these sessions can be brainstorms, co-creation or prototyping workshops and so on. These type of action-research sessions are different from classical sociological research methods in the sense that they involve visual or tangible activities. By this I mean that discussions, debates and ideas are typically formed via material practices (instead of via discussions or debate). From a design research perspective, introducing things to think with (Turkle, 2007) in CTA workshops can prove a valuable step in finding out stakeholders' visions on emerging technologies such as bodycameras, and more broadly, on possible futures of the Dutch surveillance landscape.

Both CTA and design methods can be seen as different forms of bridging events, where in- and outsiders probe each-others' worlds. In current (C) TA methods, the emphasis is often on anticipation on a broad, governmental level of policymaking. The aim of these types of workshops is to distill and/or align arguments of stakeholders. In design workshops, the emphasis is more on the material, or at least the visual, in order to create a solution, or an end-result of a problem posed. To expand the method of CTA and to attempt to use visual tools within a CTA workshop, I draw from the realm of design and its experience with methods that are aimed at involving stakeholders in different phases of the design process. Hence, my workshop is an attempt to combine both approaches. One way of involving stakeholders during a CTA workshop is to let them envision current -and near-future developments in their field via written scenarios or

vignettes (Alexander & Becker, 1978). In these scenarios, concrete, and informed situations in the now, or in the near future, are presented (cf. Lucivero 2012; te Kulve 2011; Robinson 2009; van Merkerk 2007; Bitsch 2013). Where in CTA this is mainly done via text, the envisioning part of the process becomes the responsibility of the stakeholder, or workshop participant. Incorporating visual elements of scenario building from design methods (cf. Rose et al., 1994 or Caroll, 2000), I attempt to expand the use of socio-technological scenarios as known in CTA by enriching the content via visual elements such as pictures and graphics. Concerning the form of the workshop, an attempt is made to facilitate and expand the notion of envisioning futures in CTA workshops by introducing collective activities and different forms of contributing to debate.

The research questions addressed in this workshop are:

1. Are emerging technologies in the surveillance landscape such as the bodycamera and the mobile phone recognized and articulated by stakeholders working in the Dutch surveillance sector?

2. Is there a difference in the way the three types of relevant stakeholders (policymakers, designers and users) articulate the importance of certain technologies in the surveillance landscape?

3. In current- and near future scenarios, what is deemed 'good' surveillance by these stakeholders?

4. How does involving design research methods in a CTA workshop shape bridging moments and actor alignment and does this lead to successful methodologies for engaging stakeholders in making responsible innovation?
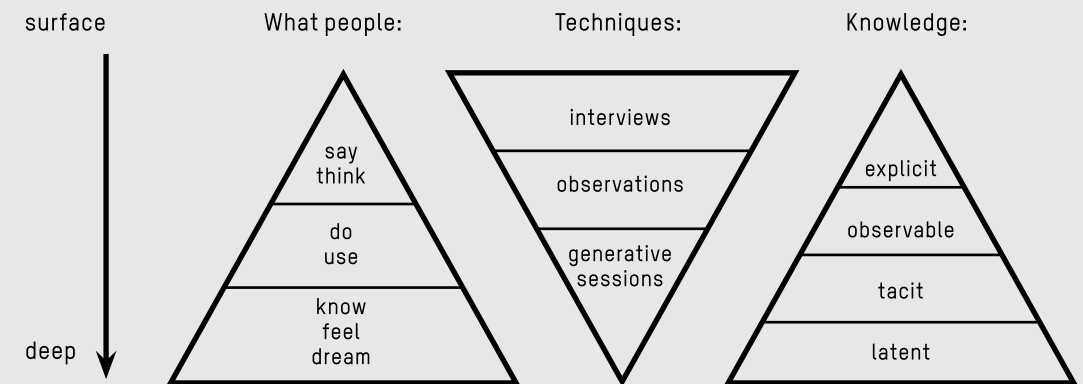

figure 2;
where different research methods lead to. Taken from Visser et al, 2005.

6.1.3 Pre-engagement and the role of the researcher

A first step in developing a workshop that resonates with the field of research, was to connect to relevant stakeholders in the field of surveillance in the Netherlands. A recent insight from CTA scholars is that in the process of organizing a bridging event such as a workshop, the phase of pre-engagement with stakeholders and participants is crucial in shaping the actual workshop, where it is recognized that this phase needs more attention (see f.i. teKulve /Rip, 2009). In pre-engagement, which can be considered as a in-depth preparation process before the event or workshop takes place, the researcher tries to identify the main stakeholders in order to distill the main issues or concerns that live in the field. Getting a grip on these issues can contribute to initiate interactions during the workshop (Parandian et al., 2012). Four phases of pre-engagement are distinguished by te Kulve (2011):

1. Assessing the degree of social embeddedness of the actor. This degree is also dependent on a 'timely engagement', meaning that the actor has to be some-where in between the startup phase and an established-in-society phase of an innovation. Where on this timeline the intervention takes place depends on the goals of the CTA research(er). Also, it is important to see to what extent the rele-vant actors have an understanding of the dynamics in their own field.

2. Assessing actor's tendencies to antici-pate future societal embedding. This means to what extent actors are moving towards, or have already incorporated, in their development orinnovation, the notion of societal embedded-ness, or at least the recognition of the importance thereof. This also involves co-ordination with other actors and willingness to cooperate with societal actors (such as institutions, local governments, user groups and so on).

3. Selecting and locating actors. To what extent can one, as a researcher, find the mostrelevant actors for a certain case, and how does one get them involved? Where this is more of a practical concern in CTA methodology, it is of key importance in defining the scope, or impact of the CTA activity.

4. Awareness of outside and indirect actors and influences (broader developments). This means that the actor-network that one is investigating has to be placed in a broader range of developments. These developments can influence the current state or situation of the innovation.

The stakeholders contacted to partake in this workshop are socially embedded to different degrees. The target stake-holders for this specific workshop are policymakers concerned with surveillance and public safety, as well as policymakers from national and local police forces. Also, engineers from both research institutes as well as camera technology companies were invited. Lastly, police officers who are end-users of many surveillance technologies and are active in the nightscape were selected as relevant stakeholders. During the pre-engagement phase, I used the bodycamera as an exemplary technology to establish contacts with relevant actors in the network of surveillance

technology innovators, and to explain to these stakeholders what I meant by a 'technological innovation', and an 'emerging surveillance artifact'. Because the bodycamera is an innovation that is in its test phase, yet actively used in the work-practice of police officers, some feedback mechanisms and first experiences with the camera and public acceptance are already in place (see f.i. Rapport Cameratoezicht in beweging, Beke, 2010). One could state here that the timing of engagement of the workshop is off with respect to the anti-cipatory goals of CTA: the artifact can already be witnessed in society and several stakeholders have already reflected upon first trials. However, since the bodycamera as an upcoming surveillance technology is back in debate both on the level of users (police officers) and policymakers (local governments and other stakeholders in the surveillance landscape), debates concer-ning this innovation are back on many agendas and therefore there is space for intervening in the debate.

When looking at the second phase of pre-engagement and the tendencies of these actors to anticipate future societal embedding, the case of the bodycamera reveals a bottom-up tendency, where police officers display a positive attitude towards societal embedding of the camera (see chapter 5). Policy-induced reports, however, provide a negative advice when it comes to societal embedding (claiming the camera has no measurable effect) and discontinuation of the project was advocated[99]. In that sense, stakeholders, or actors, from the field of policymaking have a more fluctuating agenda, because they are more dependent on local govern-ment and the local willingness to invest in innovations such as the bodycamera.

The willingness of users (police officers who have to wear the camera) to create societal embedding is large, because they are the ones who have to face 'society' with the new technology in actual practice. Stakeholders with a highly technological background would in this case be more concerned about the future embeddedness of their technology within a police force, where the societal embedding in terms of their technology entering into public space often concerns the performance of a technology rather than forms of acceptance by either users or the public.

Concerning the third phase of pre-engagement, selecting the type of actors, the specificity of the bodycam development process begs for three types of stake-holders; policymakers as instigators and potential continuators, engineers and designers as developers of this new tech-nical device, and police officers as end-users of this technology. In light of the earlier-discussed insider and outsider perspectives and the bridging of these perspectives during a workshop, in this case the insider-outsider differentiation is made on the technological expertise of the stakeholders. Designers and engi-neers are framed as insiders of new sur-veillance technology development; the policymakers and users are framed as outsiders. The latter two stakeholder groups are involved in the process of new surveillance technologies in their own practice. However, they are both not experts when it comes to technology. To further explain, in the example of the bodycamera (see also chapter 5), it became apparent that policymakers indeed were instigators of the project, but their decisions were heavily influenced by 'innovation-brokers' who in turn were relying on designers

and engineers. Also, in transforming ideas and plans into physical usable products, the technology makers have a very strong shaping role in deciding what the artifact-to-be can and cannot do, and what is technologically feasible. Via the broader project of Surveillance in Urban Nightscapes, of which this research is one strand, contacts were established in earlier phases. The project organized several valorization panels[100], where representatives from policy and technology, but also from various institutes such as Trimbos[101] and CCV[102] were present. Via these meetings, already a reference was established for further contact. Via interviews with policymakers, designers and police officers and observations in the nighttime economy with police officers (see chapter 5), the field of research was mapped and the relevant stakeholders invited.

The last phase of pre-engagement deals with indirect influences. The body camera in its test-phase already endured several strong indirect influences on different levels. On a technological level the development phase paralleled the large-scale emergence of mobile camera technologies in cities (see Fortunati, 2007; Hargittai & Walejko, 2008) and other ICTs in the city (see f.i. Nagenborg et al., 2010). This development has an influence on user-acceptance of the camera. For instance, most of these mobile ICTs nowadays are equipped with a touchscreen, which made the bodycamera look 'old-fashioned' once ready for entry. Another outside influence was that of a changing political landscape, where local governments decided to stop investments in new surveillance technologies, where the bodycamera was one. Also, research on the effectiveness of the camera in diminishing violence against

police officers revealed no clear link or strong evidence (see chapter 5 and 'Rapport Beke', 2010). Another external (f)actor that caught the attention of all stakeholders is the recognition of the direct and indirect influence of a rapidly changing technological landscape in which surveillance actors have to operate. The emergence of social media and the use of apps on mobile phones in the public night-scape (see chapter 3[103]) has caught the attention across the field. For instance, based on interviews and observation with policymakers, police officers, technology-makers and citizens, the rise of 'new media' or 'social media' in the public nighttime economy can be considered as a recurring issue. This also is reflected in current surveillance literature (see Villi & Stoccheti, 2011; Trottier, 2012; Taekke, 2011, Hardey, 2007; Fortunati, 2007; boyd, 2011).

Keeping the above insights from pre-engagement in mind, the role of the researcher, both in pre-engagement as well as during the workshop is to balance between facilitating debate and stepping out to let the debate be shaped by the stakeholders themselves. In order to facilitate this stepping out some choices and 'steering' of the debate has taken place during the design of the workshop. Based on my previous research on mobile phone cameras and body-cameras and the issues raised by stakeholders during the pre-engagement phase, I decided to focus the workshop on the (potential) role of bottom-up surveillance enabled by the use of consumer technology (and new media) in current surveillance practices. In choosing images and making scenarios for this workshop, this focus was deliberately kept in mind. These images and scenarios might be interpreted in a very different

100. See 'other presentations' section under http://www.stadsnachtwacht.nl/presentations/ Last visited July 24, 2013

101. Trimbos is a national institute that deals with safety, and drug and alcohol related issues, also in nighttime economies. See http://www.trimbos.nl/ Last visited July 24, 2013

102. Dutch centre for criminality and safety. See http://www.hetccv.nl/ Last visited July 24, 2013

103. And/or see f.i. http://www.stadsnachtwacht.nl/agenten-gefilmd-in-rotterdam/ Last visited July 24, 2013

104. Rotterdam and Utrecht are two cities in the Netherlands and both cities are research sites in the project "surveillance in urban nightscapes, of which this particular workshop is a part.

105. The names of the participants have been anonymized.

manner by the stakeholders. In that sense, the choice to move towards a more visual method of facilitating debate also bears with it more pitfalls, of steering and assuming by presenting material that is too fixed, or too associative with a specific topic. That said, the concreteness of visual material in combination with the implicit focus on the role of new media being 'built-in' in the activities might prove a strong method for evoking debate and deliberation of alternative surveillance futures. Summarizing, the main characteristics of this workshop design are to combine CTA and design research insight to facilitate discussion and mutual learning, to introduce a non-linear, more-than-text approach to discussions, to facilitate alignment work and articulation of expectations by letting stakeholders work on collaborative activities and to analyze the role of new media and bottom-up surveillance in the Dutch surveillance landscape with key stakeholders.

6.1.4 Setup of the CTA workshop and method of analysis

A CTA workshop was held the 18th of december, 2012, from 1500 to 1800, in Utrecht, the Netherlands. The main actor categories I wanted to have for this workshop were local policymakers that are concerned with questions of safety and surveillance in the public domain, technology-makers (engineers, designers) who are involved in making and exploiting surveillance technology and finally technology users, those who are involved on a daily basis with the practice of a certain surveillance technology. After mapping and collecting data about these type of actors, invitations were sent; in the end the following actors were participating in the workshop:

1 Policymaker from Rotterdam, who is also a police officer[104]
1 Policymaker from Utrecht
1 CEO and designer of a bodycamera company
1 Freelance designer hired by a communication and network company (C2000)
1 police officer from Rotterdam, who has been involved in the test-phase of the bodycamera
1 trend analyst who works at a national institute for criminality, safety and surveillance.[105]

The workshop consisted of three activities; mapping of technology in public nightscapes, determining the influence of these technologies in relation to public space users (these can be for instance civilians, surveillance personnel, police)

and discussing three scenarios of surveillance futures. The three activities as will be described below are designed to facilitate actor-alignment (in terms of learning from or about other fields and perspectives and 'probing each others' worlds'). Activity one deals with mapping technologies in public space. This fuels actor-alignment by creating a workgroup-setting in which stakeholders from different backgrounds have to create one map of technologies in public space, thus drawing on their own repertoire of what technologies are or can be while at the same time aligning them with others' repertoires. In activity two, the level of influence of technologies in public space have to be mapped. Here, in similar workgroups, besides functions of technology, also meanings and values are (implicitly) aligned amongst stakeholders, because they have a collective goal of mapping which technologies are most influential in public nightscapes in general, and surveillance. Here also questions rise of how arguments are made within the groups (technological arguments, or other types of arguments?). In activity three, these values and meanings are extrapolated: via three scenarios, participants have to review, asses and discuss potential futures of surveillance technologies in public nightscapes.

In a bridging event, some form of mutual learning has to take place. The goal of the workshop was to facilitate 'probing of each-others' worlds' in terms of what surveillance technology is, what its possible futures are and if the role of bottom-up surveillance and social media (as discussed in chapter 3 and 4) indeed change the landscape of surveillance practices. In this workshop, the learning or bridging is achieved via the use of visual

tools and the physical discussion maps: the assumption behind this methodological choice is that these visual tools are more apt than written scenarios to bring forward different perspectives on the technological surveillance landscape. Via this particular way the scenarios are designed and physically present as large posters, participants can walk around these scenarios and go back and forth through them. This allows stakeholders to 'probe' future perspectives in a discontinuous and equal way (rather than one person overtaking a conversation or putting forth a similar argument in a linear discussion), which in turn might have a positive effect on mutual learning and bridging.

Audio recordings were made of the workshop, both in plenary sessions as in the separate discussions. The results of the activities (e.g. what participants made) was transcribed; these sources will serve as the empirical material for analysis. All participants gave informed consent on the recording of both auditive and visual data. For reasons of anonymity the names of the participants are omitted. However, since analysis of data collected during the workshop can benefit from a separation of 'actors', participants are labeled according to their profession within the surveillance landscape. The relevance of separation of profession and the distinction between in- and outsiders becomes apparent when analyzing how different roles and expertise are called upon within group discussions. The participants were split up in two working-groups. Group 1 consisted of 1 surveillance practitioner (PO1), 1 designer (DE1) and a trend analyst in the area of surveillance and safety measures (PM1). Group two consisted of one police officer (PO2), one designer and CEO of the Zepcam bodycamera company (DE2)

106. Digitizing and translating would mean somehow interpreting from my side; visual styles and representation of their data as chosen my me would mean a translation, where in my opinion, richness of the method would get lost.

and a technology-advisor at TNO (PM2). Each group holds one 'insider' and two 'outsiders'. The moderator sometimes makes an appearance on the discussions (MO). In inter-group discussions, actors are separated by linking the group number to the actor (DE1 represents the designer/engineer from group 1, PO2 represents a police officer, or surveillance practitioner from group 2 and so on).

The data as presented and analyzed in this chapter is not clustered per theme. Rather, part of discussions are presented in a chronological order. This serves the purpose of simultaneously providing an account of the content and the method of the workshop. The workshop method is designed as such that the assignments follow up on each other, thereby building up on former discussions and insights. In this chapter, a close representation of these discussions is aimed for, not only to show how the separate assignments within the workshop build up methodologically, but also to show how topics such associal media and surveillance take shape throughout the workshop. Throughout the analysis, the added value of visual methods in this workshop will be stressed, showing how these visual methods contri-bute in the shaping of discussions and alignment. The audio recordings of the workshop have been transcribed and translated. Concerning the visual material as produced by the participants, I chose to provide the originals, which are in Dutch. I chose to do so because a) in order to make an argument about visual methods, I wanted to provide an original[106] account of the visual material made and b) because the stakeholders and the SUN project in its totality are aimed at the Dutch surveillance landscape, in which local terms and technologies are not always easily translated.

6.2
Technology mapping

6.2.1. The maps

In order to create a debate around the role and type of surveillance technology that has been, is being, or will be used in public space, participants were asked to map current- and emerging technological devices themselves. By letting the actors create their own scope of technology, the actors placed themselves in relation to technological developments and innovations in the surveillance landscape. By letting actors debate about categories of technology such as surveillance- or consumer technology (if they categorize at all), already forms of consensus and some form of alignment amongst stakeholders may occur. The two strands of technology development (consumer/social media and surveillance[107]) share a common space that is of particular interest, being the public nighttime districts. In order to limit the map and to focus around the 'now', the technologies that stakeholders come up with have to be in between approximately 5 years back and 5 years ahead. A second reason for limiting this 'axis' is to provide stakeholders from different (also non-technical) backgrounds with a manageable scope of technologies to choose from. In other words, these maps provide an opportunity for bridging to occur between the designers and engineers (the insiders) and the other stakeholder groups (the outsiders). Also, the maps allow the CTA researcher to see what participants expect to be upcoming or is currently in development in the worlds these actors represent. Aided by visual tools (pre-cutout pictures, markers, post-its, a map), participants were asked to engage in technology mapping in the following steps:

1. Listing types of technological devices or infrastructures individually (10 minutes). Participants are asked to make up a list of surveillance technologies and consumer electronic devices that they encounter in public spaces. This can be either from the perspective of their professional domain, or from the perspective as a citizen.

2. Discuss list within group (10 minutes). In groups of 3 participants, each group containing a mix of in-and outsider(s), from different professional backgrounds discuss their individual lists.

3. Map technological devices or infra-structures on axis visually (15 minutes). Either via visual aids (pre-given pictures) or handwritten input, the group map their technologies on the axis of figure 3.

At the end of the first exercise, groups had to explain their map to the rest of the participants. In this way, they are forced to legitimize their choices. The added value of a 2-axis map is that it reveals not only how participants see the current state of affairs, but it provides a glimpse of expectations of the future of these technological devices in the public domain. After a plenary intro-duction session, both groups started to work on activity one; the mapping of technology. Figure 4 shows the result of group 1.

107. The terminology used on the maps is 'consumer electronics'. In hindsight it would have been more appropriate to use the term 'social media' to refer to technical devices introduced as consumer technology that potentially act as surveillance tools.

Assignment 1: mapping of technology
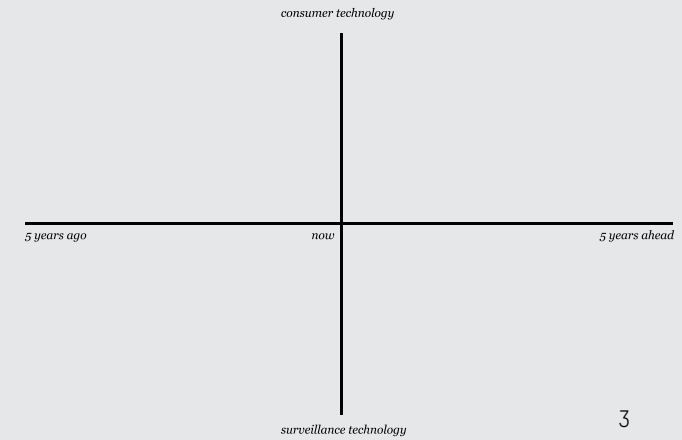

figure 3;
technology mapping

figure 4;
technology mapping
by group 1

The map shows the four quadrants as filled out by group 1 (group 1 accidentally 'flipped' the time-axle; the future moves from right to left). In the lower right quadrant, this group mapped surveillance technologies that are currently in place, or have been in place for a while. Roadblocks and urban furniture were mentioned, as well as a 'sound- car', a police bike ('bikers') and c2000, which is the backbone technology for communication between emergency services in the Netherlands. Moving along the axis towards the quadrant of surveillance futures, bouncers and fences at clubs are seen as part of the 'now'. In the near future, surveillance technology is expected to go into intelligent back-end systems and algorithms, but also towards smart sensors, such as a 'camera that can recognize and predict'. Some form of feedback of surveillance to the public is expected to take place via urban screens and intelligent lighting. In the upper right quadrant, current- and upcoming consumer technologies were placed, where this group mapped WIFI, the mobile phone and new media in the 'now'. As upcoming -or near-future- consumer technology, interactive billboards were mapped. During the process of making this map, discussion amongst participants was recorded. At first, the individual lists of technologies were compared:

PM-Cameras
PM-mobiles
PM-street lighting
PM-gates and doors
PM- turnstiles at stations
PO- but is that public space?
DE- CCTV
DE- lighting
DE- Mobile Phones

DE- roadblocks, moving posts
DE- matrix boards
DE- police uses C2000 (for) security services
DE- radio, people can also just listen to the radio
DE- dynamic ABRI's (type matrix boards)
DE- sound-cars in the city, broadcasting vans [...] cars I also see as a form of technology
DE- telephony network (as a source for analysis of crowd-movements)
PO- customizable lighting... my list is almost the same as yours ...
   (excerpt from transcription of group 1, 18th of December, 2013, Utrecht)

When grouping the types of technology mentioned here, it becomes apparent that this group was focussed on surveillance-technology. Telephone networks and mobile phones were mentioned, but mostly their lists show technology that is used by a government to control, or at least steer, the population. The surveillance practitioners'- and the policymakers' lists of technology were exhausted rather quickly; the designer clearly mentioned most technologies. The insider (DE) here was most active, where the surveillance practitioner was least present and rather adaptive (see last line of excerpt above). The mobile phone only being mentioned twice, most technologies that came to mind in this group deal with physical surveillance technologies, or at least technologies that communicate with citizens within a physical space (such as matrix-signs and roadblocks). Social media and mobile phones and the bodycamera were lacking or are not amongst the first technologies mentioned by these participants.

108. The main public Dutch news broadcaster see http://www.nos.nl Last visited July 24, 2013

109. A recent and notorious incident where a party announcement was spread on Facebook resulting in a small town being completely overrun by too many people. See f.i. http://nos.nl/artikel/421483-puinhoop-na-facebookrellen-haren.html (in Dutch) Last visited July 24, 2013

Methodologically, taking the design research-diagram in mind (see figure 1), this first listing can be placed in the category of explicit knowledge, where out-of-context questions are asked to gain 'on-top-of-the-head' knowledge. By moving towards actually placing technologies on the map visually, another type of discussions are pursued. Indeed, in further map-making more discussion about what a technology is and what its place within the (surveillance) network is, emerged:

(PM...) this is the biker? with the bodycam? So it is now?
PO - yes that is on now[...]
PM - this is Facebook?
DE- This is the NOS[108]
PM- this is consumer and the now?
PO- I would like to place it here
PM- surveillance of the police
PO-yes .. yes? [...]
DE- is has become a media thing... yes... in hindsight especially
DE- media technology we must have, it must be on the map
PM- what you do see, is that on the basis of tweets you decide on your surveillance deployment
PM- case Haren[109], many calls after that for somewhere to start using or monitoring social media
PM- the police has jumped on it very much, that is clear
PM- for me, that counts as surveillance
DE- but that holds for Twitter as well then, in fact
PM- yes Twitter as well
PO- Twittering policemen
PO- we can write that next to it, maybe
(excerpt from transcription of group 1, 18th of December, 2013, Utrecht)

Here, a discussion starts on the boundaries between what is consumer- and what is surveillance technology and who is involved in these technologies. Due to the visual presence of the four quadrants, participants were 'forced' to think about what future consumer technology can be and how that relates to surveillance. The point made by the group here is that technologies such as Facebook and Twitter serve as way for the police to gain access to social-media information created by citizens, but also they offer a way for citizens to 'surveil' the police. Although the group did not continue on this topic in this discussion, it became clear that the presence of social media in the nightscape was acknowledged. However, it remains unclear how and which direction, or for whom, social media is a benefit in public space.

Nevertheless, its practical influence is made explicit in this discussion; if you, as a police force, notice discussions of an upcoming event on Twitter, you tweak your surveillance measures to it (i.e. the amount of police officers you will send to an event or incident is being influenced by what happens on Twitter). Turning this around, the police also actively 'tweets' to inform the public. This group mapped these technologies (social media) in between surveillance- and consumer technology and it was argued that this takes place in the 'now'. Here, we do see that social media and mobile phones emerge in the debate. Where at first they were not listed by the individual group members, and they also did not directly turn up in the mapping of technologies, by discussing the quadrants, the influence of social media (in this case, Twitter) on current surveillance practices became a topic.

The map of the second group is shown in figure 5. This map shows a more spread-out distribution over the four quadrants. In the surveillance-past-to-now quadrant, technologies such as detection gates, bus-stops, and radio were put. In the quadrant of future technologies of surveillance, the mixture of public and private networks pops up. This can be considered more of a systematic change than a specific technology. Also, this group expects innovations on the software-side of sur-veillance, via video analytics and body-gesture analysis. Rules and regulations are put as an important step in future surveillance technologies. On the consumer-technology side, this group lists a digital camera as being in the past, tablets and smartphones as being in the now, and something like 'intelligent mannequins' in the future. Also, on the boundary of future consumer-and surveillance technology, they placed a picture of a network, or the 'cloud', reflec-ting on the idea that the connection, or boundary, between sur-veillance- and consumer technology lies in the sharing of data. WIFI was placed in the middle, thus more or less serving as a common- and shared resource. Also, technologies that deal with surveillance but are semi-public were placed, such as tourniquets that deal with access control at train stations. During the mapmaking, the following was said, which highlights the grey areas between surveillance technology and consumer technology:

DE- police with an iPad
PO- the 'ears' (which are worn by police officers and bouncers) is also a bit in the 'now'
PO- we can not do much with that
PM- there are no cameras on the map yet
PM- and a non-anonymous map, then you know who is where ...
DE- those are street signs
PO- we had that 20 years ago
PM- the bodycam
PO- (that) is really here (on the map)
PM- I do not know if that is it...
PO- this is simply a metal-detector
PO- what about google glasses?
DE- that would be consumer electronics

(excerpt from transcription of group 2, 18th of December, 2013, Utrecht)

The list above shows that all sorts of technologies are being mentioned; not only technologies that are 'known' from participants' own backgrounds. By placing the visual representations of technologies, discussions emerge on where a technology should be, and why. Both on the axis of time and the axis of consumer to surveil-lance technology, already discussion and alignment is taking place.

Assignment 1: mapping of technology

consumer technology

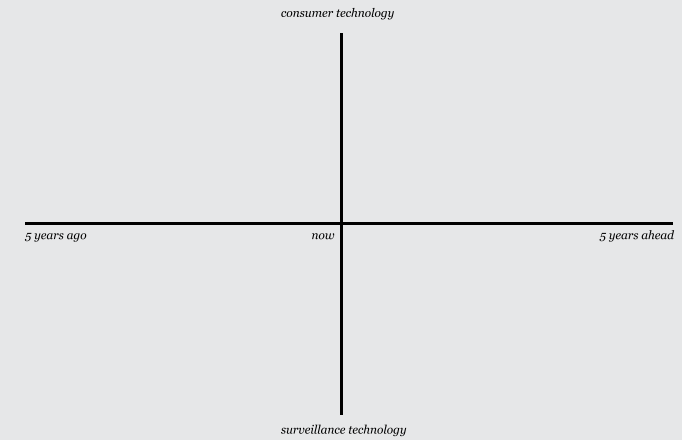5 years ago   now   5 years ahead

surveillance technology

figure 5;
technology mapping
by group 2

During the process of selecting, comparing and placing technologies, the conversation in this group evolved from discussing technologies to discussing who are the actual users of these technologies and what are issues that might surround a certain emerging technology. In terms of approach, the group is moving from explicit know-ledge to a more reflexive 'state'. In talking about the current situation and what might be coming, the focus in this group is on future combinations of public and private data, and what is or should be allowed. Without explicitly asking about expectations or promises, the group introduced these topics themselves:

DE- [...] where I think surveillance is going towards more and more [...] the connection between private and public cameras. When that potential is unleashed...
DE- we will move to one monitoring station, or central room
PO- uhm... it (progress/future) is not in the technology, but in the rules and regulations
PM- regulations?
PM- I think it matters who uses what in terms of technology
PO- TomTom, for instance, may sell any data, but the police cannot just do such a thing. Once you are a government agency you have to abide to all kinds of conditions and rules etc.
PO- (what about) traffic measurements and speeding
MO- (and) regulation? data ownership?
PO- I am not per se talking about property, but more about management
DE- [...] but also that we will have more and more cameras... but (what if) you

could make them smart by using video-analytics... to link those cameras and recordings up, to be able to do something with that giant heap of data [...]

(excerpt from transcription of group 2, 18th of December, 2013, Utrecht)

Rules of government and algorithms are new places of concern for this group; they recognize that only collecting more data is not necessarily a step forward. New media and the sharing of mobile data is thus not seen as something to be questioned; it will be (and already is) available. The amount and type of data, from either 'bottom-up' surveillance (see chapter 4 and 5) via citizen-shared data or collected via, for instance, body-cameras, form the future concerns for surveillance and its efficiency, or influence, on public space. Reading this part of the discussion, these participants might be suspect of techno-optimism. However, further on also the human factor is recognized as an important actor in the nightscape:

DE- I think (the) law will permit to track and trace all kinds of devices (this will happen..)
PM- if you, for instance, start tracking everything in daily life
PO- probably (also) everything will be read digitally and automatically, no human hand will be necessary any longer [...]
PM- no, but, a camera that monitors and records... if someone actually was to be there, on the spot, he or she would be able to actually do something

(excerpt from transcription of group 2, 18th of December, 2013, Utrecht)

This last remark brings up the issue of the use and the efficiency of both surveillance- and consumer technologies in the public nightlife. The insider (the DE) is pushing for smart technologies in expressing expectations on surveillance futures. The PM, as an outsider, is introducing the importance of the human factor, stating that actual presence of a person is still more valuable in terms of impact than a recording of the scene. Where the discussion in the first group headed towards the role of social media, and different directions and usages of social media in public space, the second group mainly discussed the rules and regulations of data and information taken in- and from the public sphere. They specifically did not treat social media as being part of that public sphere. Continuing on this topic, the link to physical space was made by pointing out that an actual police officer is more helpful in a situation than having a camera in place. The next methodological step in this activity was to let the groups present their work to each other thereby forcing them to explain the result of their mapping exercise.

6.2.2 Discussion of technology maps

In the next part of activity 1, the two groups showed each other their maps and had to explain why the map looked the way it did. Methodologically, this forces choices to be explained, thus the group to align on certain arguments (e.g. why a technology is seen as surveillance). During explanations of the maps, responses were coming from both groups. A participant of group 2 started to explain how the group moved away from discussing technologies to discussing rules and potential influences of technology:

PO2 [...] we have tried to put everything on the timeline of technology, but we ended up that regulation is always lagging behind on technological innovations. Okay, technically everything is possible. The question is what we should want and should allow, and to whom these rules apply. That is what our discussion was mainly about. When an incident occurs, do we go and project all kinds of footage on social media or do we say we put a filter in between this footage and social media... do we go and weigh the public interest and their privacy. The discussion went on about these issues and and not so much about "When is what previously invented and what we do with it."

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

Tension is identified between the common good and privacy when in concerns new technologies that will be used in public space. Here, an outsider in terms of technological expertise dismisses the idea that solution will be found in the next technological innovation. Rather, 'we' have to think about what is desirable. Here, the PO takes the perspective of a surveillance professional by questioning how to deal with social media as a police force. The question is raised where and how to filter. Another participant continued by referring to the axis of surveillance on the map and the participant explains that this axis might become more sensitive:

PM2 [...] That you can follow people and get more information (too easy to start using) as you move toward the axis going to surveillance. The surveillance axis becomes more sensitive.

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

By 'sensitive', this policymaker hints at the expectation that separating surveillance data from consumer data might become more complex in the future. Sometimes, the moderator intervenes by posing follow-up questions in the debate:

MO- and what about technology development? Is that linear?
DE2- it's going to be smarter and smaller
PO2- unconsciously, more and more is being recorded, there are many more things in the newspaper - it is being controlled much better, but if you want to use your new phone or tablet, you need to tick all sorts of boxes in order for them (companies) not to trace your every step.

In Facebook, for instance, you have to close everything off, otherwise they keep track of everything (via cookies).
- MO- yes, but is that a trend towards surveillance?
DE1- I think where it will go towards (technology development), is that everything will be much easier to trace.
PM1- the question is whether you want that [...] you stand out more in the crowd (via social media).
DE2- it's just an inevitable aspect of technology, it will go forward. And then the suggestion that uhm (..) how to filter your data, how do you filter and what to filter?

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

The group is pointing out different issues after the moderator introduced the question of technological progress. The insider (DE) points out that 'things' will be become smaller and smarter, and they will be more easily traceable. This triggers the outsider PM to questions if 'we' have to want this. DE, as an insider, responds that this is irreversible; technology will continue to progress. The issue that is raised after stating this fact is the question of how to filter collected data correctly. Here, the groups move away form technology listing into a discussion of desirability. Still, technological progress is not questioned.

Rather it is interpreted as something they do not have a say, or an influence, in. The moderator again steps in to focus the debate to the bodycamera and asks the first group why this surveillance technology is not on their map and where they would put it:

MO- The bodycamera is not on your map yet, I see. But where would you put it?
PO1- Here somewhere? I guess?
MO- And will it last?
DE2- I think in about 15 years, there will be only one device, in which everything is centralized, with 1 or more cameras on your equipment or uniform... and then all footage and all communication will go through this device...
MO- but then other people, or third parties, can also watch it? It will be possible to forward footage to someone else, for instance?
DE2- that is already possible [...] but that is indeed the direction it will take
PO2- yes but increasingly integrated... The thing about sharing these images is that you need staff to look into this footage. That is the practical decision of whether or not to deploy a new camera.

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

Here a clear expectation is put forwards by DE. As for the future of the bodycamera, 'we' will move to one device that records, collects, and communicates. Instead of having multiple gadgets or devices, there will be one device that is integrated in the uniform, probably with one or multiple cameras. When stating that these cameras can be viewed 'live' the surveillance practitioner and policymaker (the outsiders) respond that with every new camera you need more personnel to watch the footage, be it recorded or live. This reflects a practice-based critique on the argument that an increase in technology leads to less work (see also introduction chapter 1). Moreover, the insiders here voice an

implicit point, and expectation; that human will still be necessary in judging footage. Continuing on a broader note, the issue of monitoring crowds is brought up:

DE2- [...] I can imagine that in the future there will be more of an, uhm... I do not know how to call it... social security. For example through crowd control, it could work very well that you have some sort of a ticker, for flows, that you can have a better insight into the flow and psyche of groups, or how large groups of people be have and move through the city, or how to make squares or streets safer... I think there is much to be gained there.
M0- (would that be) more of a steering-technology?
DE2- yes but that need not be technology, but it can also be public lighting, for instance... although that is also a technology
M0- you would not go into a dark street?
DE2- yeah, well, I think that with a lot of common sense already many examples can be found of why in some streets and squares it works better, or it is safer... That more and more 'common knowledge' is going to be gained (via data-analysis). This common knowledge will be something city planning or development will have to take into account.

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

Another expectation is made here by DE: that there will be an innovation on the social side of public space, in the area of 'social safety'. Here, social innovation is linked with technology by pointing out the possibility of analyzing video data in terms of 'crowd control' and 'mass psychology'. The insider here is advocating technology from a professional perspective, not questioning if the crowds wants, or needs, to be monitored; the watched are not voiced. On the other hand, the wisdom of the crowds as an upcoming logics of technology is brought forwards. Here a first move is made towards another perspective on surveillance and safety, where solutions should not be sought solely in the technological. Continuing, the DE's discuss what a steering technology can be. Here, it can also be witnessed that the boundaries of what technology is, are not always clear. The workshop format forces this discussion by for example also providing images of urban furniture or public lighting; things in public space that are hardly questioned (see chapter 2). This creates possibilities for the group to place surveillance technologies in a broader perspective. A policymaker continues by bringing in some of the 'technologies of the now' from the map:

PM2- [...] Facebook, Twitter, these services allow both monitoring and sending information. And consumers on the other hand can use it as a way to get information or to send information.
M0- so that's double?
DE1- Yes it goes both ways

(excerpt from transcription of group discussion activity 1, 18th of December, 2013, Utrecht)

Both in- and outsider agree that social media works in two directions, defining it almost as a neutral ground; as something that neither the watcher nor the watched can really control. In that sense, it shows that both groups found it hard to put these technologies into a certain quadrant in the exercise; they thus play an ambiguous role in public space and surveillance. Both groups placed these technologies in the 'now', revealing that social media in some form or another is already being used in the nightscape. It also shows that actors in the surveillance landscape have social media on their agenda. While this activity was aimed at making an inventory of what the participants deemed relevant technology in the public nightscape, both within the groups as well as in the discussion, some reflections were already made on what these technologies do (and do not do), not always elaborating, however, for whom. In the next activity, both groups will take the same technologies as mapped out in this activity to look into the amount- and type- of influence they have on the nightscape.

6.3 The influence of technology in the nightscape

6.3.1 Mapping the influence of technology

After both groups mapped out technologies in public space, in the second exercise, the goal was to assess these technologies in terms of influence on or in public space and why specifically these technological devices were mentioned, or picked out. To be more precise, the groups were asked to explain how their chosen technologies influenced the public domain and on whom specifically these devices have an influence[110]. This lead to debates about the reach and the impact of certain technologies on different actors in that public space. The participants were not provided with a clear definition of 'influence'. This was deliberately done to avoid pointing the discussion towards safety or surveillance per se, thereby cutting off alternative views of what a public nightscape is, or can be. This feeds back into the larger debate on city branding and questions of fear versus fantasy (see f.i.Van Aalst & van Melik, 2007), where the city centre and city branding hinges on both challenging and being exciting as well as providing safe nightlife districts. On both sides, technology plays a role. Participants were provided with visual

tools such as pre-selected pictures of technologies, markers, post-its and a map (see figure 6). The horizontal axis now represents the scope of surveillance technology to consumer technology. On the vertical scale, the amount of influence had to be mapped. The assignment was to go through all the technological devices as selected in assignment one. Since in that assignment, each technology was already mapped on the axis of 'surveillance technology' to 'consumer technology', the challenge for the groups was to decide how much influence a specific technology has in the public nightscape. The next step was to link this influence to (a) specific actors(s) who one way or another have to deal with a technology in public space. Technological devices or infrastructures could appear more than once.

This activity aimed to trigger stakeholders into discussions of how surveillance technology, social media or anything in between influences the nightscape. The underlying question is: What type of user is affected by which technology and in what way? By plotting this on a graph, a visual insight was created that shows how and where options and chances lie for emerging surveillance technologies, but also, it created points of discussion about gaps on these maps: do we want surveillance technologies to have a lot of influence on the nightscape and on specific actors, and if so in what way?

The influence-map as shown in figure 7 is made by group 1. Looking at the quadrants of this map, many technologies are placed in the 'surveillance' and 'much influence' quadrant. Public screens, public lighting and the bodycamera are mentioned as technologies that have much influence on citizens/ visitors of public nightlife districts. The forecasting camera,

110. f.i. A CCTV camera has much influence on the police because reason X, but less on the visitor of the nighttime district, because reason Y. Thus we place the CCTV camera in the quadrant surveillance technology and much influence
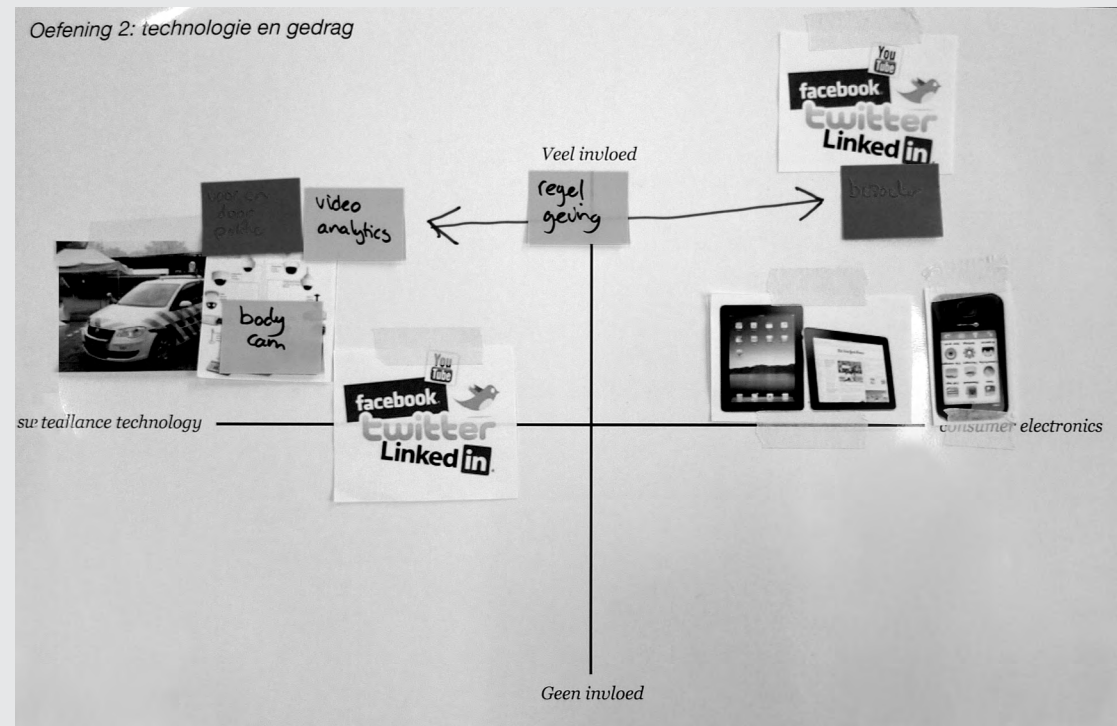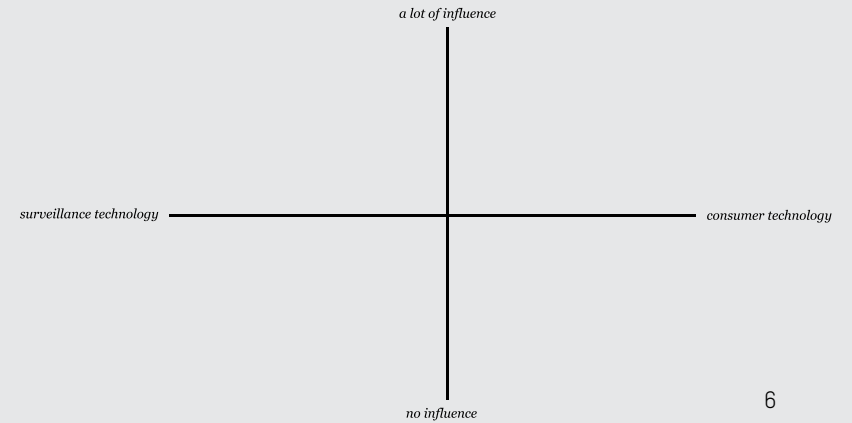
6

7

figure 6: mapping the influence of technology on public space.

figure 7;
influence of technology on the nightscape by group 1

the police control room and the body-camera are identified as technologies that mainly influence police officers. In the consumer-quadrant, this group has mentioned roadblocks and lighting as influential on citizens, although they are placed low on the axis. The mobile phone, which is here placed as a consumer technology, is granted much influence and this influence works on everybody. Social media is placed on the axis between surveillance- and consumer technology, indicating that these technologies are influential on both sides, they do not belong specifically to 'surveillance' or 'consumer' technologies. In the quadrant of surveillance technology and little to no influence, the group placed detection gates and CCTV close to both axes. This means the group grants these technologies a bit of influence. Technologies such as ANPR[111] and c2000[112] have no influence at all on the public space at night. On the other side, consumer technologies such as WIFI and Google Maps are claimed to have no influence either, not on citizens nor on the surveillance-control room. This last mapping is typical, since one might expect an open location service to have been interpreted as something influential. The group, and especially the insider (DE), advocates that Google maps is not a steering technology:

PO- whom it (technologies) affects? […] (Google maps) has a lot of influence on this (consumer technology), but little on that (surveillance technology)
DE- and about Google maps, you are not steered by it, but a mobile phone that you use a lot, that might have a steering influence.
PM- […] okay, and then we also have

pasted this one in (points at another technology)
PO- but do we place it (Google Maps) under 'a lot of influence'?

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

The map here provides a way to reshuffle, or re-calibrate influence once more technologies are mapped. This means team members can still 'move' a technology over the map after it is placed, making placed items re-negotiable once put on the map. Terms such as steering and influence work here, because they are deliberately not defined beforehand. This forces team members to explain why and how a technology might have influence on a police officer or a citizen. One discussion that this triggered was on what a better way of steering is; physical and conscious, or implicit and subconscious? Public lighting is brought up as being the latter (see next page).

PO- […] and lighting… that does have influence, but umm
DE- not an awful lot…
DE- it is more subconscious, right?
PM- So it is more on that side (of the map), because it will be … um, you're going to walk somewhere where it is lit up nicely and not where it is very dark?
DE- yeah okay, but yeah, that is more of a subconscious uhm it does influence a decision, but umm it will not work like "hey, we turn on the light, now it's time to go home".
PM- well, I do not know, it is the suggestion made in the Enschede-case[113]
DE- yes, it will not work in 100% of the

111. Automatic number plate recognition

112. C2000 is the backbone system for communication between emergency services in the Netherlands.

113. In the city of Enschede, police-controlled public lighting on the main square is used as a soft means to 'force' nightscape visitors to return home. By increasing brightness, a light atmosphere is created in which, or so the idea is, people call it a day and want to go home.

114. By this, the group points to cameras that are hooked up to an intelligent back-end system. By analyzing movements of people and cross-checking this with template 'patterns' of deviant behavior, for instance, the camera can 'predict' that something is about to happen and consequently, can auto-matically track the person(s) involved in the predicament. See f.i. Erdem, U. M., & Sclaroff, S. (2005, September). Look there! predicting where to look for motion in an active camera network. In Advanced Video and Signal Based Surveillance, 2005. AVSS 2005. IEEE Conference on (pp. 105-110). IEEE.

cases or be the cause - it's more that it creates an atmosphere.

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

Here insider- and outsider views clash (DE and PM respectively). This leads to a compromise by DE, who is stating that the influence of public lighting is contextual, meaning that it creates an atmosphere that might, subconsciously, influence citizens in, for instance, their movement. In debates surrounding the sense and nonsense of surveillance means, often the hard facts, or those means that are explicit and have measurable effect or influence are preferred. Public lighting is seen here as something that indeed might have an influence as a 'soft' means. Moving to cameras, an outsider (PO) introduces the 'predicting'[114] camera as an upcoming technology. The insider (DE) follows up by introducing urban screens as a technology that is currently present in public space:

PO- that predictive camera can have an impact on the police
DE- then we also have these public screens
PO- Well that (reference to a certain screen) will have no influence, but this does! (reference to another urban screen)
PM- if you have a screen that displays perpetrators, or suspects, then that might work
[…]
DE- So that's, that if we map this, then it sits here (on the map)
PM- so (screens are) surveillance and then uhm something else?

DE- everyone secretly looks at those screens anyway; it draws attention

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

In this group, the influence of urban screens is linked to content and size of these screens, where it might draw attention when it is being used for surveillance purposes, such as displaying perpetrators (f.i. see chapter 2). Here, all stakeholders more or less reason from a citizenperspective, not claiming expertise on this specific technology. The type of technologies that are visible are mentioned first. What about the less visible back-end systems and the infrastructure in place that make sure that visible technologies such as urban screens, or CCTV cameras, can function? The map shows that, where social media is placed on the axis between surveillance and consumer and is granted 'much' influence, the access to these types of services via WIFI is seen as typical consumer technology that has little or no influence:

MO […] and what about WIFI?
PO- yes, that is consumer technology
DE- a bit like Google maps
PO- yes that does not have much influence I think
DE- people already have a mobile that is equipped with Internet, it is not so surprising

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

The insider states here that since WIFI is ubiquitous, it has become so normal and engrained in everyday life that it will not

influence behavior of citizens at all. This would point out that indeed social media tools are present in the nightscape, but that their influence on surveillance is neglectable, because they are ubiquitous. Both the PO and de DE here seem to reason from their experience as a citizen and do not question infrastructures needed to enable things such as social media. Moving on to the bodycamera, the following is said:

PO- The bodycam, does that influence the citizen or the police?
PM- or both... I think both [...]
PO- government-owned cameras, is that still on the map? I would say citizens... do they really care about CCTV cameras?

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

It is questioned by PO whether CCTV cameras and body-cameras have an influence on citizens and/or police. Here, this outsider creates a distance between this group (as being all insiders of organizational surveillance) and citizens. While the participants in this workshop all are professionals in the field of, or somehow responsible for, surveillance technology, the question of influence of a CCTV camera is apparently still a valid one (in other words, there is still ambiguity surrounding the role and effect of CCTV cameras, even amongst professionals). They 'agree' that in the end, state-owned camera technologies have little influence on citizens in public nightscape. As stated earlier by participants, technologies such as the bodycamera and the CCTV cameras work as an extra eye, having maybe more value for police than directly for citizens. According to this group, influential or

steering technologies can be found in physical, or at least clearly visible means. In the city of Rotterdam, where a part of the participants is situated, there are clubs and bars with electronic detection gates. These gates also enter into the discussion:

MO [...] things such as security gates
PM- hmm do they have influence?
DE- in some pubs they do have those
PM- for weapon detection
DE- I find it very doubtful, very telling
PO- then (if a pub has a detection gate) you know that something is off
DE- then I do not go inside, because you know that indeed it's not good
PM- but you have them in other buildings
PO- but that's the same story, so it has an effect[...]
PM- where would it be placed (on the map)?
DE- it is basically an electronic bouncer

(excerpt from transcription of activity 2, group 1, 18th of December, 2013, Utrecht)

Because the detection gate deals with access control and thus entails a selection process, the group grants detection gates 'much influence'. These types of access controls also have a preventive function, according to the group. Reasoning from a citizen- perspective, both DE and PO point out that if a bar or a club has these types of gates, it is apparently necessary, thus a 'bad' place to go to. They would not to go into such places.

Looking at these discussions triggered by the influence maps, an image of a surveillance technology emerges that has a strong emphasis on physical steering and physical boundaries as effective 'instruments' in public space.

Consumer technologies such as the mobile phone, but also CCTV and the bodycamera are seen as non-influential when it comes to choices or actions citizens make during a night out. Some technologies are discussed while not being on the map (f.i. this group forgot to map the detection gate). Reflecting on how this group used the map, it can be concluded that the map helped them in shaping opinions about the different technologies that are a part of, or expected to become a part of, the public space at night.

In this activity, both in- and outsider stepped away a bit from their professional perspective; the question of influence was often treated from the perspective of (being) the citizen. This group categorized governance, police, and citizens as main actors in the nightscape. Concerning the level of influence attributed to technologies in public space, this group mentioned the mobile phone as having most influence on citizens, social media technologies as highly influential for both citizens as organizational surveillance, thus generally influential in the nightscape. The control room as a place of technologies rather than a technology in itself was mentioned as having the most influence on police work in the nightscape. Surveillance measures such as a sound-car or a public screen are mentioned as means that are, or can be, highly influential as surveillance means on citizens.

Figure 8 shows the influence- map as made by group 2. This group decided to create a system in which the orange post-its represent the actor and the yellow post-its represent a technology, or rather a surveillance instrument. When looking at the map, it shows that this group only focussed on technologies that have an influence on public space. In the upper left

quadrant, a police car, video analytics, and cameras such as the bodycam are mapped as having a lot of influence. Nuancing the map, the group explains that this influence is only on, through and by police (orange post-it). Moving along the axis towards consumer technology, technologies such as Facebook and Twitter are put. They are put in the middle of the 'influence' axis, thus these technologies doe not have a major influence in the surveillance landscape, according to this group. At the centre axis between consumer and surveillance technology, a yellow post-it is put that reads 'regulation'. Where this is not necessarily a technology in terms of a technological device, the group sees regulation as the key connection between technology and its users. Relating this to surveillance, their argument seems to be that both 'organizational surveillance such as body-cameras as well as 'bottom-up' surveillance via Facebook and Twitter can only be used if it is clear to all parties how it is used and what it is used for. Moving the quadrant in the upper right corner, the group does grant much influence to social media and social media devices that citizens in (or 'visitors of') a public space might carry. According to this group social media does make an entry in the public domain by having influence on behavior of citizens. Technologies such as cameras and cars have more influence on the behavior of police officers than social media technologies do. The group emphasizes the importance of regulation for surveillance technologies as well as social media technology (for instance, Facebook). During the discussion on how different technologies affect different actors in public space. This group extensively discussed the bodycameras and how they relate to CCTV cameras:

PO- there are so many types of cameras
DE- this (on the map) is the whole camera palette
MO- on who do you think that (cameras) have the most influence?
PM- well, what do you see now? Visitors?
DE- Well umm that you put information into a device...
PO- it is something you work with... it is one of the basic ingredients you work with. You're always in need of good information: what did he look like, or what exactly happened.
PO- yes because this offers the possibility to color things that were grey before.
MO- , so the bodycamera has an influence on police, but not directly on the visitor?
PO- yes...
DE- umm yeah... not necessarily but I see a link to umm... when something is happening it adds to the flow of information (i)... such as crowd management

(excerpt from transcription of activity 2, group 2, 18th of December, 2013, Utrecht)

In this discussion, the police officer states that cameras do have an influence as information-gatherers, that allows you to get a better understanding of a situation. The designer continues that the cameras only indirectly have an influence on the citizen, or the visitor. Because you collect data about crowd movements in a city centre via cameras, for instance, you can make a better judgement on if and where 'steering' is necessary. Here, both the insider (DE) and the outsider (PO) hint at the value of technological solutions to gain 'social' information. This collecting of social data is not problematized in light of surveillance- and privacy issues; it is 'just' another resource a surveilling party can tap from. The police officer explains that another influence of cameras in public space is verification of other data:

DE- yes well it could also be that you... you have here... that you want to verify things, uh, it gets out of hand, there must uh, somebody must go there to see what is at stake exactly...
PM- I agree
PO- it (the bodycamera) is sometimes useful in verifying other information, because a camera setup, there, when it comes to crowd management, you can sometimes create a better overview. For example, a policeman says, it is too crowded here. But he looks in one specific direction (one way), and then you see via the cameras (CCTV), that left, right and behind him there is still plenty of room.

(excerpt from transcription of activity 2, group 2, 18th of December, 2013, Utrecht)

The CCTV camera here becomes a tool, and 'extra eye' to guide police officers who are in a public space. Where these fixed cameras have the advantage of providing an overview of a square, for instance, the bodycamera has other specific qualities that are pointed out by the designer:

DE- On one occasion, in Nijmegen, at the four-day walking marathon, our live bodycams were used. There was someone who got unwell, who fell ill.. An officer on-site was there first.

figure 8:
influence of techno-
logy on the night-
scape by group 2

Via the bodycamera he was given instructions by doctors on a distance on how to treat   the patient.
MO- so what he or she had to do

(excerpt from transcription of activity 2, group 2, 18th of December, 2013, Utrecht)

Thus, the bodycamera is not necessarily only used to record deviant behavior or to surveil on a crowd; here another influence of the bodycamera in the public domain is pointed out as well, that of guiding ground personnel, but now from a more close-up point of view. Redirecting the debate towards surveillance and the role of cameras in public space, the moderator asks the question if citizens should know about cameras such as the CCTV or the bodycamera, and from which geographical point or location in the city should citizens be informed?

MO- but you would therefore argue that the CCTV signs do affect?
PM- Yeah, I do not know that. I find that difficult uhm... I know that opinions are divided on this matter
MO- but what do you think?
PM- I do think you should give people a chance to see that there is CCTV, once they walk into an area... but the influence...
DE- very practical ..the fact that CCTV cameras are hanging high,makes for one angle of vision. It also means people can not break them. But if they want to avoid them they just put on a hoody...[...]
PO- it works against the police in any case, such signs
PM- yes?
MO- so it does affect...

PO- yes, but I think it is a gesture to the audience to say uh, your privacy is somewhat less than uhm as 10 meters back.

(excerpt from transcription of activity 2, group 2, 18th of December, 2013, Utrecht)

The policymaker states that you have to give people the chance to read, or communicate, that camera surveillance is in place in the upcoming area. The designer responds that the efficiency of these cameras is easily dodged by putting on a hoody. The police officer opposes even more strongly to CCTV signs, stating that it does not help, but rather works against police officers, not developing further how exactly. Here only the PM as an outsider is taking the perspective of citizens. The other two stakeholders take the perspective of surveillance professionals. These signs do have an influence on the public, by communicating that your privacy as a citizen is less respected beyond a certain point, as claimed by the police officer. Interestingly, none of the participants makes the link to a form of digital notification or warning that one walks into a CCTV area (a surveillance innovation that seems rather straightforward). In reflecting upon types of surveillance technologies such as cameras and signs, social media is not on top the minds of participants in this group. Forcing the discussion into the direction of the perspective of citizens, the moderator asks the following:

MO- how could such cameras protect citizens?
PM- well, that they may not or cannot record unless it is really necessary.

MO- but how would you do that?
PO- that can be done via regulations
PM- these devices (cameras) records things, okay, but it must also be very clear (to the public) what is being done with the footage, what you can and can not do with those recordings (as a government)

(excerpt from transcription of activity 2, group 2, 18th of December, 2013, Utrecht)

The police officer again refers to regulation (of which CCTV-signs or a message on one's mobile stating that one is now under CCTV surveillance are clear manifestations, one could argue). The policymaker argues that one solution could be that the camera only records unless its necessary. It must be clear (to the public) what happens with recorded footage. Ideas on how this camera should communicate this, are not further explored.

Summarizing, this group mapped certain technologies from their first assignment as being influential. This influence was spread over two separate groups of actors in public nightlife: police officers and visitors. This reflects in some part the professional background of these participants. In terms of social media technologies, they are convinced that this has influence on citizens, and that surveillance officials such as the police can make use of this medium to monitor audiences, but also to communicate to them. According to this group, the key challenge for the future of surveillance is to process and use data derived from 'classical' surveillance technologies, as well as new technological artifacts such as the bodycamera or the mobile phone. Reflecting on how this group used the

map, it can be concluded that they used it to articulate the difference between surveillance technologies used by police (organisational surveillance) and the growing importance of social media in shaping public spaces. Also, they used the map to highlight the importance of regulation.

6.3.2 Discussion of influence of technology

After two group sessions, the influence-maps were discussed plenary, where each group had to explain their map. The designer of the first group starts by explaining why they believe social media does not have a lot of influence on public space:

DE1- we see a lot of applications and influences in surveillance technology
PM1- (we discussed) many citizen-directed technologies
DE1- such as WIFI and Google
PO1- we wonder whether that will impact public space and surveillance
PO1- I think it is a 'nice to have' but not a 'need to have' (social media)
PM1- we also have technology for everyone, including Google Maps and WIFI
DE1 - it (Google maps) is a given, but it does nothing, it does not influence citizen's choices during a night out
DE1- public space and lighting and uh, stuff that nuance behavior, but it is not controlling, or steering
DE1- other influences are more steering
PM1- for instance, CCTV and a metal detector, it creates, or shapes your environment, but it has no direct influence

DE1- but it does not change your decision, as a citizen
DE1- it is a bit 'in the middle'; a little bit of surveillance and a little bit of consumer

(excerpt from transcription of activity 2, discussion, 18th of December, 2013, Utrecht)

Evolving in an open discussion concerning the influence of social media on the nightscape, the policymaker from group 2 adds to this point that for a police-force, it is very welcome data, where for citizens you want as little influence of this type of data on your night out:

PM2 [...] as a citizen I can imagine that I do not want to sit on this side of many surveillance and influential technology, because I would not want that as a citizen, but as a government or public authority, well, you do really want to be on this side, so it's just how you interpret, or from what side you look at it.

(excerpt from transcription of activity 2, discussion, 18th of December, 2013, Utrecht)

Here, for the first time, the influence of social media is questioned as something 'good', or something we should want as a citizen. The designer from group 2 emphasizes this point. There are already lots of cameras in public space; data from the cloud only adds power to the side of organizational surveillance. He does make the link with the bodycamera as a set of 'eyes-on-the-ground', and that this might also be a positive development:

DE2 [...] Uhm, then you have, already discussed in the other group, a whole palette of cameras, CCTV uh, bodycams; they might have a reasonable influence. But it is especially on the side surveillance that (social media) is useful for the government. In addition, if via social media it becomes clear that something uhm something happened, that for example, that bodycams can be 'fast' eyes for the government, or the police may be to be able to verify what is going on.

(excerpt from transcription of activity 2, discussion, 18th of December, 2013, Utrecht)

Responding on the example provided by insider DE2, PO2 explains that in current surveillance- and policing practices, monitoring of social media does take place. Reasoning from a professional perspective, the added value he sees in social media is that it can be used to verify information from other sources, such as police officers on the ground and CCTV cameras in public space. Also, communication channels such as Twitter can be used by local governments or police to send out messages to the public (in this case, linked to crowd management). As an outsider, PO2 is informing the group about current technological practices of surveillance:

PO2 [...] but using that type of monitoring of social media to see what happens. Now social media can act as a piece of verification. This might be valuable information when f.i attempts are made to steer or do crowd management, in a very busy event. You can put up physical signs such as matrix signs, but you can also try to communicate the message

again via social media to clarify that by -uhm- via Twitter or any other social media whatsoever.

(excerpt from transcription of activity 2, discussion, 18th of December, 2013, Utrecht)

What happens here is that social media is emerging in the group discussion. Examples from work- practice are used to argue for relations between social media and surveillance, granting these technologies the status of monitoring- and communication tools. Comparisons are made with 'old' technologies such as matrix signs in cities to convey a message. The other group, however, does not agree with this vision on the role of social media in surveillance:

DE1- [...] us (another group) we had just written off social media as a sphere of influence
MO- why?
DE1- for example if you want to have influence on Facebook as police, you have to be friends with those consumers, or visitors. I think that was playing in our minds a bit...
PM2- that is why we distinguished between police that uses Twitter and the people who are Twittering...

(excerpt from transcription of activity 2, discussion, 18th of December, 2013, Utrecht)

The practical point raised by the designer is that social media is not all open, free and accessible. For instance, in order to spread a message on Facebook, the local police has to be friends with everybody

that at that time is in the city centre. Here, a key issue is touched upon when discussing social media and the effect, or role it can have on public space and surveillance; it might seem as a way to reach a broad audience at once, but which audience is this? Where a CCTV camera, or a matrix-sign is physically present in the space-to-be-controlled or monitored, the receiving end of social media is unknown. The policymaker of group 2 responds that that is why social media appears twice on their map; once at the side of consumers and citizens, where organizations such as the police can monitor what is being posted by a certain public, and once at the side of the police force itself, they can choose to use social media channels to communicate to a certain public. Upcoming technologies such as social media and the bodycamera thus are not as clear-cut. Rather, this discussion reveals that amongst surveillance stakeholders, there are different views on what kinds of technologies can be found in public space, which of those are part of the surveillance-landscape and what type of influence they have on the nightscape. The role of social media is not uncontested, as workshop participants show both a firm belief and skepticism concerning these media.

6.4 Assessing scenarios on surveillance futures

6.4.1 Scenarios of Dutch surveillance futures

The third and last activity in this workshop involved reviewing and assessing social-technical scenarios on surveillance-futures. Based on interviews and field notes of observations (see chapter 5), three scenarios have been developed that propose three different futures (within 10 years from now), taking into account both possible changes in social-political contexts and technological landscapes. These technological landscapes are based on current developments and the growing role of privately owned and potential surveillance technology in the public sphere. The boundary between privately owned and public surveillance technologies is under scrutiny in all three scenarios. However, in the scenarios, the way citizens, governments and technological actors deal with this varies drastically. Against the social-political and the technological backdrop, in every scenario a situation is being sketched that deals with 'a night out in a city centre'. At the end of the situation a question is included. This question is directed at the 'reader' of the scenario and serves as input for discussion and assessment. In short, the scenarios consists of the following sections: 1) socio-technical background, 2) technological

landscape and 3) a situation. In each of these scenarios, upcoming surveillance technologies such as the bodycamera play a role. In analyzing responses to these scenarios, insights are developed on what these stakeholders see as desirable futures and 'good' surveillance.

As discussed earlier in the method section, these scenarios are based on pre-engagement with major stakeholders in the Dutch surveillance landscape. A typical difference with 'classical' CTA scenarios is that they are built-up visually, in a combination of text and images. The main reason for doing this is to communicate certain concepts or technologies in such a way that they invite stakeholders to engage with the scenarios. Each scenario presents a different surveillance future and a different take on what 'good' surveillance should entail. Methodologically, the scenarios are built up in such a way that there are multiple 'routes' through the scenarios, creating the possibility to discuss the scenarios in a non-linear fashion. Although these scenarios are largely visual, a short textual description of each scenario is provided below (see next pages for the actual scenarios as presented during the workshop).

In the first scenario ("technological optimism"), the social-political background is that of responsible citizenship where safety and surveillance have become issues for the public to deal with more than a local government.Technology in this scenario is seen as something neutral, even positive. The surveillance landscape is based on 'cloud computing', where all data of citizens and governments, is shared in the cloud and open to use. Sharing of data is seen as something 'normal' and unquestioned. The police uses social media to promote certain nightlife districts

115. Bluetube is a closed YouTube-like channel that has been developed in the Netherlands. On this channel, video footage that has to do with surveillance and incidents is being shared. Access (for now) is limited to police stations.

116. Where participants opposed strongly to this notion, we are in a way already there; companies such as Instagram, a picture-sharing app, attempted to gain control over user-data in order to sell user-made pictures in their name to third parties (f.i. User makes a picture of a good restaurant, uploads this picture via Instagram, the company would try to sell the picture to the restaurant, claiming all copyright. Luckily, a court case has blocked this development (for now).

117. Also here, many participants opposed the notion of creating physical access point to city centers, forgetting that this already takes place in the Netherlands during special events, where city squares or certain areas become (often privately exploited) closed spaces, where ID and everyone is 'frisked'.

while at the same time monitoring them. Via active campaigning citizens are being informed about safety-apps, 'bluetube[115]' and where and how to post self-made videos in such a way that they become findable and connected to a certain incident or crime committed in a particular nightlife district. The body camera has become standard equipment. The case presented in this scenario is that in a nightlife-related incident, a judge has to deal with a myriad of digital sources of evidence, both user generated and from local governments. The question underlying scenario 1 is: how to cope with digital truth-finding?

In the second scenario ("technological pessimism"), the social-political landscape turned more towards a heavy-governed and control-based society. City centers have become more rough and safety cannot always be guaranteed. Investments have been made in technological solutions, rather than investing in people. A lot of services and institutions are based on 'access control', both in physical and digital spaces, building on the current development that social media sites are more and more acting as 'walled gardens' (see f.i. Feijoo et al., 2009), where constant verification on your identity is required. In this technological future, many technological items have become traceable, such as phones and computers. Companies that provide this information are willing to sell this data to (local) governments. Data created by users is company-and state-owned, rather than user owned[116]. The bodycamera is used during special events such as a football match, or specifically busy nights. The case that is presented in this scenario is that on one night, somebody tries to get into a city center. The local government uses access gates

to control nightlife districts, where ID is needed to get in.[117] This person gets into the city centre under a false ID. The police gets a notification and via pushed images, the bodycamera is used to track the person down. The person is escorted out of the nightlife districts. After doing so, police officers re-evaluate the necessity of this action and the boundaries of tracking and controlling nightscape visitors.

The third scenario ('new balances') is based on an equilibrium, where nudge politics (Thaler & Sunstein, 2008) are a dominant means of governing nightscapes. Safety is still and issue in the city, however, the effects of 9/11 have worn off a bit. Although there is more technology in public space, there is not necessarily more use; there is some awareness of the value of not being connected. Technology has not drastically changed from the now. City centers do have open WIFI's as a part of the infrastructure. Surveillance is based on nudge politics, where you and your smartphone, for instance, become part of the surveillance network unless you notify you do not want this. Due to a fine balance between privacy protection and commercial interests, the final control over what happens to one's data lies with the user of the service. Different surveillance measures in this scenario are based on an optional model, where you as a visitor can choose to take part in certain services or not. Where this scenario might sound user-friendly, in fact the model is that of nudge; you are 'in' a system or service unless you explicitly let that provider or party know that you 'want out'. In that sense, social media is used to 'mobilize' citizens, which can lead to discussionson privacy and citizen responsibility. The case in this scenario is that a visitor of the nightscape enters the nightlife districts

and gets a push-notification[118] that asks her if her phone and phone camera can be used this night as extra witness, or surveillance camera, in case this is needed (a call upon 'participatory surveillance'). If the user accepts, this is accompanied with the responsibility to respond when called upon by the local government or police (call upon 'responsible citizenship').

The scenarios were printed out in large formats (about 3500mm*700mm)[119], and laid out on separate tables. The participants were divided in two workgroups: per work-group they were asked to walk around and assess each scenario. They were allowed to revisit scenarios and/ or go back and forth between scenarios. In a plenary session the scenarios were discussed in terms of plausibility and desirability.

118. This is a term currently used by social media services. It means a (digital) service forwards a message or notification at their choosing (after user-consent)

119. High-resolution versions can be found at (respectively):

http://www.stadsnacht-wacht.nl/media/posters/scenario_1.pdf

http://www.stadsnacht-wacht.nl/media/posters/scenario_2.pdf

http://www.stadsnacht-wacht.nl/media/posters/scenario_3.pdf

120. A case where patients in a Dutch hospital were secretly filmed. A while later patients were asked permission by the hospital to use that footage (see f.i. http://nos.nl/artikel/439428-patienten-vumcserie-misleid.html (in Dutch))

6.4.2 Responses to scenario 1: Technological optimism

During this last exercise, the participants could go through the scenarios in any order they chose to discuss and reflect on what they saw and read. In a plenary session, the scenarios were discussed, in particular the role of the new surveillance technologies such as the bodycamera and the mobile phone as a platform for social media. Responses of the participants on scenario one can be summarized by the remark of a policymaker, who stated that this is not the future, rather, we are already there. However, the participants considered this scenario as too optimistic, because it relied too heavily on mutual trust of citizen and local government. When discussing the scenario in a plenary session, the following issues were raised:

PM1- it is there already
MO- but is it desirable?
PO2- it is not desirable, there is a decision point about who releases what in terms of images and footage
PM1- not (the) live watch
PO2 (an) difference between investigative procedures in the public domain and those in the private
DE2- the bodycam is for situation-awareness
PO2- but they make public images, so it is not desirable to share it
PM2- only if there is a reason for it
PO1- detection asked? other purposes, but also there: image is there
PM1- there is an educational purpose..
PM1- it(reminds me of the) case VUmc[120]: to first take footage and then afterwards

ask permission
PO2- we have to watch over what is released
PO1- (we need a) cheaper way to store data
De1- do users also have access? to data?
PO1- it is about digital truth-finding
(notes taken during activity 3, discussion on scenarios, 18th of December, 2013, Utrecht)

The discussion moves in different directions, from topics of preferability of this scenario towards the goal of sharing footage (educational, or something else), especially when it is produced by police, to finding ways of saving data to the question of user involvement in this whole process. Finally, the point is made that in this scenario, the main issue is the value of digital truth-finding. Participants assess this scenario as slightly optimistic, but rather plausible because it is very close to the 'now'. It explores how the role of social media could be complementary in creating 'better' surveillance. However, it does call upon 'citizen responsibility' when it comes to surveillance and safety, in a way granting more 'power' to citizens than currently is the case. Also, it is based on the willingness to share data 'for the greater good'. Concerning good governance and the desirability of this future, especially the PO advocates strongly against this scenario, emphasizing that 'we' need to keep a clear boundary between public and private spaces and data. The PM states that there should be a very good reason for using public data. The insiders (DE) voice concerns for users and the accessibility of data once it is being used for surveillance purposes.

Scenario 1; Technologisch optimisme

Achtergrond

2015/2020: Na een stijging in incidenten in uitgaansgebieden in steden als Rotterdam en Utrecht, besluit de overheid in samenwerking met de lokale politiek om middelen beschikbaar te stellen in technologische ontwikkeling.

"City branding" wordt belangrijker en er is een economisch belang voor zowel lokale als landelijke overheden en bedrijven om een goed imago neer te zetten.

De stad moet veilig maar aantrekkelijk. Er wordt veel beroep gedaan in de maatschappij op 'responsible citizenship' ; niet alleen de overheid is verantwoordelijk, maar burgers zelf hebben invloed op allerlei processen (voorbeelden hier zijn OpenData, Hackdeoverheid etc.)

Technologie
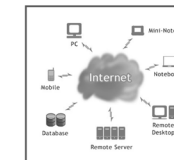
Technologie wordt gezien als neutraal/ positief; alles is open en in de cloud.Data is van jezelf en in de cloud aanwezig zijn geeft voordelen.

Via campagnes worden mensen bewust gemaakt van veiligheidsapps, bluetube, en de te gebruiken steekwoorden om gefilmde en gedeelde situaties vindbaar te maken

Het delen van data wordt gezien als iets sociaals. De politie zet sociale media in om het uitgaanscentrum te promoten, maar ook om het in de gaten te houden

Situatie

Er is een incident in het centrum van Rotterdam. CCTV camera's kunnen niet zien wat er aan de hand is.

De beelden van de bodycam worden live gedeeld met de meldkamer, maar ook open op het internet gezet.

In het discussieforum dat eraan hangt zijn zijn verschillende meningen te vinden over wat er precies is voorgevallen. De politie is erg content met de website en informatie, maar de officier van justitie zit met de vraag; welke bron is nu 'waar'?

Via informatie in de 'cloud', informatie gedeeld door de burger, bedrijven en instellingen, weet de meldpost snel te achterhalen waar de broeierigheid in de stad zich afspeelt.

Het incident bleek lastig te herconstrueren door middel van alleen de bodycam beelden. Via 'crowdsourcing' worden mensen gevraagd mee te helpen in het verzamelen en 'taggen van beelden en andere informatie die via steekwoorden automatisch is verzameld op een openbare, gemeentelijke website en/of app.

Er wordt naar alle koppels omgeroepen om hun bodycam aan te zetten.

Al voordat het eerste poli- tiekoppel arriveert, zijn er film- en geluidsopnames te vinden op YouTube en wordt er ge-twittert over de wat er aan de hand is.

figure 9; scenario 1

6.4.3 Responses to scenario 2: Technological pessimism

Generally, participants dismissed this scenario as either plausible nor desirable. Labeling it as 'dystopian' or 'very negative', none of the participants was inclined to support futures such as proposed in the scenario. However, since the scenario holds elements that are currently in practice, or at least in progress of development in the Dutch surveillance landscape, this opposition from some key actors in that landscape during the workshop is remarkable. During the plenary discussion, some views on certain surveillance technologies slightly altered:

PO2- to be bitten by the dog or the cat (via either one side, or the other, its both bad)
PM1-left and right do not fit (of the scenario)
PM1, PO2- sharing of 100% data does not exploit, or lead to all possibilities to tackle someone
PO2- (things like) alcohol legislation... that is 18 +... it is unenforceable (that which is proposed in the scenario)
PM1- there is a technological possibility, but do you want this?
PO2- what is the reason for repelling them?
PM2- it is a question (we) do not (want) to have answered by technology
PM2- it's a gut feeling and very dependent on the (local) political composition
PO1- technology (should be) for surveillance coupled with action or intervention

PM1- (things like) face recognition in some cases is useful (it can have a) sense/scan function
DE2- (what about the) database?
PO2- there are very strict rules for databases
PM1- but how do they play out in practice?
PO2- if you have done nothing wrong you should not end up in a database
PO1- when you ask people about it, they will have an opinion
PM2- I just want to be able to walk down the street without ending up in a database [...]
PO1- as a citizen, you can expect that you are there for a reason (in the database)

(notes taken during activity 3, discussion on scenarios, 18th of December, 2013, Utrecht)

At first, a police officer and a policy-maker agree on the fact that technological means do not lead to a 10% chance of catching a criminal. When following both policymakers in the continuation of the discussion, they both agree that 'we' have to ask what is desirable as a surveillance future, despite what is technologically possible. One policymakers refers to a 'gut-feeling' of rejection she got when looking at this scenario. Moreover, she links this type of future strongly to the (local) political landscape, a point not so strongly raised before in the workshop. A police officer responds that surveillance means should only be there to monitor and to guide 'action', hereby setting clear boundaries to these type of means. Following, a policy maker does believe that innovations such as face-recognition do have an added value,

and is in some cases desirable. Where during the scenario-'reading', this was strongly opposed, here we see an alteration towards an argument of 'but when it is effective, it is o.k. to use it'. Concerning the cross-referencing of databases, which occurs in the scenario, a police officer explains that very strict rules are in place when it concerns these issues. However, in how far are these rules followed, especially with the logics of social media and sharing of data in mind? A police officer closes by stating that as a citizen, you can expect that if you turn up in a database, this is for a good reason.

Where this demands a lot of trust from citizens in the ICT departments of a police force in the first place, the real question is that this trust cannot be promised, or guaranteed in a technological landscape where servers, standards and interfaces to data change every couple of years. In this sense, participants in this workshop do agree that there should be strict regulation and careful treatment of 'digitaliden-tities' when it comes to somewhat extreme scenarios as the one proposed here. None, however, relate this agreement to ICT practice and the (im)possibility to protect and secure data. Where the participants do reveal a sense of techno-realism, where it is stated that technology cannot solve all issues, there is also a hint of techno-logical-naiveness when it comes to the implementation of face-recognition or cross-referencing databases, in a 'good' way. The debate about 'good' governance here takes place between the two different 'outsider' groups.

Where the PO's draw on practical concerns derived from their perspective as a surveillance professional, the PM's push the debate more towards abstract questions of desirability of technologies as introduced in this scenario, often reasoning from a citizen-perspective. The insiders are hardly present in this debate.

Scenario 2; Technologisch pessimisme

Achtergrond

2015/2020: De uitgaansgebieden in Nederland zijn versoberd. Waar *city branding* en commercieel succes gecombineerd met veiligheid een droom was van zowel overheid als uitbaters, is er door de economische crisis een stabiel animo voor uitgaan.

Met deze versobering is ook een verruwing opgetreden. In steden als Rotterdam en Utrecht is uitgaan niet onschuldig en veilig meer, en er is veel van hetzelfde in termen van aanbod en type publiek.

Veiligheidsmaateregelen zijn een constant punt van bezuinigingen en de idee-en zijn er wel om problemen op te lossen, maar niet altijd de middelen.

Technologie

Er wordt hoog ingezet op nieuwe technologie tegen een lage prijs, waarbij het hoofddoel is geworden om te weten wie waar is op welk moment. Sociale media zijn helemaal dicht- 'access control' is het hoofd-paradigma als het gaat om technologie in de publieke ruimte.

Iedereen en alles is trace-able; digitaal zoekbaar en vindbaar. Het wordt steeds moeilijker om 'erbuiten' te zijn. Data is niet van jezelf, maar is eigendom van de staat.

Het delen van data wordt gezien als iets commercieels, maar onontkoombaar; wil je gebruik maken van een dienst, dan lever je daar je recht op je eigen data voor in. De bodycams die er nog zijn worden ingezet bij speciale 'events' of avonden, waar extra problemen worden verwacht.

Situatie

Na een voetbalavond in Utrecht worden er problemen verwacht. De supporters bewegen zich richting stad.

Een supporter weet met een geleend pasje het centrum in te komen. Hij is 17, en mag er nog niet in (18+). maar al z'n vrienden zijn binnen en ze hebben net gewonnen (en al wat op). Het poortje detecteert via cameraverificatie en slimme software dat het pasje niet overeen komt (match-ed) met de persoon.

Eenmaal aangekomen in het uitgaanscentrum, moeten ze door een poort. Net als de trein in het voetbalstadion moet elke bezoeker inchecken.

Agenten in het uitgaanscentrum krijgen de foto van de CCTV camera bij het poortje doorgestuurd naar hun bodycam.

De bodycam wordt aangezet en de scant de omgeving via 'face recognition' af naar de overtreder. Na een paar rondes word er een 90% match gevonden.

De agenten houden de jongen aan en zetten hem uit het uitgaansgebied, volgens strikt protocol. De agenten echter vragen zich na de tijd af: hoeveel vertrouwen wij op die software? En was dit nou echt nodig?

figure 10; scenario 2

6.4.4 Responses to scenario 3: New balances

The general response to this scenario was that it seemed plausible and to some extent desirable. However, question rose about responsibilities in the nightscape, where it was deemed impossible to force -or to rely on- citizens being a part of organisational surveillance. Not only due to quality or consistency reasons, but also because the safety of citizens would be jeopardized. A part of the discussion is given:

MO- how does this relate to nudge politics? (you are nudged into being part of something by default unless you indicate that you DO NOT want to – opting out instead of opting in)
PO1- we do not want to work if we go out
PM2- it (the scenario) goes far
PM1- at least you are given a choice
PO1- yes or no, it depends on a specific goal and objective
DE2- bodycam as a smartphone
DE2- the initiative whether or not to participate lies with the user
PO2- what is the reason to join (as a citizen)?
PM2- things such as Amber Alert - as a citizen you have a bigger reason to participate, and he impact on your own safety is smaller
PO2- the risks are different
DE1- by offering a possibility / security monitor / police mandate.
PO1- is there a distinction in mandate?
PM1- what if you do not want to? It is an appeal to 'good citizenship'
PO2- what do you do with people who are attacked because they participate?

PO1- (what is the role of) witness and suspect in these cases?

(notes taken during activity 3, discussion on scenarios, 18th of December, 2013, Utrecht)

A police officer points out that when he is out as a citizen, he does not want to be working (as a voluntary surveillance agent). A policymaker states that this scenario 'goes far', perhaps too far. Associations were made with the 'Stasi' time, when everyone was spying on everyone. This is an interesting remark, due to the fact that campaigns that call upon responsible citizenship by asking citizens to take photos or movies of the perpetrator(s) have already been rolled out in the Netherlands[121]. A policymaker and a designer do agree that the end-user in this scenario is given a choice; one does not have to participate. Another policymaker makes a comparison with Amber Alert, a service that uses social media in case of a missing child, where she states that in case of the Amber Alert, the reason for participation is bigger and the risk for the one who is participating smaller. Here, a crucial point in this surveillance future of participation is mentioned that also appeared during interviews with mobile phone camera users in nightlife districts (see chapter 4); that of the risk that is put on the one who makes footage as a voluntary sur-veillance agent or as a citizen. During the discussion, this point was further questioned by a policymaker and a police officer. When a citizen is a witness, can you actually call upon 'responsible citizenship' as government without being able to guarantee safety for the person who is recording?

121. See poster for campaign: http://www.leidschendam-voorburg.nl/Int/Leidschendam-Voorburg/Homepage-internet-Actueel/Nieuwsberichten/Nieuws-2010/Veiligheid-op-straat-en-in-wijken-Leidschendam-Voorburg.html Last visited July 22, 2013

Relating this to the question of good surveillance and good governance, especially the outsiders (PO and PM) raise concerns about the incorporation of citizens-dependent surveillance. Risks and responsibilities for (local) governments are deemed too high.

Scenario 3; Nieuwe evenwichten

Achtergrond

Technologische ontwikkeling is gestaag doorgegaan, alhoewel de wet van Moore toch niet helemaal uit blijkt te komen. Iedereen heeft wel een smartphone waarop er altijd connectie kan worden gemaakt met het thuisnetwerk, of met het stadsnetwerk.

Toch is er meer bewustzijn dan vroeger omtrent de gevolgen van het constante 'in the cloud' en 'connected' zijn. Af en toe is het handig, maar gebruik is met mate.

Hierover gaan ook veel overheidscampagnes. Het veiligheidsthema na 9/11 is een beetje overgewaaid. Toch is er nog wel angst. Om overvallen te worden, of voor de ander. Tijdens het uitgaan zijn er wel veel camera's en elk café heeft een eigen veiligheidsapp. Toch is het veiligheidsgevoel niet veranderd.

Technologie

Consumer electronics en surveillance technologie gaan in elkaar over. Tracking and tracing is standaard geworden, maar toegang en permissie ligt bij de eindgebruiker.
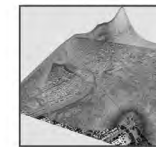
Surveillance gebaseerd op 'nudge politics' - je wordt automatisch onderdeel van een systeem of keuze tenzij je zelf actief aangeeft dat je dit niet wilt.

Privacy debatten omtrent nieuwe technologie houden een scherpe balans in stand tussen het vrijgeven van data en de bescherming ervan. Surveillance technologie is in balans gebleven.
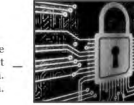
Situatie

Sophie gaat met haar vriendinnen uit om een avond te dansen in Utrecht. Nadat ze hun huis hebben verlaten, checken ze in met hun OV- chipkaart om met de bus naar het station te gaan.

In de bus krijgen ze een bericht naar hun mobiel met de vraag of ze hun telefooncamera willen vrijgeven in het geval van incidenten. Dit betekent dat, mocht ze een noodoproep van de lokale politie krijgen, ze haar mobiele telefoon camera moet richten naar in de door de app aangegeven richting.

Haar vriendinnen weigeren, maar Sophie drukt voor deze avond op 'allow'

Agenten in het uitgaansgebied krijgen, naast hun bodycam (of op hun bodycam) een bericht dat er nieuwe mogelijke mobiele camera is, die kan worden ingezet. De locatie van de mobiele telefooncamera (en dus van Sophie) zijn te volgen door de agenten.

Gelukkig blijft het die avond rustig op de plekken waar Sophie naartoe gaat. Als ze het uitgaansgebied verlaat, krijgt ze bedankberichtje van de app (gemeente Utrecht?). Sophie vind het fijn dat de app er is, maar ze zou niet elke avond participeren. Want wie weet moet ze echt gaan filmen en komen ze achter haar aan?
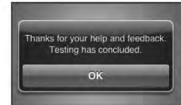
figure 11; scenario 3

6.4 5. Responses on the bodycamera and social media

Two main emerging technologies that were of interest for me as a researcher and that were both implicitly and explicitly part of the scenarios in activity three are surveillance via social media and new surveillance tools such as the bodycamera. These emerging technologies stem from different 'worlds' and follow very different logics when it comes to introduction into the surveillance landscape. In the general responses to the three scenarios the role of social media in the surveillance landscape is of strong concern amongst these participants. In contrast, the body-camera is not frequently mentioned. Both on the topics of the bodycamera as well as mobile phones as new technological artifacts in the surveillance landscape, some continuing discussions are relevant to mention. On the topic of social media technologies and their role in the surveillance landscape, Twitter is typically mentioned as a tool that is already used in current surveillance practice, however not yet officially part of police work via for instance a protocol:

PO1- open data is difficult in itself
PM2- and law also plays a role in this
PO2 (what is the) aim of putting something on Twitter
DE1- what is the importance of data sharing
PO2- percentage of people who are really actively Twittering (is small)
PM2- there are some things (on Twitter) which are true, or can be valuable [...]
MO- but does it have an impact on safety?

PM2, DE2 (it is a) quick way of information sharing
PO1- security and surveillance should work differently
DE1- (it becomes) less easy to do your own thing?
PO1-information management remains difficult
PO2- The image of the police (so far) is trustworthy... you forfeit that position (if you all share on Twitter).

(notes taken during activity 3, discussion on scenarios, 18th of December, 2013, Utrecht)

From practice, a police officer reports that the use of open data is 'difficult'; sources and ownership of this data do play a role. A policymaker complements that also the law has a say in determining where these boundaries are. Continuing, there is a short discussion between a policymaker, a designer and a police officer on the value of Twitter-messages and how to retrieve useful messages in between all the non-sense that is being posted on Twitter. The moderator tries to redirect the discussion towards the influence of these kinds of technologies on the nightscape; does something like Twitter actually have an impact? Opinions differ between policymakers and a designer. Agreement is reached by stating that services such as Twitter do provide a channel for both monitoring and communication to a large audience. Opposing these agreements a police officer (PO1) states that information management in practice is very difficult and that by using media such as Twitter in a wrong way, you are putting your image as being reliable and trustworthy at stake.

This reflects the current status within the Dutch surveillance landscape, where policymakers recognize a new technology, or hype, and want to put it on the agenda. Designers and engineers see possibilities for development (safety-apps, face-recognition, cross-referencing of CCTV with Facebook and so on), and surveillance practitioners see more work coming their way in actually dealing with new 'gadgets' and technologies in practice. The discussions on the bodycamera at the end of the plenary session showed similar dynamics:

DE2- (the) bodycam (is) not so special, it is one of the many cameras
DE2- the only thing (that makes it special) is that it is mobile
PO2- (but)the role as a camera does not change
PO2- except that the quality is lower (than CCTV)
DE2- but the impact on behavior of citizens is larger than a static camera [...]
MO- (the bodycamera) does it have a preventive effect?
DE2- it has a dual role, (that) has become clear
PO2- yes but not yet...
PO2- in about 5 years or so, we will know more about its effect
PO1- (the camera is useful for) directing ground-personnel
DE2- and it allows for better reporting (of events)
PO1- what can we do (more) with bodycamera footage?

(notes taken during activity 3, discussion on scenarios, 18th of December, 2013, Utrecht)

The CEO and designer of the bodycamera (DE2) states that the camera in itself is not that special; it just adds to the total amount of cameras present in the public domain. One police officer claims that the quality of the images is lower than CCTV. Where this can be contested, the designer points out that the main innovation is the fact that this camera is mobile. Due to the camera also being able to stream live images, the camera might have a double role, or function; a preventive one and a monitoring one, where it acts as a mobile CCTV camera. The police officer continues that this double role might emerge in the future, but as of yet it does not fulfill that role. Another police officer complements by stating it does help in steering and di-recting ground personnel and it that sense it has added value. Also for reporting, and being an 'objective witness (see see chapter 5), this camera can be seen as a new tool in the surveillance toolbox.

Other functions, such as proposed in the three scenarios, do not re-enter the debate.

Summarizing, these two excerpts show that, while in the mapping of technologies and influences on the nightscape, these to emerging forms of surveillance technology were not explicitly fore-grounded, via the scenarios it becomes apparent that they are becoming an important part of current surveillance practice, although not with equal weight. Where the bodycamera is seen as an added mobile CCTV camera, its preventive function remaining ambiguous, mobile phones and social media are recognized as something to take into account. Due to the volatile and unpredictable nature of technologies such as Facebook (Trottier, 2012, pp.104) the views of different stake-holders vary widely. One group clearly demarcated them as a 'hype' that will not have a lasting

influence on public space when it comes to surveillance. The other group thinks it is unwise not to look at Twitter, for instance, because all of information can be of value in a situation. Both in prevention as well as determining action, policymakers and police officers admit that social media is already part of surveillance practice.

6.5 An analysis of stakeholders' views of the Dutch surveillance landscape

Before going into what implications this workshop might have for Dutch surveillance professionals, or how at least this workshop contributes to forms of alignment of desirable futures (Quist & Vergragt, 2006, van Merkerk, 2008) of surveillance, first I will revisit the research questions:

Are emerging technologies in the surveillance landscape such as the bodycamera and the mobile phone recognized and articulated by stakeholders working in the Dutch surveillance sector?

From the first activity, that of technology mapping, we can see that in both groups social media appear, where technologies such as Facebook and Twitter as well as the platforms on which they run, such as smartphones and tablets are mentioned Both group 1 and group 2 map these technologies as being in the past- and or in the 'now', and they both map these technologies as being part of 'consumer technology'. The bodycamera is only mapped by group 2 and is placed as a

surveillance technology in the 'now'. During the second activity, more articulation took place because participants in this activity mapped the level of influence of surveillance technologies in the nightscape. Group 1 mapped the mobile phone as a technology that has much influence on everybody. However, via this same reasoning, they mapped supporting network technologies such as WIFI and services such as Google Maps as having very little influence, especially because they are accessible to everyone. Their reasoning is that for the individual citizen, these technologies will not have a strong impact on behavior and surveillance-related issues during a night out. The body camera is granted little influence on this same individual as well. Group 1 argued that the bodycamera might play a valuable role between control-room and police officer, but its (potential) preventive function on citizens is hardly present. Group 2 took a similar stance towards the bodycamera, granting it influence in the network of surveillance technologies used by the police and as such, the bodycamera would be a new, mobile camera that acts as a 'sensor' and 'extra eye' for control room personnel. The influence on citizens, however, is also limited, according to this group. Concerning social media, much influence is granted on citizens. For the organizational surveillance, however, social media will not have that big of an impact. It works as a background-information channel, and also as a way for the police to communicate to a potentially broad public, but it will not structurally change the surveillance landscape. Cases where the police is being 'policed' by being filmed by citizens were hardly reflected upon, expect for the realization that this (citizens using cameras) is a new reality

where police officers have to work in. In discussions about the scenarios (activity 3), the groups formed two different views on these developments. The first group concluded that indeed social media is a present factor in society, but that it is a hype that will 'sink in' and 'slow down' in such a way that for the surveillance landscape it will not have a major impact; rather, it will be used as a background information channel. The second group did see social media as having an inevitably influential role in the surveillance landscape, stating that social media is already a part of the job in current surveillance practice. Both groups agreed on the bodycam as being a transitional technology; eventually police officers will have one or more cameras integrated in their uniform, or at least cameras will become part of their standard equipment. For now, it is seen as an 'extra camera' that is useful in special events, or on certain occasions.

Concerning the difference between in-and outsiders, the technology-experts more often focussed on technological promises such as the value of combining multiple sources of (video)data, whereas the outsiders often brought in more practice-based feedback on both existing- and emerging technologies.

Is there a difference in the way the three types of relevant stakeholders (policymakers, designers and users) articulate the importance of certain technologies in the surveillance landscape?

Throughout the three activities, many discussions took place between different stakeholders and the different groups. In that sense, it is difficult to summarize from the workshop how particular stakeholder-groups formed an opinion as a group. However, some points can be made about the articulation of different views on both social media and the bodycamera between stakeholder-groups. This became most apparent during the final plenary discussion. Policymakers do acknowledge social media as 'something they have to do something with' and identify options for the surveillance landscape. The bodycamera for them is seen an an extra camera but valuable as such. As outsiders, they put more emphasis on the surveillance network rather than on individual technologies. Designers and engineers make more connections to the actual effect, or use, of technology where on the one hand expectations were articulated on data aggregation and cross-referencing of all sorts of data in and about public space: on the other hand, physical surveillance 'technology' (f.i. fences, matrix-signs, electronic detection gates) was highlighted as having a strong influence on the experience of public space and surveillance (especially when it comes to crowd management and of 'steering' of the public (coercion)). As technology-experts, these insiders often focussed more on individual technologies and their developments, to then think about new connection between surveillance-technologies and f.i. social media. In many instances, they expressed a more nuanced picture of these individual technologies, in the form of what is actually can do or how it actually works. Police officers and surveillance practitioners revealed an ambiguous stance; one the one hand, social media is seen as something that can help in situations to anticipate in a better way

what is happening. On the other hand, the value of social media is decreased by stating that it should not be 'another' distraction from 'real' work - there is little actually valuable information in the cloud. As outsiders, they expressed similar views as the policymakers when it came to social-media phenomena. Arguments and examples based on practice showed that social media has become a part of police work already.

In terms of bridging and mutual learning between in- and outsiders, throughout the activities and discussions a shift in argumentation of the insiders can be witnessed. There was a decrease of technical arguments towards more debate surrounding regulations and the effects of technology in the nightscapes (rather than technology per se). Especially in the final discussion surrounding the the scenarios and influence of social media on the nightscape. more alignment surrounding what is desired from technology took place. These instances of bridging are an important result of CTA workshop and also play a role when analysing how arguments for surveillance-futures are made.

In current- and near future scenarios, what is deemed 'good' surveillance by these stakeholders?

The first two activities in the workshop can be seen as a structured way to prepare the ground for reflections on the scenarios. Through the proposed scenarios, participants were commenting and reflecting on what they believe is 'good' surveillance. By posing two extreme- and one relatively neutral scenario, participants could navigate and adjust

their views on proposed surveillance futures. Responses on the scenarios in general were not surprising; the first positive scenario was deemed indeed desirable, however somewhat too positive and slightly naive. The second scenario was considered the opposite; very undesirable and negative and somewhat implausible. The third scenario was seen as indeed plausible and a potential future for surveillance. However, this scenario was also associated with too large of a call on responsible citizenship via social media. In more detailed discussions of the scenarios, views started to differ and discussions were raised about the delegation of responsibilities to citizens and surveillance agents. Where in the first scenario, everyone is voluntarily participating by feeding 'surveillance' data (videos, images, locations) to the cloud in an open fashion, this was dismissed as good surveillance by a designer due to the overload of data this would produce. A police officer added that this data will probably have questionable quality, relevance and find-ability. A policymaker responded that indeed this will make digital truth-finding very complex. According to most participants, the second scenario delegated too much responsibility to surveillance technology such as face-recognition and access control; the designers and the policymakers stressed that combining all sorts of technologies and databases does not lead to a 'better' surveillance landscape. Besides being undesirable, it would also put too much trust in surveillance technology itself. A police officer pointed out that there must be very solid grounds and rules in place when citizens end up in police-or government databases. The third scenario provided citizens with a choice

to participate upon request of police and government. Where this would be a more controlled way of gaining relevant surveillance information, a police officer stated that this would also lead to too much risk and responsibility for the participating citizen. The designers pointed out that it is a positive aspect that users have a choice in participating, whereas a policymaker responded that then new questions rise of image ownership, but also of new balances between suspect and witness. In terms of in- and outsider differences, the insiders revealed a stronger notion of end-users integration and the practical (dis) advantages of emerging technologies, whereas outsiders, and especially policy makers raised questions concerning combination of technologies with regulation and law.

Concerning notions of what 'good' surveillance is or should be, a policymaker defined this as 'technology that is only active where and when needed', where regulation and protection of privacy remains the responsibility of the state. Combinations of social and technological innovations in the surveillance landscape were put forward, where the human factor was emphasized as decisive. In terms of types of technologies, one group typically articulated the importance of physical means in public space (technologies such as lighting, urban furniture and screens were stressed) as an influential factor in surveillance technology. The other group emphasized the importance of social media and 'cloud' technologies for organizational surveillance such as the police. Social media could work as a communication channel to citizens. Also, this group sees a surveillance future wherein several sources of surveillance data will be connected (one source can be a smart-

phone-type of device that will replace the separate artifacts that are being used now, such as the bodycamera or the walky-talky). In creating good surveillance, the importance of safeguarding privacy and the danger of function creep in current- and upcoming uses of technologies such as social media, were also mentioned. Concerning 'good governance' of new technologies, there is a strong conviction that whenever new technologies enter the public domain, it should be clear to the public (the surveilled) for what purpose this technology is there and what it exactly does.

When debating surveillance futures, high-tech visions of surveillance thrived amongst some of the participants, in which a strong belief in computational power and combinations of data sources was expected to lead to a smarter surveillance landscape. Although some bridging took place in terms of insider using less technology-based and more regulation-based arguments, still techno-optimistic views were put forward by both designers and engineers as insiders but also policy makers. Surveillance practitioners, as outsiders, resisted this stance and advocated more down-to-earth and practice-based views on how nightscapes can be made more safe but still exciting, emphasizing that new technological means do not necessarily mean a better grip or a better understanding of what happen in the night. In that sense, technology-based arguments were sometimes contested and technology was not seen as a given, or seen as necessarily the basis of good surveillance futures by surveillance practitioners.

	DE	PM	PO
activity 1	23	22	20
discussion 1	10	4	5
activity 2	30	21	26
discussion 2	10	5	3
scenarios	6	24	18
plenary session	8	21	2
total	87	78	84

figure 12;
stakeholder voicing
per activity and
in total

6.6
Reflections
on CTA

Reflecting on the workshop as a form of CTA, it begs the question if and how the combination of design research methods and 'classical' forms of CTA create different types of debate and outcomes.

How does involving design research methods in a CTA workshop shape bridging moments and actor alignment and does this lead to successful methodologies for engaging stake-holders in making responsible innovation?

In order to answer this question in a comparative manner, more workshops would be needed. However, this exploration does point out the potential added value of bringing in a more visual an active approach in debates concerning future technologies. One goal of CTA is to talk about speculative futures of a specific scientific or technological development, in order to better anticipate impacts of that technology on society. Although the workshop as a method is limited both in time (it is a snapshot-moment) and in depth (only so much can be done within the scope of a workshop), it does create a place where different stakeholders come together and share visions and ideas. This in itself can be interpreted as an added value. If there is an actual impact on the development of the discussed technology, or within that field, it remains to be seen.

Often in CTA workshops, the subject is an emerging technology, or field of innovation (f.i. 'nanotechnology'). In such workshops, this development or innovation is discussed in an informed yet speculative manner (see f.i. Robinson, 2009; te Kulve, 2009; Lucivero, 2012). In contrast, this workshop focussed on both existing and emerging technological devices. These technologies are positioned in between existing 'pathways' of development, cohabiting with influences and inno-vations from 'outside' of the field of surveillance (in this case, for instance, social media). This allows for more grounded and less speculative discussions. The approach taken here was not that of a specific technological innovation. Rather, this opportunity was used to let stakeholders from different fields determine themselves what 'surveillance technology' entails. Consequently, collective mapping by the participants themselves of both surveillance techno-logies and their influence on public space created opportunities for exploration of future scenarios (see f.i. Lucivero, 2012). These mappings created a common under-standing amongst participants of the workshop who then had to assess these socio-technical scenarios. Where the use of scenarios in itself is not new, the use of visual scenarios in this specific manner within CTA, is.

The added value of presenting scenarios in this way is that participants were able to walk through them in a non-linear fashion. This creates the possibility to revisit and compare scenarios very easily. I would argue that this nonlinearity of activities and scenarios allows for other types of discussion, where, rather than one stakeholder taking the stage or repeating the same argument, more stakeholder-equality is introduced (in terms of their contribution to the workshop). Especially in the mapping activities, the visual and physical activity of creating and deliberating over surveillance technologies and their influence creates a type of debate where arguments, pictures and ideas can be reshuffled and adjusted as the debate goes. For the researcher, the physical outcome of these maps provided qualitatively rich material on how these participants see surveillance technology in the now, and more importantly, in the future. Also, by reflecting on the maps in a plenary session during the workshop, the moderator and the researcher can point out to gaps in the mapping or why certain technologies are placed where they are by a group. This being said, to what extent stakeholder learning and alignment takes place during such a workshop is hard to determine.

A consequence of the methods as used in this workshop is that of non-linearity in both content and form of these discussions. However, when looking at the balance of stakeholder-voicing in the excerpts as presented above, some peculiarities are worth pointing out. Figure 12 provides a quantitative over-view of the voicing of stakeholders during the workshop, based on the excerpts as presented above. When comparing total instances of actors having a voice in discussions, the figure shows that all stakeholder groups are relatively equally present throughout the workshop. No specific group is silenced or absent. In that respect, the specific design of the workshop does hint at facilitating more equality in discussions between different stakeholders. Relating this to the difference made earlier between in-and outsiders within such a workshop and the notion of a bridging

event, here the goal of bridging between stakeholders is achieved, at least in terms of creating a platform where all participants can contribute equally. Specifying this equality per activity, it can be seen that the DE's have a larger presence in the first two activities, especially in the discussions. The PM's play a larger role in the activity of assessing the scenarios. In the final discussion, the PO's become more active in voicing their ideas, concerns and expectations.

More workshops will be needed to make direct connections between workshop methods and an increase in equality of stakeholder discussions. The numbers as provided above are a preliminary yet promising indication of the 'equalizing' role of these methods. What can be said is that via shared activities, stakeholders from different backgrounds are forced to discuss, compromise, create and explain their map, thereby 'probing each others worlds' (Rip & te Kulve, 2008). Also, the mapmaking ensures that some form of alignment within the group must explicitly take place. CTA as a method can benefit from this exploration by questioning the type of discussion a particular method evokes. Broadening the 'toolbox' by bringing in visual material and shared activities can be a promising start.

Chapter 07
Conclusions, reflections and recommen-dations

122. See chapter 1; emerging here is explained in two ways; in case of the bodyca-mera, it concerns a a new ICT that has been introduced in the nightscape; in the case of the mobile phone, the technology already exists, however, its presence and use in nightlife districts is an emerging phenomenon.

Introduction: Revisiting the research questions

In this dissertation, I have investigated surveillance in Dutch city centers at night by interpreting these places as landscapes. These landscapes are made up of both humans and things that behave differently at night than during the day. The term nightscapes was used to describe this specific time and place in the city. Drawing from three fields, I have combined concepts and heuristics in order to grasp how to think about surveillance technologies and their mediating role in these nightscapes. This lead me to pose the following question and subquestions:

How are surveillance practices in Dutch nightscapes shaped by hybrid collectives of humans and emerging technologies?

1. What constitutes Dutch nightscapes in terms of humans and surveillance technologies and what new hybrids can be observed?

2. How are existing and emerging hybrid collectives experienced by nightscape visitors?

3. How do new hybrid collectives of humans and mobile surveillance technologies behave in the nightscape and how does this alter surveillance practices?

4. What is considered to be good surveillance in Dutch nightscapes by relevant stakeholders?

The subquestions represent chronological steps in the process of answering the main question. This main question is based on several key notions that I have derived from the disciplines of Urban Geography, Science and Technology Studies, and Surveillance Studies. The main question tries to capture processes of surveillance practice in terms of hybrid collectives of humans and technologies. Both technologies and humans make up the nightscape and are therefore all relevant to look into. However, in order to see how hybrid collectives alter surveillance in urban nightscapes, I have chosen to look into emerging[122] technologies, particularly the mobile phone camera and the body-camera. These emerging technologies simultaneously bring in new touchpoints of surveillance in the nightscape and question surveillance technologies already in place. The downside of looking at emerging technologies is that their role, or their acceptance by either the public or organisational surveillance (Mann et al., 2003; Smith, 2007) is unclear, risking the chance to chase the wrong rabbit. Another part of the main question that is not straightforward, is the notion of hybrid collectives (Latour, 2005; 2012). This term can mean many things dependent

on the context, however, in this case, it means a unique configuration of human and (technological) artefacts. I need this notion in order to the expand analysis of surveillance in the nightscape from merely delving into surveillance technologies to incorporating practices of humans and technologies. Besides the starting point that technologies are never neutral (as explained in chapter 1), surveillance technologies also play out differently per situation and per local surveillance practice. The technologies can be similar in different cities, but local use practices and technological networks differ. Investigating these practices has lead to heterogeneous images of surveillance technology, where technologies play different roles in the surveillance network. The importance of showing these different images lies in the message that new and existing questions surrounding surveillance, such as privacy, evidence, truth-finding or image ownership, needs to be revisited. Dealing with these questions can happen from a top-down policy stance to inform practice, but also from a practice based, bottom-up approach to inform policy and law. I adopted this latter approach in this thesis.

Instead of repeating questions that dominate policy discourse, such as 'does a camera work' or 'how many cameras do we need to make a safe city centre', looking into what happens in the nightscape in terms of who is there and what kinds of technologies do they use for what purposes, provides a different perspective on policies for introducing surveillance technologies and their role in shaping surveillance (Dubbeld, 2005). This view lead me to divert from the path of mainly researching CCTV cameras (as a well-known and present surveillance

technology) towards other technologies found in the nightscape; mobile phone cameras and bodycameras. Although new technologies of surveillance have entered these spaces before, what makes the timeframe of this particular research project interesting in terms of emerging technologies is the rise of social media as a phenomenon in Western societies (at large) and Dutch nightlife districts (in particular). Another important reason to focus on these emerging technologies is that, in contrast to CCTV cameras, they are mobile technologies. Police-worn bodycameras and mobile phones represent respectively a top-down and a bottom-up development in surveillance visible in Dutch nightscapes, and could be interpreted as a move towards more symmetry in cameras in these spaces. Not only do police officers have access to CCTV and mobile cameras, citizens can also make recordings via their own mobile phone cameras. Moreover, the latter offers the possibility to share footage in a myriad ways via more light-weight systems and infrastructures than a CCTV camera and its 'heavy' back-end infrastructure. Although both police officers, police cars, bikers and (some) citizens are now equipped with a camera, a symmetry of cameras does not automatically entail a symmetry of actors. To investigate if and how actors are affected by these changes in the surveillance landscape, I turned to both police-bodycam practices and citizen-mobile phone practices. Turning to these practices revealed how these new hybrid collectives have to find their place in a surveillance landscape that is already inhabited by existing technologies of surveillance, which also alters the meaning of these latter technologies. Moreover, it showed how and where new uncertainties

arise amongst users of these technologies, and, from a broader perspective, users of nightscapes. Emerging technologies such as discussed in this PhD thesis create- and move in a grey area in which new forms of surveillance arise in the nightscape.

In the next sections, a summary of the main research findings will be provided. These research findings will be coupled to the research question and subquestions. This will be followed by a discussion on theories and concepts used and developed in this thesis. Also notes of methods used and approaches taken will be provided. This chapter will end with recommendations for Dutch surveillance stakeholders.

7.1
Summary of findings and answering the subquestions

7.1.1 Mapping surveillance landscapes

In the first empirical chapter of this thesis, three different city centers in the Netherlands were explored; Groningen, Utrecht and Rotterdam. Following the theoretical approach that surveillance in urban nightscapes is made up of a combination of humans and technologies, a first step that was made was to map different nightscapes in the Netherlands in terms of humans and things. This mapping provided insights on both a practical and a theoretical level. The practical level is that by mapping and counting things such as the amount of cameras and the amount of police officers, but also the amount of visitors on several nights, the particular nightscape can be described in detail. This provides a firm basis for analyzing how, where but also when to look for instances of surveillance in urban nightscapes. The maps as shown in chapter 2 are a 'test' for these theoretical approaches; is it actually productive to look at surveillance in urban nightscapes via such notions? Moreover, mapping the research sites of

Groningen, Utrecht and Rotterdam also revealed the necessity to localize practices of surveillance technology. Although technologies might seem 'similar', they are acted and reacted upon differently in each nightscape we have looked into: local culture and local context have to be taken into account when analyzing surveillance. When dealing with questions of power relations, public space and surveillance, answers have to be sought in the interactions between humans and technologies in these local nightscapes and surveillant assemblages. Addressing the question of what constitutes the nightscape, chapter 2 showed that not only CCTV cameras or police officers shape the nightscape, but that a myriad of other actants also influence the atmosphere in the nightscape. Urban furniture, street lighting, the amount, type and group-size of visitors, a certain average age, the presence of bouncers, the narrowness of streets and even to some extent the smell of a place.

In Rotterdam, the amount of private security agents (either bouncers or privately-hired security firms) in relation to the amount of police officers present was significantly higher than in the other two cities. Rotterdam also is the only city where city stewards were observed. Similarly, police presence via police-on-horse was only witnessed in Rotterdam. This city stands out for its amount of CCTV cameras in the centre. Moreover, this was the only city where cameras on vehicles were seen. Rotterdam showed a de-central organisation concerning locations of surveillance. In Groningen, we observed a more constant amount and presence of police force on the ground during the night than in other cities. Due to its dense streets there was a relatively high number of

123. See f.i. a case in Rotterdam, where police officers were filmed while being at work and this was put on YouTube: http://www.stadsnachtwacht.nl/agenten-gefilmd-in-rotterdam/. After a public outcry for a response, the head of the police force in Rotterdam responded not on regular TV, but also on YouTube: http://www.stadsnachtwacht.nl/reactie_korpschef/ Last visted July 24, 2013

police on foot. In terms of of organisation, a central 'base' place was observed (on the Grote Markt). The surveillant assemblage in Utrecht is typical because of its relative high number of bikers (police on bike) in the nigthscape. Although its centre also contains narrow streets, many connecting streets in between squares are wide: this makes for an oversee-able nightscape, where both police-vans and bikers can move quickly between local bar-areas and/or squares.

Which of these, or combinations of these actants have the most impact on feelings of safety amongst visitors, is a topic that has been addressed by other researchers of the SUN project (see f.i. Brands, 2013). Distilling which actants are most important, or at least deemed most important by organisational surveillance actors, has been addressed in chapter 6.

The research activity of mapping and observing nightscapes also pointed towards several technologies that are present in the nightscape, but were not on the research radar yet. It allowed me to see what is out there in terms of (surveillance) technologies and how they are actually being used by different actors in the night. Some new actants were witnessed, such as CCTV cameras mounted on police cars and vans, and bikers (police on bike) with helmet cameras. On the level of surveillance networks, instances of the use of private security firms being responsible for public surveillance was witnessed. Another emerging technology that has its presence in the nightscape is the mobile phone carried by visitors of the nightscape. Often, these mobile phones are equipped with a camera. As has been discussed in chapter 1, this presence is often overlooked by scholars in surveillance studies, because the mobile phone camera is not introduced

as a surveillance tool. However, recently it has made its appearance in nightlife districts as being more than only a capturer of entertainment[123]. Besides the changes of technology on the side of organisational surveillance, this mobile phone provides citizens with the possibility to also 'surveil and monitor' or to collect evidence. Moreover, the sharing capabilities of these mobile phones represent another potential change in the surveillance landscape (which has been discussed in chapter 3 and 4). The mappings of the nightscape thus allowed to see changes in the surveillant assemblage: the familiar landscape inhabited by static actants such as CCTV camera, and organisational-surveillance actors such as patrolling police officers and the occasional bouncer are moving into a more complex landscape of surveillance, in which different tools, owned by different stakeholder and used by different actors, create more uncertainty about who or what is surveilling who.

7.1.2 How visitors experience existing and emerging hybrid collectives

In chapter 3, I have explored whether and how mobile cameras in public space are experienced as a form of surveillance by citizens in public nightscapes. Responses of 32 interviewees were collected on how citizens relate to surveilling technologies. I conceptualized OCTV (Open-Source-Television) and CCTV as hybrid collectives. This allowed me to go beyond human intentions and pre-given topologies of people and things. One of the major findings of our empirical research is that, as with CCTV, OCTV cameras are, in specific contexts, also seen as surveillance technologies. While in Surveillance Studies these mobile cameras are often referred to as a form of sousveillance, this analysis suggests that the mobile camera is experienced as a form of surveillance, however, in a very specific way. The chapter showed important differences in the ways in which OCTV and CCTV were read and understood as surveillance technologies. In the case of CCTV, both the physical make-up and the destination of footage were clear to the respondents. In the case of OCTV, it was the footage rather than the appearance of the mobile camera that triggered negative responses among the respondents. Although the physical make-up was clear to all respondents, the destination of footage was not, and this aspect made respondents feel 'surveyed'.

While mobile cameras can be seen as a more democratic technology compared with CCTV because they allow for bottom-up control of camera (what is filmed) and footage (what will happen with the

footage) in contrast to the closed and black-boxed technology character of CCTV, this openness creates uncertainty. The majority of our 32 respondents experienced this uncertainty as unpleasant and unwanted. Most importantly, this uncertainty was mostly coupled with privacy concerns. These privacy concerns, however, did not evolve due to the physical presence of the camera or the active presence of the film-maker but were rather the result of the possible non-official uses or dissemination of the footage. A possible explanation for this being a main surveillance issue can be found in a more established trust in the Dutch government in taking care of CCTV footage versus a fear of the lack of control in new media. An openness in data (in this case OCTV footage) means less control over this data.

Another important finding is that the respondents not only considered the mobile camera as a form of surveillance but that they experienced this surveillance as being stronger than the use of OCTV cameras, particularly when it concerns privacy. The respondents did not articulate any concerns related to a privacy violation of CCTV but instead emphasized how the technology enhanced their feelings of safety. In contrast, the case of the OCTV revealed the reverse picture. A way to explain these contrasting findings is by concluding that the mobile camera, and other new media, pose a threat to issues of privacy and liberty of action in public spaces, whereas CCTV does not. That being so, this conclusion tends to reinforce a technological deterministic view of technology. In line with the ANT approach developed in earlier parts of this thesis (see chapter 1), I argue that these differences cannot be explained solely by the intrinsic properties of these technologies. Because

CCTV cameras have now become part and parcel of everyday life in public spaces, citizens do not question or experience these technologies any longer as un-pleasant or threatening their privacy. In contrast, mobile cameras and cameras in mobile phones are relative newcomers in public spaces.

Moreover, we should be careful to conclude that the ways in which citizens relate to mobile cameras is the same everywhere. In this respect, it is important to notice that the specific places where the mobile cameras are used may also play an important role in shaping the experiences and values created in the OCTV hybrid collectives. By conceptualizing OCTV and CCTV as hybrid collectives that may take different shapes in different places, we may improve our understanding of the current changes in the surveillance landscape.

7.1.3 New hybrid collectives: Acting in and changing the surveillance landscape

Looking into mobile phone camera use in the nightscape created the opportunity to investigate how this hybrid collective behaves in the nightscape, and if indeed, just like the watched, the users of mobile phones connect their activities with their mobile phone camera with instances of surveillance. Having done explorative research via interviews and a script analysis of a mobile phone, findings of chapter 4 cannot provide exhaustive answers to the question of how these new hybrids experience surveillance. However, the findings can shed light in new and relevant themes and issues that may challenge existing notions and practices of surveillance in urban nightscapes. The first hint at the presence of mobile phones and social media in the nightscape was found in the listing of interviewees of what kinds of things they actually carry with them on a night out. Where this used to be 'wallet and keys' now is it 'wallet, keys and phone' as standard things to bring amongst all of the interviewees. However, this does not yet say much about how they use it and if this use is at all linked to surveillance. In order to analyze different types of use of mobile phones and social media in the nightscape in relation to questions of surveillance, I turned to the theoretical notion of participatory surveillance (see Albrechtslund & Dubbeld, 2005).

By participating in media-making and participating on social network sites by posting images, movies, remarks and so on, the different types of responses can be put into a perspective of surveillance. By this it

is meant that either deliberately, or without being aware, sharing data of a nightscape adds to the pool of potential surveillance data; data that can be used by third parties. Mobile phones and social media are not only used by visitors, also other actors in the nightscape make use of social media, for instance the police that is starting to monitor Twitter[124]. In this chapter I distinguished two types of use of mobile phone cameras and bottom-up made footage; during a night out, where the act of filming becomes a point of inquiry, and after a night out, where sharing of data becomes the main issue in relation to surveillance.

Concerning the first type of use, taking pictures or making movies during a night out, interviewees in general said to be using their camera to either record things that were out of the ordinary, that triggered memories or reminded them of something or someone. Also, party-pictures of friends and the atmosphere were made. Some respondents said only to focus on friends or people they knew, if focussing on people at all. Although camera use varied widely amongst participants, in no particular instance was camera use connected to surveillance issues (f.i. deliberately recording an incident). Responses of other citizens to acts of making pictures or movies were either positive, or the act of filming did not raise any eyebrows at all. This is in sharp contrast to chapter 3, where responses to being filmed in public space were rather strong, pointing at a wide variety of responses to the citizen-camera hybrid. The second type of use concerns the sharing of data either during a night out or after. Footage made can end up being shared in multiple ways, some more widespread and accessible to third parties

than others. Interviewees displayed also here a wide variety of uses, something current ICT allows for. Sharing was sometimes done after consulting friends who were there that evening, and/or in the pictures. In a couple of instances, interviewees were asked by friends or peers to remove uploaded data. Some interviewees anticipated on consequences of footage by not specifically focussing on people, or at least strangers. This shows a level of participation where control over one's data is already taken into account during the act of making content. Some only shared their content locally, by showing it to others via their phone directly. However, there were also interviewees who were unaware, or indifferent as to whom could access their data once shared. This difference in awareness can be explained by a difference in media literacy and the different levels of understanding of new media logics amongst participants. Chapter 4 thus showed how, even in an explorative research with a small group of participants, a wide variety of ways in which the human-mobile hybrid behaves in the nightscape can be distinguished. With respect to sharing data, local context and habits amongst friends determine how, where and what types of data end up in the cloud. The issue of participatory surveillance only became apparent when image (and data) ownership were discussed and compared to CCTV footage. Adding data to the pool of potential surveillance data was seen by these respondents as not necessarily positive or negative, it is 'just' visitors of the nightscape adding to the pool of data. However, not only in sharing of data, but also by just being there with your phone, you can become part of a

124. See f.i. http://www.stadsnachtwacht.nl/fbi-tracking-smart-phones-in-the-states/ Last visited July 24, 2013

125. See f.i. the case of the Queensday app developed for the Queensday ceremony in Amsterdam, 2013. By sharing your GPS data, an app would inform subscribers of this app about busy crossings and pressure points in the city. The more people contribute, the better the algorithm performs. However, you voluntary make yourself traceable (see. f.i. http://www.stadsnachtwacht.nl/apps-for-safety/) Last visited July 24, 2013

surveillance network[125].

In these networks, there exists a divergence between the visitor as a profile on a social media site or as a data source that provides information, and the visitor as subject, or individual, who is held responsible and accountable for actions (and recordings) in the nightscape.

Besides the mobile phone-visitor hybrid, another hybrid collective was witnessed as an emerging phenomenon in the nightscape; the police-worn bodycamera. The bodycamera is a wearable camera developed specifically for professionals in the field of public order and safety, such as police officers. In chapter 5, the process of development of this camera is analysed, starting from policymakers who came up with the idea, to designers who were responsible for implementation of the ideas of policy makers, and finally to police officers who took part in trials of use of this camera in the nightscape. The same question as in chapter 4 can be asked here: How do these new hybrid collectives behave in the nightscape and how does this change surveillance practices? Similarities between this case and the former is that both involve the introduction, or emergence, of a wearable, mobile camera in the nightscape. Differences are that the bodycamera is top-down and its use is not incidental or voluntary; it has been introduced as a tool for police officers to be used in the nightscape. Still, it remains valid to question how this new tool alters police officer-practice, and if and how this alters notions of surveillance also for police officers. The theoretical notion of the hybrid also seemed adequate; where a police officer would normally face -or encounter-nightscape visitors and have a clear relation-ship and role in that encounter,

now the camera is there as a new actant that mediates the interactions between police officers and citizens. This might have a positive (preventive) effect in the nightscape: it might also trigger new debates and form new places of evidence-gathering (be it in favor of the police officer or the visitor).

Dealing with three different "phases" of development of this bodycamera, I turned to the concept of objectual practices (Knorr-Cetina, 2001). This allowed me to go beyond a linear view of processes of technological development and to look into how the object (the bodycamera) gave and was given meaning in the three different practices of policy, design and use. I used script analysis, in-depth interviews and participatory observations to investigate these three practices surrounding this camera. Chapter 5 revealed major differences about what the bodycamera should do in the nightscape. Where in the objectual practice of policymakers, the camera was to serve the purpose of protecting personnel against violence, a heavy emphasis lay on a camera with a preventive function. Side-effects, or function creep such as accidental evidence-gathering or monitoring was taken for granted, and possible even encouraged. My analysis of the objectual practice of designers showed that, although they tried to implement these purposes, they mainly focussed on performance, safety and durability of the camera. This can be seen in the emphasis on battery life, data protection, officer safety in use and different levels of user-access (to protect the manipulation of data). In use practices, police officers dismissed the preventive function, or at least the increase of safety for themselves while carrying the camera, all together. Rather, the camera was

used for recording incidents, for making screenshots of potential troublemakers and in some instances to scare, or to calm down the provoking or troublemaking nightscape visitor.

Chapter 5 described as well how, after the introduction and test-phase of the bodycamera, enthusiasm and frequency of use has been fluctuating within different police departments and between them. One reason provided by users is that time plays a role in the effectiveness of the medium; once the wow-effect is gone, the impact of wearing a camera becomes less. Also, it was mentioned by some users that everybody in the nightscape is already carrying a camera, hence the impressiveness of a bodycamera should not be overestimated. While the preventive purpose is dismissed, at least by users, the role of the artifact rather rapidly changed to be deployed for other functions, pointing at the process of constant negotiations of its purpose and functionality within police practice. Although these insights have been fed back into policy-and lawmaking practices and design practices, the making of a renewed or alternative system is still in process[126]. In the meantime, the body-camera is occasionally used on nightscape shifts. Besides the different meanings ascribed to the camera by police officers, ranging from the bodycamera as an empowering tool to it being a new hazard during work or an annoyance that does not add much to police-work, the watched are nowhere to be found in deliberations about what this camera is, should be, and should do[127]. Neither policymakers nor designers took into account the watched in the development process in such a way that they are represented in the design of the camera itself. In use practices, this turned out to be an advantage: it allowed

for secret, or non-permitted recording of visitors in the nightscape. In terms of surveillance, the bodycamera as a tool might seem symmetrical to the mobile phone camera (user-chosen moments to make recordings, mobile, human-leveled, direct connection between camera and operator). However, in practice, it resembles more the logics of use of a CCTV camera in the nightscape (uncertainty among the watched about its workings, hardly preventive, and aimed at monitoring and surveillance of citizens).

126. Also, it awaits the merger of police forces and departments in the Netherlands to one, national police, where new demands of police-equipment will be formed. All parties that were involved in the development and deployment of the bodycamera are now waiting for this merger process for finish before moving forward.

127. A next step would be to also involve the watched (the visitor) of the nightscape, however, this is outside the scope of this dissertation.

7.1.4 Emerging hybrid collectives and good surveillance

In chapter 6, I have tried to analyze how major stakeholders in the Dutch nightscapes assess the current situation and future of surveillance technologies. What do they consider being good surveillance? Via an interactive workshop, views and opinions of these stakeholders on current-and future surveillance technologies were investigated[127]. The method developed to engage engineers, policymakers and police officers in a fruitful debate surrounding emerging surveillance technologies and possible and desirable surveillance futures, was based on a combination of Constructive Technology Assessment(CTA) (see f.i. Rip & Te Kulve, 2008) and design research methods.

The participants in this workshop were divided analytically into insiders and outsiders of technology, where designers and engineers of surveillance technology were seen as insiders. This was done in order to see if technological expertise shaped arguments about what surveillance technology is, or should be and do, and if technologically- based arguments were ever used to push points or arguments. Insights from design research were used to get to different types of knowledge of participants. Where more standardized methods used in research are mainly about obtaining reflexive knowledge via focus group discussions and debates, I have tried to tap into different forms, or different ways of facilitating these types of debates. The main added value of my approach was that a) participants in this workshop were forced to work together in creating

and presenting something (in this case different types of maps) and b) in the fact that they had to do this via physical and visual methods. In other words, debates in this workshop were facilitated via material practices; via doing. Although more workshops are needed to refine this approach, the results of this workshop indicate that its formats have been successful in triggering other dynamics in the debate by bringing in visual tools (see section 7.4 for a more detailed discussion of this method).

In terms of content, the participants had to create their own overview of what they deemed is surveillance technology in the nightscape; they had to create their own landscape of technology. The range of technologies offered was between surveillance technology and consumer technology/ electronics. This choice was made to force the debate towards emerging technologies such as the mobile phone and social media sites that are altering the landscape of surveillance. The next step in my approach entailed mapping the importance of each of these technologies in terms of influence on the nightscape. On whom technologies had influence was deliberately left open, in order to see what (surveillance) technologies do in public space according to these participants. The types of technologies ranged from a fence that is used as a roadblock and public street lighting to smart video algorithms and predictive/anticipating CCTV cameras. The most relevant areas of the maps for analysis (see chapter 6) are those areas where surveillance technology or consumer technology cross each-others boundaries. In these boundary areas, phenomena such as tablets, Google glasses, smartphones and urban screens can be found. Interestingly, also background

technologies such as a WIFI network were placed here, stating that is it an important backbone where many services, also surveillance-related ones, rely on. In terms of which technologies actually have an influence in shaping the nightscape, opinions differed widely amongst in- and outsiders and in between groups. Especially technologies that are used both by police officers as well as citizens (or police officers as citizens), such as social media technologies, sparked debates. One group asserted that, since social media is ubiquitous, it is deemed normal. And since it is deemed normal, it cannot have any influence on the behavior of citizens. Physical means, however, such as fences and gates are considered to have a strong steering influence, because they are coercive and clear in what it wants you to do. Another group claimed that distilling information from the cloud, but also feeding information to the cloud is, or will be, essential in police work, because it has the strong potential of sensing and predicting a certain mood or sentiment in the nightscape. Also, in terms of communicating to citizens, social media were deemed highly influential. In that sense a dichotomic stance towards social media and its power to change the landscape of surveillance was articulated during this workshop.

Concerning surveillance futures, high-tech visions of surveillance thrived amongst some of the participants, in which a strong belief in computational power and combinations of data sources was expected to lead to a smarter surveillance landscape. Techno-optimistic views, often put forward by both designers and engineers as insiders and policymakers as outsiders met resistance of surveillance practitioners, who advocated more down-to-earth

views on how nightscapes can be made more safe but still exciting. In this respect, my assumption that technology-based arguments would be articulated by insiders because of their technological expertise does not hold. Obviously, high-tech visions are eagerly embraced by policymakers as well.

About the different scenarios of surveillance futures proposed (the first being based on current technology and cloud, computing, combined with a positive attitude towards a government, the second being aimed at more physical control of public space and a more dystopian view of a government, the third being based on nudge-politics (see chapter 1) within technology, where one has to opt-out of services in a socio-politically moderate government (see chapter 6 for extended scenario descriptions), during the workshop the first scenario triggered intriguing reactions. Many participants claimed that this was not the future, rather, it is reality today. Data from the cloud, or from specific social media sites are already being parsed, tracked and traced. Police-practice is already including this data as part of surveillance data. Responses on scenario 2 were that city centers can maybe be walled gardens, they should not become closed gardens. Regulation and law in that respect lags behind of technological developments. Regulation is seen as a good and necessary thing; it made participants aware of the necessity to sometimes slow down and think about consequences of new technologies. A surveillance landscape based on more physical control combined with (digital) access points, as represented in the scenario, was dismissed as a desirable future. Concerning scenario 3, participants were reluctant to buy

into future technologies that nudge users into use, and call upon responsible citizenship. Especially since such forms of participatory surveillance lead to new uncertainties about the status of the citizen; do 'we' need to protect them? Can we guarantee safety of someone who is helping us by filming an incident? Most participants deemed this not the responsibility of the nightscape visitor. The optional model for users to choose and consciously participate- and to be informed about- local surveillance measures was seen as a good point. This workshop showed that new technologies such as social media do play a role in the surveillant assemblage. Views on how these new technologies influence existing networks and if this is for the better or for the worse varies widely amongst these Dutch surveillance professionals.

Discussions during the workshop revealed that the participants initially mainly used technological arguments in debating desirable futures of surveillance. The question of good surveillance was thus answered in technological terms: good surveillance is mainly about the use of efficient and advanced technological tools. This approach to good surveillance can be understood in terms of the background of the workshop participants: All actors belong to the world of organisational surveillance and bear responsibilities for designing, regulating and practicing surveillance in landscapes that are already heavily inhabited by technological devices. Obviously, all participants still believe in technological fixes for societal problems such as safety in city centers. In this respect it is very telling that the watched, or the nightscape visitors, were hardly mentioned in the initial discussions. It was only by pointing to the visitors of

nightscapes that other perspectives made their entry in the discussions during the workshop. Main issues then shifted from the role technologies towards those of trust and regulation.

During the workshop, the participants also articulated another approach to good surveillance. According to them, good surveillance depends on good communication. Hereby they refer to communication about surveillance in a nightscape to citizens. Recalling the image of the CCTV sign in a nightscape (chapter 1, figure 5) this communication of surveillance regulations is now done via physical signs. Questioning the effectiveness of this type of communication, I would add that good communi-cation lies in good design. If indeed good surveillance is about reaching consensus on what and who is being watched in a nightscape, and how this is done, this leads to renewed design challenges on how to do this. These design challenges were, however, not addressed by the participants of this workshop.

7.2 Reflections on theory

7.2.1 Rethinking the role of nightscape visitors

Chapter 1 started with a review of concepts that seemed appropriate in dealing with the research questions posed to investigate surveillance in urban nightscapes. Starting with literature stemming from urban geography, this chapter began with a discussion of the literature on processes of inclusion, exclusion and marginalization in urban nightscapes related to surveillance. This literature focuses on visitors of nightscapes and how places become walled gardens that create safety for some, but not for others; how these walled gardens in – or exclude people or groups of people in the nighttime economy. Social exclusion and marginalization and the enforcement of these processes via surveillance are focus points within the Surveillance in Urban Nightscapes project. Instead of assuming tat it takes place, processes of social exclusion or marginalization have been taken up as a research question (how does it exactly take place, and how is it mediated/ enforced by surveillance technology)[128.] In this thesis, I have addressed this research question from another perspective. Instead of taking a human-centric approach, looking at the network of humans and surveillance technologies leads to a different interpretation of these processes. Putting

the human actor central in the analysis of these processes assumes a passive human being, a subjectivated citizen that has no choice but to undergo the systems of surveillance in a city centre. This passive model is also reflected in questioning surveillance, where exclusion or marginalization via surveillance is seen as a one-way street in which the watchers as representatives of organisational surveillance, holds the power to control its subjects. Based strongly on a panoptical idea of surveillance and society (see chapter 1), this approach dismisses any active agency, voice, or possibility to actively make and negotiate publicness by citizens via their own actions, including the use of technologies.

Another critique is that in studies of surveillance, groups of a certain class or category are treated as homogeneous. Although one could state that this also happens in surveillance practices and therefore legitimates the use of similar categories in research, I argue that re-instating this groups via social sciences is performative in that sense that it provides proof again for surveillance practices that these categories actually exist. Not claiming that every individual or group is treated equal, or that everyone in the nightscape has the same access or possibility for empowerment or critical stance, the point here is that in this thesis, I have tried to look into places and touch-points of surveillance that occur when nightscape visitors, organisational surveillance and emerging technologies interact, without taking pre-defined notions of power up front. Taking a bottom-up and user-centered approach to surveillance and the nightscape might seem naïve (because indeed, there are power struggles at play that go beyond

128. See http://www.
stadsnachtwacht.nl/about
Last accessed July 24, 2013

the scope of the individual), it does however lead to situated insights in how surveillance in the nightscape is unfolding in practices. This also implies looking at other theoretical frameworks in order to analyze these practices.

7.2.2 Rethinking the Panopticon

In this thesis I have looked into surveillance practices without presumptions of processes of exclusion or marginalization or pre-given objects and subjects of surveillance, as explained above. This also calls for different ways of dealing with surveillance theoretically (be it as framework, as metaphor, or something else). One metaphor has been discussed in chapter 1; the Panopticon (Bentham, 1791; Foucault, 1977). I explained the resilience of this metaphor, as it is still an often-referred model and in some disciplines almost a rite-de-passage (for instance in surveillance studies). Many varieties have been proposed on the Panopticon (f.i. the oligopticon (Latour and Hermant, 1998) or the postmodern panopticon (Albrechtslund, 2005). All these suggestions can be interpreted as attempts to update, or to contemporize this metaphor (see also Wood, 2007 for a critique on the Panopticon). Since it is a metaphor that relates more to governance and macro-level analysis of a state or a nation (a society), for my situated approach of surveillance in Dutch urban night-scapes, it renders unproductive when analyzing surveillance practices, and specifically practices surrounding emerging technologies. In the practices as described in this thesis, no clear evidence was found of subjects being disciplined in a Foucauldian way in nightlife districts, or at least, not explicitly. To provide one example, concerning the (in)famous panoptical icon, the CCTV camera, for most respondents this has become a background-technology (Ihde, 1990). Instead of being a clear and present disciplining instrument, pointing out

the presence of CCTV in public space to interviewees triggered much responses of indifference toward this presence and very little faith was put in effect or workings of CCTV for either their own safety, or for creating a safer nightscape (see chapter 3).

The panoptical model is based on subjectivation and internalisation of control, but this clearly only works if subjects know that somehow they are being watched. Not stating this does not take place in current Western societies, subjects we spoke to did not know or did not care. This is the main problem regarding the Panopticon as model; it presupposes a closed system. However attractive it may seem to think of current Western societies, and city centers specifically, as closed systems where there is -or can be- full control and full visibility of subjects, (luckily) this is not the case. Besides this point, a second reason for abandoning the Panopticon as a model is that the places of analysis have changed drastically. CCTV cameras and police officers are not the only agents in the surveillant assemblage (Haggerty & Erickson, 2000); more things, tools, technologies, roles and policies are becoming a part of, in this case, the nightscape, but in general, society. Where new combinations, new hybrid collectives come into being, they all develop their own typical rules, behaviors and use practices. In all these practices, it is highly likely that some form of surveillance will appear (also because, when it concerns ICTs and services in public space, its scripts often include logins, user names, back accounts and so on). This means that other forms of surveillance than the Panopticon model are emerging, and cannot be captured anymore by one encompassing metaphor.

In surveillance studies, there has

been a move towards analyzing social media in terms of a digitized panopticon (see f.i. Taekke, 2011; Jespersen et al., 2007; boyd, 2011), where subjects voluntarily let themselves be watched and even post their own material online (self-broadcasting). This also includes looking into self-surveillance that is done by ICT users for other purposes than surveillance, such as sports-trackers and phenoma such as the quantified self movement, where users are concerned with biofeedback and self-monitoring (see f.i. Albrechtslund & Lauritsen, 2013 or quantifiedself.com). These phenomena have very little to do with a big state that wants to discipline its subjects into a standard and measurable yet productive way of life. Citizens have more control and freedom to choose to participate in these type of monitoring devices or services (these phenoma would be better described as corporate surveillance), also for other purposes than being disciplined per se (or sometimes being disciplined voluntarily by sharing data with peers).Similar to these approaches this PhD thesis can be understood as an attempt to go beyond the Panopticon metaphor to understand current and emerging surveillance practices. In analyzing emer-ging technologies in the nightscape, such as mobile phones and bodycameras, I therefore used the concept of participatory surveillance to describe and capture surveillance in urban nightscapes.

7.2.3 Participatory surveillance

The concept of participatory surveillance has been introduced as a different perspective within surveillance studies, attempting to get away from established and/or a priori assumptions about power relations in analyzing surveillance. The concept as discussed in chapter one explained participatory surveillance as looking at places of participation by citizens in all kinds of services voluntarily. The relevance of this perspective is that it shows new models and new places of surveillance. In the first descriptions of participatory surveillance, this concept was explained in terms of types of surveillance that are not only voluntary, but also playful and fun (see Albrechtslund and Dubbeld, 2005). Although I do agree that places of social media and gaming are new places of surveillance, where users indeed choose to participate, they also enter into a system of watching and being watched. When projected on my own research of the nightscape, however, I found it hard to interpret new places of participatory surveillance as positive or necessarily empowering. Going through different places and different actors and actants, showed indeed, as argued by Albrechts-lund and others, that understanding surveillance goes far beyond merely analyzing CCTV cameras. In a recent publication by Albrechtslund and Lauritsen (2013), they introduce similar theoretical approaches and articulate a similar research agenda as I have applied in this thesis, namely a) to point out to surveillance studies that technologies need to be taken into account in the analysis

and that ANT provides a fruitful heuristic to do and b) that surveillance is local and contextualized, and in the case of this thesis, that urban geography provides analytic tools to analyze this context. They specify this shift in research agenda as follows:

These types of surveillance practices are characterized by a great extent of participation, as the basic premise is that users voluntarily share personal information with a network of people. Our main argument is that an important task for surveillance scholars is not only to identify participatory surveillance as a specific iteration of surveillance. Rather, the project is to analyze participation in any given situation of surveillance and this includes a careful attention to the ways in which participation is established, maintained and negotiated. (Albrechtslund & Lauritsen, 2013,introduction)

In this thesis, I have tried to show places where surveillance is established, maintained and negotiated by looking into cases of emerging surveillance practices in several locations and times, specifically in the night. In this respect, following emerging technologies seems fruitful because they open up new places of surveillance, such as social media sites, and connect them to new acts of surveillance, such as making a movie in the nightscape. Besides the earlier described unprecedented connectedness of tools such as smartphones equipped with cameras, these technologies also question other means of surveillance already in place,

such as the CCTV camera. Where before, questions of participation were not so clear or obvious, via emerging technologies as described in this thesis, the question of participation becomes an important issue to investigate the surveillance landscape. However, as Albrechtslund and Lauritsen suggest as well, participation is not a goal to be achieved, rather it is a way of looking at surveillance:

> [...] participation is not a norm that should be achieved, but an integral part of surveillance practices, and should be turned into a subject of analysis. (Albrechtslund & Lauritsen, 2013, p 1)

When applying the participatory surveillance perspective to the specific surveillance practices investigated in this dissertation, I conclude that the act of participation is not merely voluntary, but is mediated by the scripts of the technologies. Following ANT, the introduction of new technologies in the surveillance landscape implies a delegation of responsibilities in which nightscape visitors are invited to produce and share data that can potentially become surveillance data. For different types of users of the bodycamera and the mobile phone, this delegation of responsibility of filming in the nightscape, sharing of data and aftercare of data creates new issues in surveillance. However, these responsibilities are not only delegated to users, but also to technologies. Where does user control stop and interfaces and algorithms take over? As could be seen in the bodycam case but also in the mobile phone case, types of use vary widely, because ICTs allow for this difference in use. The scripts of these devices might look simple and strict at the

level of the local device (such as making a picture, or deleting a movie), however, once these devices start connecting to other technological networks, scripts of these individual devices cannot control what users can or cannot do with the footage or material. Not stating that it should, it leads to conclude that the world of ICT and potential surveillance touch-points has expanded vastly. In that sense, local instances and local contexts and surveillance networks need to be looked into in order to understand how and what type of surveillance is expressed locally in interaction with the surveillance networks that are in place.

Where Albrechtslund & Lauritsen (2013) also argued for this, issues arise concerning governance and lawmaking; how can we make sound policy and regulation in urban nightscapes, if local surveillance landscapes differ so greatly? I pose this question not because I think we need regulation, but because most of the participants in my studies that were part of Dutch organisational surveillance stated that laws and regulations are the only 'weapon' that is accessible for both 'sides'. These laws and regulations serve as much as a protection for citizens as it protects police officers or other surveillance professionals. Boundaries have to be set in terms of what can and what cannot be done in terms of a government surveilling one's citizens. However, the issue of participatory surveillance and the myriad of spaces, devices and sites where this potentially takes place cannot be captured by regulation. To some extent, this might be good news as well. Not every place, be it digital or physical, needs to be monitored and regulated (how much local police would like to or want to). Besides implications for what it means to be a free

129. While I assert this, news about the NSA spying and tracking digital traffic of almost all European citizens just came out. In that sense, Big Brother does exist. This brother, though, is neither local nor national, rather it is supra-national. Where this is scary in every sense, in light of this research, the NSA is not involved in tracking and tracing locally generated and locally purposed data; they will not care what happens in center of Utrecht on a regular Saturday evening (I hope). However, this news did make clear that 'science-fiction' warnings of the possibility for governments to check email, phone records, Facebook accounts and so on, is very real. In that sense, I am convinced that 'corporate voluntary surveillance' as a phenomenon should be on the research agenda of surveillance studies, where especially the question of participation and awareness amongst users, media-literacy and script analysis of interfaces should be investigated.

130. See f.i. this article on the costs of data storage and servers: http://boingboing.net/2013/06/16/what-would-it-cost-to-store-al.html

citizen[129], infrastructural, and related to that, economical questions need to be asked. Do we want and do we need to store heaps and heaps of data? And who needs to pay for all that? Where discussing the costs and economical models[130] of data storage are beyond the scope of this thesis, it was mentioned by organisational surveillance practitioners that (the costs of) data storage was one of the main variables that kept them from installing HD-cameras in the city, for instance (notes during CTA workshop, 2013). More importantly, it does invoke important questions concerning participation, namely questions of the value of data.

Although the concept of participatory surveillance as introduced by Albrechtslund and colleagues has been productive, it still raises some questions. I have already showed that surveillance networks are a complex and local mix of humans and non-humans; of users and their technologies, that sometimes work together (f.i. a citizen providing his or her movie to the local police), and sometimes show counter-movements (f.i. citizens that posts bad behavior of a police officer on YouTube, creating public outcry about the limits of policing). I have also shown that the influence of emerging technologies, such as mobile phones connected to social media sites creates new places of surveillance, and that through such technologies, surveillance is stretched from an in-situ and in-the-moment monitoring of public space to an extension of surveillance in time. This technologically-facilitated stretching of time happens on both sides. The police is scraping Twitter in order to anticipate on upcoming trouble and/or to prepare for a potentially extra-rough night upfront, for instance (notes during CTA workshop, 2013), or visitors of a nightscape

sharing images of their night out via social media the next day (interviews with nightscape visitors, see chapter 4). Although night-scape visitors and police officers can thus be considered as active agents of participatory surveillance, following Albrechtslund we might be tempted to conclude that this participation is based on intention, which would imply that all these actions are done deliberately and consciously:

> What surveillance is and what effects it has is always a matter of how heterogeneous actors are aligned, how their participation is negotiated and how their intentions and actions are translated. (Albrechtslund & Lauritsen, 2013, p 6)

In contrast to Albrechtslund and Lauritsen, my dissertation shows that many acts of participating in surveillance, for instance by posting something on Facebook, are done non-deliberately, or in an unconscious fashion, where the user of an upload-service or sharing-platform is ignorant of the potential of data being used by organisational surveillance. Of course, the act of making or sharing a movie in the nightscape is done consciously or deliberately. However, the consequences of these actions for control over data and related privacy issues and the lifespan of this data are often not taken into account. From the other case, the bodycamera, a similar arguments holds: because police officers are not (yet) familiar with the workings of the camera, but are using it in the nightscape to make recordings, both the police officer and the watched of this camera are not (and in the current design cannot) fully oversee the scope, or

the boundaries of these recordings[131]. In that sense, participation goes beyond the scope of intentional or controllable action taken in a surveillance landscape: it also encompasses often invisible background networks where third parties are also involved in surveillance. The footage made or comment shared might have had a certain intention or goals (for instance, sharing experiences at a night out), once accessible to other, third, parties, this intention gets lost. In that sense, participation in the surveillance can be out of the hands of the one participating.

One way of dealing with this side of participatory surveillance is to go a step further by actually zooming in on existing or emerging hybrids. In this thesis, I have done so via script analysis. This helped me to analyze how users of technologies in the nightscape can actually negotiate the level or participation to surveillance. Where script analysis looks into artifacts and how the use of these artifacts is scripted by designers, another fruitful way might be to involve code studies and insights about digital literacy. Reasons for looking into these directions are that for one, script analysis as-it-is, is not equipped to analyze digitally, smart, and/ or connected artifacts, secondly because script analysis leaves out the wide variety of user practices surrounding 'smart' artifacts such as the mobile phone (as already became apparent in chapter 4). Technologies such as the bodycamera and the mobile phone predefine their user, and their potential participation to surveillance via their interfaces. These interfaces are front-ends of complex back-end code systems and standards. Looking into both interface design and assumptions in programming- and coding practices might shed another light on how

and why these technologies are used and how negotiations of surveillance are 'pre' scribed into these interfaces. (for example, the relative difficulty of de-sharing content in social media sites). Involving software studies and digital humanities can prove valuable in asking questions of (delegations of) responsibilities in participatory surveillance and can thereby contribute to current surveillance studies.

131. During a recent meeting (2013), a police officer explained to me that the bodycam has worked against him; he was not aware that citizens who were filmed with this camera could also use this footage against the police officer. (field notes NFI day, the hague, 2013)
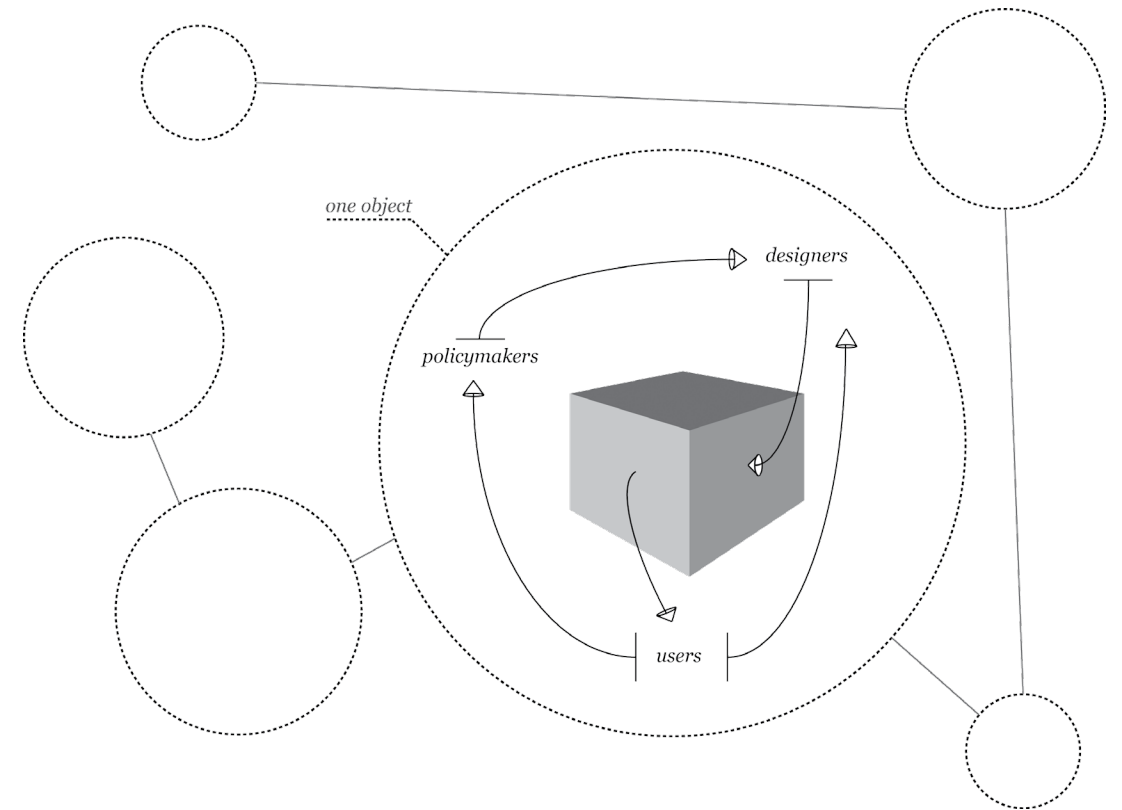

figure 1;
Surrounding one technological object there is a network of actors. This object however, is in itself part of a larger network of humans and things that influence this object and its user(s).

7.3 Notes on methods and approaches

In this thesis, different types of approaches and methods have been developed and applied in order to retrieve empirical data from the nightscape. What seemed to be manageable research sites, turned out to be more complex and more layered than can be captured in one PhD project. Much of the data as presented stems from explorative research, following different technologies and accompanying actors. Reasons for doing so are grounded both in a methodology as well as in practice. Having adopted the approach of Actor-Network-Theory and the adagium of 'following-the-actor' used in observations in the nightscape, the types and amounts of data might seem inconsistent. However, it did lead to a research trail through various layers of surveillance in the nightscape, providing a qualitative, yet cross-sectional view of the changing landscape of surveillance. Without knowing beforehand that a call for this type of research was in the making, Albrechtslund and Lauritsen described this process rather on-topic and to-the-point:

[...]the task of the scholar is not to promote participation, but to analyze how participation is negotiated in the networks where heterogeneous actors produce surveillance. Using the vocabulary of ANT, this includes asking questions such as: What are the strategies used for enrolling other actors in the surveillance practice? Are there any attempts of resisting enrollment? Is there friction because of e.g. malfunctioning technologies? How is surveillance produced by the network; is it for example related to control, care or entertainment or maybe to all of them? (Albrechtslund & Lauritsen, 2013; p 6)

These scholars point towards a move that I have also advocated and put into practice; to take insights from STS, and in specific the approach of ANT (see chapter 1) to also involve technology as important actants in analyzing surveillance. In my analysis of emerging technologies in the nightscape, I have incorporated technology as strong and influential part of how a surveillant assemblage is shaped. Following Latour, and adding Akrich' script analysis (Akrich, 1992; Law, 2007), I have analysed emerging technologies in terms of what and how participation (be it accidental or on purpose) is inscribed in these technologies and how users deal with these inscriptions. This delegation of responsibilities, combined with looking at the world as a network of actors and actants and the perspective of looking at them as hybrid collectives, have strongly shaped my research process. However, as attractive as ANT is for expanding surveillance studies and questions of participation, I have encountered some drawbacks in applying it.

First of all, the network in a Latourian sense does not exist out there. It's strength lies in its use as a heuristic tool, however, once applying it to observational data, the networks found come into being only through the researcher's methods and research questions. In doing so, choices have to be made on which parts of the networks to include into the analysis, and which to leave out via the chosen methods and research questions. This connects to another issue once applying ANT as a methodology or approach: to define the boundaries of what is inside a network and what is outside (see figure 1). Of course this does not imply that the empirical results are in line with the assumptions and expectations of the researcher.

The challenge is to find connections between the (rigid) technologica networks and the layers of social processes facilitated by these networks, where it is temping to make correlations or causalities that are not really there. This problem becomes even more urgent when it comes to surveillance technology, where attempts have been made to find evidence of a connection between CCTV networks and behavioral change of those watched by it (and this quest for evidence-based crime prevention has been criticized, see f.i. Webster (2009)). One could state that indeed ANT should only be used when it makes an analysis stronger: as a heuristic tool. In that respect, ANT has the advantage to stay away from a priori normative terms or stances (as often found in surveillance studies) and this turned out to be a valuable starting point to look into bodycams and mobile phones. However, this does not imply that we should stop here. Stating only that surveillance practitioners and nightscape visitors are in (ever changing) networks with technologies, is not sufficient. If it stops there, ANT hints at a laissez-faire observational practice. To avoid such a detached stance it is important to make an additional step by including a normative reflection on how the insights of this study may be useful for a better governance of nightscapes.

I will return to this issue in section 7.4.

Another concept, that of hybrids, turned out to be valuable in making choices and distilling new focus points for my research trail in terms of what to follow. However, for instance in the analysis of the bodycamera, it did not suffice in helping to understand how actually negotiations take place on a micro-level between users and technology. Turning to script analysis, interviews and participatory observations allowed a more fine-grained analysis of how the bodycamera-police officer hybrid actually performed in practice, and consequently how it changed (or is changing) surveillance in local nightscapes. Script analysis provided a way to include interfaces and design choices into the analysis of delegations of responsibilities, interviews provided insights into experiences and issues surrounding the test phase and use of this device, and participatory observations showed these places of negotiation of surveillance and how this new hybrid collective functioned in the existing network of surveillance (for example, it was only here that I learned about the value of recording sound via the bodycamera as an information source for police officers). Still, many other methods are needed to truly get into use practices and a more longitudinal analysis of how devices such as the bodycamera behave in the nightscape. Here, again, I would suggest to incorporate design research methods and interface studies as an expansion of research as applied in this thesis.

A final method that I relied on is that of Constructive Technology Assessment (CTA) and bridging events (see chapter 6). One critique on this method is the validity of data produced during one- or a couple of- workshop(s) with relevant stakeholders

of a specific domain. How much did they actually learn from each other and how does this affect their practice on a long term? In short; what kind of bridging can actually take place and is it measurable? The latter question can be answered for instance by comparative, long-term repetition of such workshops, or other instances of data collection amongst these stakeholders. However, what needs to be stressed is that before a CTA workshop takes place, phases of pre-engagement and careful planning and design (should) precede this activity. The workshop is a snapshot moment of a longer process, in which the relevant topics and questions have been distilled before the workshops takes place. This renders the workshop data valuable and 'valid' as qualitative research data. The workshop described in this thesis tried to expand the CTA method by bringing in visual elements and collaborative work during the workshop. This was done to create a different kind of debate surrounding emerging technologies in surveillance and desirable futures for surveillance in urban nightscapes. The analysis of this workshop showed that the tools developed to encourage stakeholders to articulate their visions and experiences clearly had a shaping role; it produced rich content. Moreover, it created a more equal voicing amongst the present stakeholders. In that sense, visual (design) research methods have potential to make CTA more interactive and provide a way to distill different types of knowledge and insights from stakeholders than is currently the case. Where this was a first exploration of expanding a method, it revealed new and relevant ways of engaging stakeholders in a debate and therefore a promising step in CTA.

A final methodological note on empirical research in this thesis is that I applied explorative research methods as a way to probe the nightscape, which lead to a snapshot analysis of different research sites. These research sites were not chosen randomly, or by accident. Rather, as explained in chapter 1, research sites were chosen either because of their (relatively) novel or innovative approach to surveillance technology (Groningen), being the most surveillance-technology-minded in terms of quantity of surveillance means such as CCTV cameras and police officers (Rotterdam) or to serve as a base-case, a representation of 'average' surveillance measures (Utrecht). In terms of nightscape visitor population, Groningen was chosen because of its relatively high student population, combined with a strong regional character. Rotterdam was chosen because, besides (and because of it) being one of the few metropolitan cities in the Netherlands, it also hosts the largest variety of ethnicities amongst nightscape visitors. Utrecht was chosen because it represents a middle-sized population, with an average mixture of ethnicities (although empirical material revealed that this is not represented in the nightscape population). In chapter 2, data collected in all three cities was used to show the make up of the socio-technical landscapes in these cities, focussing on surveillance technologies and nightscape visitors during a typical night out. In chapter 3, the interventions were held in the city of Rotterdam. This city was chosen as main research site due to expectations of more diverse responses, based on the observations described in chapter 2. The interviews that formed the basis of the empirical material in chapter 4 were held in Rotterdam as well, due to the expectation of the researcher of getting

the most diverse responses. This is not only linked to demographic arguments, but also to the physical make-up of Rotterdam, in which different nights-capes exist in the centre (e.g. it is decentralized and the subcenters are rather distant- is hardly happens that nightscape visitors -that I have interviewed- switch between these subcenters). In chapter 5, the city of Enschede enters as a research site, besides the city of Rotterdam. The reason for this is that both these cities were amongst the first to be part of bodycamera-testing and they both still use these cameras regularly (whereas the other two cities were not).

The research methods thus move across cities and were not structurally performed in a similar and comparable way in each city (expect for chapter 2). Rather, the process can be considered as explorative and in line with the approach of 'following-the-actor". This can be considered as a weak point in methodology. In order to strengthen findings as presented in this thesis, a next step could be to look into digital traces and quantitative methods in order to frame research findings in this thesis in a more generalizable manner.

7.4
Recommen-dations for the governance of Dutch surveillance practices

Besides academic and/or theoretical insights, this thesis also aimed to provide insights for surveillance practitioners and other stakeholders that deal with the nightscape. This research has been part of the NWO Responsible Innovation program (MVI) and thus invites an explicit reflection on the relevance of the results of this research for the governance of surveillance. Multiple types and places of field research over a period of time have lead to certain insights and analyses as presented in this thesis. Translating these insights into valuable, and applicable recommendations for the governance of current- and future surveillance practices is far from straightforward, and doing so will unavoidably encompass some translations and generalizations of findings. That said, my recommendations aim to address different stakeholders in organisational surveillance and address some overarching points that are important to take into account in the governance of surveillance.

7.4.1 Responsible innovation?

The NWO program of Responsible Innovation aims to anticipate social- and ethical problems that accompany technological innovations. As stated on the program website:

"The Responsible Innovation programme funds and encourages research that considers the ethical and social aspects of new technology from the design phase onwards"[132]

The program aims, much in line with CTA (see chapter 6), to anticipate on societal and ethical problems by moving these problems more upstream in development processes of scientific and technological innovations. Although this is a noble aim, the goals of this aim are unclear: is it meant to educate engineers, or to create a softer landing of technology in society, or is it to point science and technology practitioners to step outside their labs in order to address current societal problems? Besides this unclarity, the term responsible leads to another confusion; responsible for whom and within which timeframe? If one would apply responsibility in the context of sustainability, the only true innovation in surveillance in urban nightscapes is to stop all forms of camera surveillance (since its effect is hard to prove and its electricity bill keeps growing). Also, lighting up city centers and having bars and clubs that consume lots of energy, and so on, becomes questionable. Responsibility can also mean that, in light of current trends of responsible citizenship (see chapter 1), it is about reducing costs by moving responsibility for safety in the nightscape towards citizens themselves. Via

132. http://www.nwo.nl/en/research-and-results/programmes/responsible+innovation Last visited July 24, 2013

133. See Kiran (2012) or Wiley (2013) for a more detailed reflection and discussion of what responsible innovation should and could entail

user-generated content, incident-hotlines and citizen reporting, a civilian-driven and self-correcting nightscape could be envisioned. But this may lead to local rules, vigilance and authoritative chaos. Where this might be two extreme examples, in my view the appropriate place for responsible innovation lies in sensible design-or inno-vation processes where financial gain is not the only decisive factor for innovation. This directly creates a problem; the places of innovation, in the cases I have studied, shift between several stakeholders (policymakers, designers, buyers, users etc). In developing surveillance tech-nologies and designing nightscapes, innovations travel through private- or commercial-stakeholders, for whom financial arguments are most influential. In short, without a business model that addresses economic and/or financial issues developing responsible innovations seem likely to fail (see f.i. the bodycamera case in chapter 5, where after a successful pilot, the project was not continued due to a lack of funding). This leads to another point concerning responsible innovation; the question of steer-ability. Do projects that aim for responsible innovation actually manage to achieve a more responsible innovation than parties or companies that do not bother about the theme, but develop something more responsible anyway (f.i. as a side-effect of their development process, or because of marketing reasons?). Despite these drawbacks, this thesis suggests that programs that explicitly encourage relevant stakeholders involved in design or innovation to aim at responsible innovation remain worthwhile to pursue[133]. In terms of innovation in surveillance technologies, thinking through and anticipating on how technologies are involved in delegations of responsibilities to humans and

things might prove a valuable starting point. As I have shown in this thesis that responsibility is often delegated to humans and artifacts, the latter being capable of allowing or disallowing certain actions. This insight that responsibilities are inscribed in technological objects and shared in a network of humans and technologies is especially relevant in questions of surveillance, where there exists a heavy reliance on technologies in surveillance practice. Responsible innovation may, as stated by the NWO MVI program, indeed be improved by injecting social and ethical questions in the design process on an earlier stage, however, the questions and explanations surrounding what responsible innovation means go beyond the design process.

7.4.2 Social media in the nightscape: Who is in control?

The theme of responsible innovation links up to a larger theme in this thesis; the (un)control-ability of technological innovations in the nightscape. The reason to address mobile phones and social media sites in this thesis stems from a need to address more society-wide used technological innovations that also have their influence on surveillance in the nightscape. In short, what does CCTV do that YouTube cannot? During the CTA workshop as described in chapter 6, I implicitly asked this question to several stakeholders within Dutch surveillance practice by inviting them to reflect on surveillance technology as well as consumer electronics or social media.

Although opinions differed, all agreed that social media are present in the nightscape. How this presence plays out and how it will affect surveillance practices, remains to be seen: it was also generally acknowledged amongst stakeholders that they are right in the middle of dealing with this development. Because the role of social media in surveillance landscapes has not been stabilized (yet?), some recommendations for governance by policymakers, designers and police officers are in place.

For policymakers, my main recommendation is to adopt a way of looking at the city at night as a network of humans and technologies. In terms of policymaking concerning surveillance and safety measures, it is important to understand the way in which human actions in combination with surveillance technologies shape the nightscape. Emerging technologies in the nightscape exemplify this point: through them existing policies surrounding surveillance are being questioned. One consequence of this digital layer in public space is that it alters spaces and times of surveillance. This stretching of time and space of surveillance needs to be taken into account when thinking about policies for public nightscapes. In order to do so, social- and technical processes should be integrated: analyzing and implementing technology as something separate leads to incomplete understanding of surveillance processes. One way of doing this is to take into account   that these policies have to include not only regulations on how a technology or a use practice should be, but it should take into account the implementability of policy for both design and use. By this I mean that already at the process of policymaking, design-and use processes of

these policies should be taken into account.

For designers, the main recommendation is to have a closer look at the role and the potential influence of technology in public space, especially looking into consequences of technology that is being designed. The challenge for design processes lies not only in connecting micro-inscriptions with end-user behavior, but to connect local design choices concerning specific surveillance devices with a larger network of surveillance technologies. Not only user-centered design is of importance here, but also a careful reflection and awareness of what policy regulations can be and should be incorporated into physical artifacts. The emergence of social media in the domain of surveillance brought along new questions concerning digital truth finding and performativity of visual footage. Also here, there is a task for design to think about a renewed way of dealing with not only privacy by design (Langheinrich, 2001), but also data-control-by-design. Design directions such as de-sharing and footage control should become part of responsible design practices in places where footage is shared. Moreover, designers should question what kind of responsibilities they inscribe when designing surveillance artifacts and/or services.

Another recommendation is to take into account developments in social media and consumer electronics; what kinds of design standards and user-considerations are being developed in these areas from which insights can be adopted, and what types of user expectations are created there that can be drawn from?

For police officers and other surveillance practitioners, the changing landscape of surveillance also means that ways of

working might be under scrutiny. New technologies such as the bodycamera might present new possibilities of prevention or evidence gathering, however, they can also form distractions of human police work. Citizens equipped with social media platforms do form a new type of visitor of the nightscape; it alters organizations of groups, ways of sharing events. They also represent new vulnerabilities of sharing content and/or making sure there is evidence that the night out was fun. It is important for surveilling police officers to better understand the logics of social media and its possibilities, but also limits, in shaping the nightscape. It brings new questions of etiquette in the nightscape, where norms of for instance filming, calling or texting create new rules of what is accepted behavior in public space, also towards police officers. There will probably always be tensions between work-practice and going-out practice, visitors and organizational surveillance; between watcher and watched in the night-scape. The limits of the role of technology in defining the right balance in this tension are not only defined anymore by organisational surveillance, but also by technologically-mediated citizens. The landscape of surveillance has become more complex: this complexity should also reflect in the creation and anticipation of future surveillance practices.

References

List of interviewees and/or participants

Chapter 3:
32 anonymous respondents in the city centre of Rotterdam participated in the interventions

Chapter 4:
6 Rotterdam anonymized nightscape visitors were interviewed about 'participatory surveillance' and the role of new media in their going-out practices in January and February, 2011

Chapter 5:
The following people were interviewed about either policy, design and/or use of the bodycamera:

• Bart van de Aa, Zepcam, 24th of January, 2011; 2nd of March, 2012; 12th of March, 2012.

• Bart-Jan Harmsen, bodycam user and policymaker, Police department Enschede, 31st of May, 2012; 7th of June, 2012.

• Two bodycam users, Micha Nijhof and Remco Saas, Police department Rotterdam-Rijnmond, 1st of December, 2012.

• Interview Micheal Rodgers, bodycam user and policymaker, police department Rotterdam-Rijnmond, 11th of September, 2012.

• Phone and/or mail interviews concerning the bodycamera: Adri Voermans, National coordinator Anti-terror and national security,

23rd of September, 2011. Peter Duin, VTSPN Research & Innovation, 26th of September, 2011.

Chapter 6:
The following people participated in the workshop held on the 18th of December, 2012:

• Henk Molenaar, Police department Hollands-Midden, Event co-ordination

• Bart van der Aa, Ceo Zepcam company

• Eric Toering, freelance programmer for KPN security networks

• Stefan Lindaart, Police department Hollands-midden, project leader national bodycam development team

• Judith Dijk, smart video analysis, TNO

• Lynsey Dubbeld, CCV (centre for safety and security), trend analyst and editor

List of observations

Rotterdam
- Nightscape observations: 15-16-17 April, 2010

Utrecht
- Nightscape observations: 2-3 April, 2010
- Observing operating room CCTV: May, 2010

Groningen
- Nightscape observations: 17-20 March, 2010

Enschede
- Participatory observations on bodycamera use on the 3rd of November, 2012 and the 10th of November, 2012

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Appendices

Appendix A: Description of observation protocol and the developed method booklets (static and dynamic)

Protocol for dynamic observations:

The following information needs to be collected during the recording sessions:
- Who is in the nightscape in terms of gender, ethnicity and class size.
- What and how much dynamic surveillance is present in the area, distinguishing to police, city guard and private security. Attributes, clothing and transport must be mentioned.
- Who keep themselves within the nightscape (> = 5 min) in terms of sex, origin, group, subculture and age. Any additions are welcome here, such as use of attributes and transport mode. It is also important to look at where they stop or hang out.

Because this is entails a large amount of information, it has been decided to follow a specific protocol for coding information. This protocol will be described step by step below. Passers-by become part of the observation once they cross a virtual line (on which the researchers focus their view). All coding sequences take place synchronously.

1. The visitors of the nightscape:

1a. Are among those with the virtual line passing to a group or not.
Yes (code: group), No (code: no).

1b. See below or persons husband or wife.
Male (code: man), Female (code: woman)

1c. Share the husband and wife a category for their origins far.
White (code: no), African (code: A), Middle East / Arabic (code M), Latino (Code: L), Other (code: O).

1d. Are you ready to describe the group / individual?
Yes, with the group (code: end) Yes with an individual (code: no), No (go back to 1b)

Example Situation:
A group of four, including two white men, one white woman and one dark woman walks past.
- Create Group, man - man - woman - woman A, end.

Note: after the observation period note down an estimate in percentage in terms of the presence of subcultures and age.

2. Dynamic surveillance in the nightscape

2a. Describe the number of surveillance units that you see.
1 (code: a), 2 (code: two), etc.

2b. Describe what type of unit you see. If different types are simultaneously present, treat them one by one. Police Code (police), city guard (code: city guard), private security (code: private).

2c. Describe the vehicle (s) of the dynamic surveillance by naming according to their prevent them. Walk (code: no), Auto (code: car), bike (code: bike), horse (code: horse), etc.

2d. Remember the following checklist: dogs, weapons, camera, conspicuous clothing, extra protection, communication, other things that stand out. For these categories there are no codes, just mention them as soon as you see them.

Example Situation:
You see two police officers on horse, in yellow vests talking on a walkie-talkie. They carry a visible gun.
Code: Two, police, horse, horse, communication, distinctive clothing, weapons.

Note: draw the route of the surveillance units witnessed on a map (if possible).

3. Lingering:

3a. Describe whether people are lingering (> = 5 min)
Yes (code: stop), No (code: no).

3b. Describe group one by one.
Male (code: man), Female (code: woman).

3c. Contribute origins for both the male and the female category.
White (code: no), African (code: A), Middle East / Arabic (code M), Latino (Code: L), Other (code: O).

3d. Try to provide additional audio information were possible

3e. Are you finished with describing where the group resides?
Yes (code: ready), No (go back to 3b).

Example Situation:
3 arabic-looking men, a white man and one Arabic-looking woman sitting on a statue of their music from a scooter to listen. Code: Lingering, male A - male A – male A – female A. They are sitting on a bench listening to music.

Note: After the observations, draw the location of the observed group(s) on the map. Draw, as estimated, subculture and age group.

Booklet for static observations:

OBSERVATION SCHEMA

NAME: WEATHER CONDITIONS:
SCHEMA NUMBER:
LOCATION:
TIME(FROM/TO):

physical space (once)

amount of cafes:
amount of restaurants:
amount of clubs/discos:
amount of snackbars:
Other services or venues:

Short description of architecture (at least: openness, wideness of streets, height of buildings)

Draw in map 1 the areas that are well-lit green, averagely lit orange and badly lit red

Draw street furniture in map 2. Use the following signs:
wc   tioletten. + u = urinoir (wcu)
☐   trashcan
◯   bench
△   –
✕   –

make a picture of the observed space

OBSERVATION SCHEMA

NAME: WEATHER CONDITIONS:
SCHEMA NUMBER:
LOCATION:
TIME(FROM/TO):

static surveillance

number   type   picture number

camera
dome camera
sound camera
surveillance sign

mosquito
.....

GRONINGEN - ONDERZOEKSGEBIED - TOTAAL

Booklet for dynamic observations:

OBSERVATION SCHEMA

NAME:
SCHEMA NUMBER:
LOCATION:
TIME(FROM/TO):

WEATHER CONDITIONS:

Dynamic surveillance

police
number

city guard
number

private security
number

attributes
- dogs ☐
- weapons ☐
- camera ☐
- bike ☐
- horse ☐
- recognizable clothing ☐
- extra protection (helmet, shield) ☐
- communication (walkie talkie etc.) ☐
- other means (flashlight etc...) ☐

vehicles ☐
number
vans
cars

attributes
- recognizable clothing ☐
- communication (walkie talkie etc.) ☐
- other means (flashlight etc...) ☐

attributes
- recognizable clothing ☐
- communication (walkie talkie etc.) ☐
- other means (flashlight etc...) ☐

draw the instances, palces and routes of dynamic surveillance observed

ROTTERDAM·ONDERZOEKSBOEKJE·150·TOTAAL

OBSERVATION SCHEMA

NAME:
SCHEMA NUMBER:
LOCATION:
TIME(FROM/TO):

WEATHER CONDITIONS:

who?

Male	Female
"white / caucasian"	"white / caucasian"
12-19	12-19
20-29	20-29
30->	30->
"african"	"african"
12-19	12-19
20-29	20-29
30->	30->
"middle-east / arabic"	"middle-east / arabic"
12-19	12-19
20-29	20-29
30->	30->
"other"	"other"
12-19	12-19
20-29	20-29
30->	30->

Draw the location of lingering groups or individual. If possible, provide (approximate) age, gender, ethnicity, subculture.

GRONINGEN·ONDERZOEKSBOEKJE·150·TOTAAL

REMARKS

incidents during observation

other

Appendix B: list of facilities

List of facilities in the nightscapes

Eating, drinking and
entertainment facilities

CL = club
DC = dance café
C = café
SN = snackbar
T = theatre
FI = cinema
CUL = cultural institution
R = restaurant
STUD = fraternity
R/C = restaurant-café
CAS = casino
DC/H = dance café with housing above
R/C/H = restaurant cafe with housing above
R/SN = restaurant snackbar
FI/T = cinema and theatre

Educational facilities

UNI = university building
HS = polytechnic building

Commercial service- related
W = Offices
WI = Shop
WI/H = Shop with housing above

Residential
H = housing

Other (O)
VER = institution.

Appendix C: Intervention protocol

Protocol interventions

Context of the intervention:
The interventions are carried out under the following conditions:

- Initially the interventions are only held in the center of Utrecht (as a pilot) and in case of good results, followed by Rotterdam.

- The interventions are carried out between 22:00 to 01:00. It is assumed that the target group at this moment will be located in a public space, without being too much to be under the influence of alcohol and/or drugs.

- Within this period we strive for a number of five participants per hour. This means 15 participants per evening; 30 per city.

- The interventions are spread over two days per city, a Friday and a Saturday. These days were chosen because a more diverse audience in public space is expected compared to the other weekdays.

- The intervention will take place at a fixed location in the city. In Utrecht this will "

Old-canal side of the Neude, near the Neude flat". Participants will be recruited on- and nearthe Neude square.
In Rotterdam, the interventions will take place on the corner of Schouwburgplein (a square), near the Korte Lijnbaan. Participants are recruited on and near the Schouwburgplein.

- From previous fieldwork - observations - a composite image of the nightscape visitors emerged. The objective is to replicate this composition (gender, ethnicity, age) within the interventions. The observations also showed that group sizes of 2 and 3 are the most prevalent. For this reason, and to keep the intervention workable (possible intrusion by group), only groups of 2 and 3 persons are addressed.

- The interventions are carried out by two researchers, both having their own tasks. Potential participants are only addressed by one researcher (see below).

Before the intervention:

Researcher 1 checks if everything is complete (voice recorder, "place", camera, schedule) and chooses a place / walks around to address passers-by. The following question is asked:

"Can I ask you something? Would you want to cooperate with some research for a few minutes about your experience of the city at night? "

If no:
"Okay, thanks for your time."

If yes, then ask: "your answers will be recorded. Is that okay? "

If yes:
"Would you walk with me?"

If no:
"Okay, then you unfortunately can not participate. Thanks for your time. "

In the meantime, researcher 2 is not talking but is near and "involved" in recruiting. If a participant is found, researcher 2 takes distance Researcher 2 carries a camera (ready but not visible yet for the participant) and an observation scheme.

During the intervention:

If phase 1 is completed, both researchers give a signal to start the intervention (f.i. thumbs up). The first question to the participant is asked:

1.1) "how safe do you feel here and now?"
The participant receives reflection and time to formulate his or her answer. Based on this response is asked:

1.2) "can you explain why?"
The participant receives reflection and time to formulate his or her answer. Then researcher 2 intervenes by approaching researcher one and the participant. R2 holds a camera and points it to the participant. Actual recording is made impossible due to removal of battery. R1 then asks implicitly about the effects of this intervention by saying/ questioning:

2.1) "My colleague has changed the situation. How safe do you feel now, here and now? "

The participant receives reflection and time to formulate his or her answer.
A few situations that are anticipated:

"Nothing has changed for me"
"I'm quite used to be filmed / photographed"

If these type of answers are given, go to 2.2.

"I find it very uncomfortable that I will be filmed: I'm certainly not safer"
"Go away with that camera"

If these type of answers are given, go to to 2.3.

2.2) "Can you explain why?"
The participant receives reflection and time to formulate his or her answer. Based on the reply given,

2.3) "we will remove the camera: it was not recording. There was no battery and no tape in the camera, which you can check after this conversation."

Then the next questions will be asked:
"Can you explain why" (statement / explanation of the reaction).

The participant receives reflection and time to formulate his or her answer.

3.1) "Did you know that you are being filmed right here and right now by security cameras?"

3.2) If no, go to 3.3.
If yes: "Can you identify them?"

3.3) The researcher points (at least) to 1.

3.4) "Does the fact that you are being filmed right here and now by security cameras affect your sense of security?"

The participant receives reflection and time to formulate his or her answer. Researcher 1 closes and thanked the participants for participation. It asks one investigator or the participant is interested in a follow-up interview.

Researcher 2

• Remains in proximity of the interview

• Anticipates 'cue' to start 'filming': to know when the camera is to emerge. This should be clearly visible to the respondent.

• Distance of filming: it must refer to CCTV, an overview image. A few meters away is therefore desirable. (Direct in your-face would a) do not correspond with CCTV cameras and b) give rise to

privacy reactions).
After the intervention:

After the intervention, researcher 1 writes down personal characteristics of the participant in a schedule (age, contact details). The participant receives a card with contact details of the researcher and a link to the project website. Researcher 2 writes coded in an observation schedule.

Herein described to the following:
    - Personal characteristics
    - Non-verbal responses to questions
    - Attitude
    - Other things that stand out.

Hereafter, the following potential participant is sought.
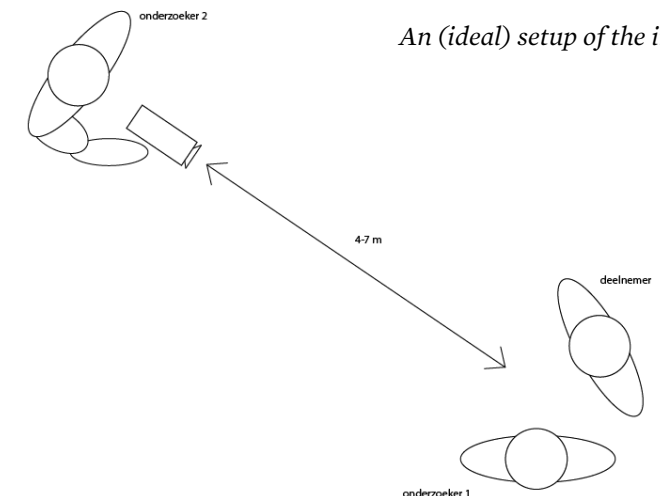
An (ideal) setup of the intervention:

Appendix D:
Semi-structured interview
question list

Introduction
Name, age
For how long have you been living in
Rotterdam
How often do you go out in the city?
Could you briefly describe a typical
night out?

Main interview
Attributes
With regard to a night out, I want to ask
you what things you bring with you during
a night out. Can you explain, of each object,
why you take this with you? Which things
would you always bring? Why these?

When going out
- Imagine a recent night out. Can you
  name some activities that occur
  regularly during such an evening?
- What objects can you name that you
  use most during such a night? Are these
  personal things?
- Could you tell me how you use these
  things during a night out?

Technological resources
- Could you specify which resources and
  / or objects that you used during a night
  out, you see as 'technological'?
- What actions are associated or what do
  you do with these 'technology' means?

- What do you think of the various
  technological means in terms of ease
  of use? What things are 'difficult' and
  which are 'good'?

Mobile Cameras
- We just talked about your personal
  belongings, or at least things that
  you carry with you during a night
  out and which you considered being
  technological.
- Talking about one specific technology,
  I want to ask you if you ever bring or
  brought a camera during a night out?
- Are there people in your surroundings
  who use a camera?
- Could you explain how cameras are used
  by people in your surroundings?
- How often is a camera used during a
  night out, if you had to estimate?

Filming and being filmed
- Have you ever been filmed during a
  night out or taken on picture? If so, can
  you describe how, where and when this
  took place?
- What did you think of it?
- And if we turn this around, do you
  yourself sometimes make movies or
  photos?
- If so, can you say how people reacted?
- Could you think of situations during a
  night out that you would want to record?
- And situations that you definitely would
  not want record?

Preparing and look back
- Could you show a movie or picture of the
  area that you prefer going to when going
  out?
- Do you ever search for something via
  your mobile phone while being in these
  areas? - If so, what kind of things are you
  looking up?
- If not, you could say how you prepare for
  a night out?
- Do you ever share your own movies or
  photos on a night out?
- If so, could you show me a recent movie
  and.or picture?

Enhancing effect cameras
- After seeing and looking up several
  videos and photos of nights out, I want to
  ask you about the impact of these media.
- Could you say how these movies and
  pictures make you feel? Is it pleasant or
  unpleasant and why?
- What do you think of the videos that
  have just been shown? (Only if there is
  Internet).
- Can you think of a situation where a
  mobile camera can help you?
- Can you describe a situation where you
  have used a mobile phone camera for
  a purpose other than entertainment?
  If not, could you imagine such a
  situation?CCTV
- We now continue with the idea of
  filming and being filmed.
- Did you know that you were filmed in
  the nightlife of Rotterdam?

I will now show you some pictures of
CCTV cameras in Rotterdam area.
- Did you know that there was CCTV in
  this area?
- What do you think of this technology?
- What do the cameras with your idea
  about Rotterdam and its nightlife?

- We have just talked about capturing and
  viewing of Rotterdam area using mobile
  cameras. Then I asked something about
  security cameras and CCTV.
- Could you tell me how you think the
  CCTV camera works?
- Do you feel that they watched the space?
  And that they specifically watch you?
- How do you feel about the fact that there
  are CCTV cameras?

Image ownership
- About the images CCTV cameras make,
  who do you think may or should use this
  footage?
- Would you like to see them yourself?
  And if so, why?
- What would be the added value for you?
- We have talked about the use and
  presence of mobile cameras and the
  presence of CCTV cameras.
- Can you name any differences between
  these two cameras in terms of usage?
  And in terms of presence?
- Could also think of some similarities?

General comments?
Thank you! + Gift ...

------- End ---------

Appendix E, F and G
are all in Dutch, and
can be found here:

http://www.stadsnachtwacht.nl/media/appendices_EFG.pdf

Samenvatting

Problematiseren van de nachtelijke openbare ruimte en surveillance

Deze dissertatie houdt zich bezig met surveillance-technologie binnen uitgaanscentra in Nederlandse steden. Surveillance en cameratoezicht zijn actuele thema's in huidige westerse samenlevingen. Sinds de aanslagen van 9/11 zien we een toename van zowel het aantal en type van surveillance technologieën in de publieke ruimte (denk aan een toename van CCTV camera's bijvoorbeeld). Een aanleiding voor deze ontwikkeling is de overtuiging dat dit soort technologieën daadwerkelijk helpen: dat er een positieve relatie bestaat tussen surveillance technologie en veiligheid in de publieke ruimte. Deze aanname kan worden bevraagd, niet alleen in termen van de noodzaak van het ontwikkelen van technologie omwille van de technologie, maar ook in termen van het soort maatschappij waarin we willen leven: wat is een wenselijke toekomst als het gaat om surveillance technologie in de maatschappij en hoe beïnvloed nieuwe surveillance technologie de publieke ruimte?

Als we kijken naar het technologisch landschap in de publieke ruimte, dan zien we combinaties van nieuwe en bestaande surveillance technologieën. Het verbinden en koppelen van surveillance-gerelateerde technologie heeft nieuwe doelen gecreëerd binnen de wereld van surveillance, zoals het streven naar een volledige surveillance-dekking van de openbare ruimte, of de mogelijkheid om constant alles te kunnen zien. Naast de technologische uitdagingen die dit met zich meebrengt (uitdagingen van aanpassing van normen, formaten, databases, code, bewaartijd, hardware etc.), genereert dit streven ook nieuwe problemen omtrent de grenzen van toezicht en surveillance in openbare ruimte, bijvoorbeeld privacy. In combinatie met de opkomst van meer geïndividualiseerde ICT-technologieën in dezelfde publieke ruimtes waar surveillance technologieën zich bevinden, worden de grenzen en verhoudingen tussen kijker en bekekene steeds vager.

Dit onderzoek kijkt specifiek naar de stedelijke publieke ruimte in de nacht, omdat in deze context de meeste incidenten voorkomen en de spanningen vaak hoog oplopen. Ook is dit een context waarin surveillance technologie aanwezig is en een rol kan spelen. Door te communiceren naar het publiek dat men in de gaten wordt gehouden in stadscentra, en dat de stad gedragsregels handhaaft in bepaalde gebieden, wordt het kwaadwillend publiek gewaarschuwd terwijl het publiek dat er is om plezier te hebben gerustgesteld: het is een spannende maar veilige plek. In het geval van 'oude' surveillance technologie zoals Closed-Circuit Television (CCTV), bestaat er een idee van duidelijke machtsverhoudingen die aan het werk zijn: een regering installeert een camera en burgers in de openbare ruimte zijn het onderwerp van toezicht voor die camera. Zowel de camera's als de surveillance-borden die we aantreffen in de openbare ruimte communiceren en informeren over wat er aan de hand is: je bent een burger en als zodanig wordt er op u gelet.

Echter, wanneer deze blik wordt gedecentraliseerd en op meerdere manieren wordt verspreid, zoals we zien bij opkomende sociale en mobiele media technologieën, wordt het moeilijker om te begrijpen wie er op wie let en waarom. Dit proefschrift heeft als doel om deze nieuwe plekken en platformen van surveillance te begrijpen door te onderzoeken hoe zowel mensen en technologieën vorm geven aan surveillance praktijken in het Nederlandse nachtleven.

Combinatie van drie theoretische perspectieven

Het theoretisch deel van dit proefschrift is gebaseerd op concepten vanuit drie disciplines: Stadsgeografie, Wetenschap-en Technologie Studies en Surveillance Studies. Vanuit deze drie vakgebieden heb ik theorieën gecombineerd om surveillance technologieën en hun bemiddelende rol in het Nederlandse nachtleven te analyseren.

De eerste is Stadsgeografie. Deze discipline kijkt naar steden en burgers binnen de steden. Het biedt ook inzichten om te kijken naar verschillende tijden en plaatsen in de stad. Een van deze tijd-ruimtes is het landschap in de nacht: een nachtelijk landschap (nightscape). In deze landschappen zien we een focus op het creëren van een veilige- en vermakelijke avond of nacht. Deze focus kan deels worden verklaard door de economische ambities van de lokale overheid en andere actoren die betrokken zijn bij de ontwikkeling van de (nachtelijke) openbare ruimte: hoe veiliger, hoe meer mensen deze plekken bezoeken, hoe meer bezoekers, hoe meer economische activiteit. Een van de middelen om deze veiligheid te bereiken is via toezicht: via surveillance. Als we uitgaan van de veronderstelling dat deze openbare ruimtes toegankelijk en open moeten zijn voor iedereen, dan kan dit worden bevraagd door te kijken naar praktijken van surveillance en de manier waarop toezicht een veilige plek vormt voor de een, maar misschien een onprettige of gevaarlijke plek voor de ander. Met andere woorden, we kunnen de vraag stellen hoe toezicht-middelen en technologieën de ruimte vormgeven.

Om surveillance technologie te analyseren, wend ik me tot Wetenschap-en Technologie Studies. Naast het uitgangspunt vanuit deze discipline dat technologieën nooit neutraal zijn, is het ook belangrijk om te beseffen dat surveillance-technologieën verschillend uitpakken per situatie en per lokale surveillance-praktijk. Binnen deze praktijk gaat het niet alleen om de beleidsmakers en de ontwerpers, maar ook om de eindgebruikers van deze technologieën. Ik gebruik het perspectief van Actor-Netwerk Theorie als een manier om de praktijken van -en de relaties tussen- beleidsmakers, ontwerpers en gebruikers van opkomende surveillance technologieën te onderzoeken. Verder inzoomend op mens-technologie relaties, gebruik ik de theoretische heuristiek van hybride collectieven om specifieke combinaties van mens en technologie te beschrijven. Een laatste invalshoek waarvan ik gebruik is script analyse, waarmee ik kijk naar welke aannames worden ingeschreven in surveillance technologieën en hoe gebruikers omgaan met deze gemedieerde aannames.

Een laatste discipline die een rol speelt in dit proefschrift is Surveillance Studies. In een poging verder te gaan dan Foucauldiaanse theorieën van machtsverhoudingen binnen een samenleving die worden geuit via technologie, heb ik vooral concepten gebruikt die te maken hebben met relaties tussen toezicht en nieuwe digitale lagen in de openbare ruimte die de daadwerkelijke nightscape beïnvloeden, zonder vooraf machtsverhoudingen als gegeven aan

te nemen. Ondanks het feit dat deze plekken fysieke plekken zijn in stadscentra, is de rol van digitale lagen en netwerken in deze ruimtes van toenemende invloed op zowel de bezoekers van de nachtelijke stad, alsook de toezichthouders. Een uitdaging in dit proefschrift is om bestaande theorieën van surveillance te combineren met praktijken van (nieuwe) surveillance technologie-en zoals we die zien in verschillende nachtlandschappen.

De centrale vraagstelling in dit proefschrift luidt:

" Hoe worden praktijken van toezicht- en ordehandhaving in Nederlandse uitgaansgebieden gevormd door combinaties van mens en nieuwe technologie?"

Casussen en onderzoekslocaties

De eerste stap die ik maak richting het onderzoeken van surveillance-praktijken is het in kaart brengen van mensen en dingen die zich begeven in drie verschillende nacht-landschappen; Rotterdam, Groningen en Utrecht. Hoofdstuk 2 laat zien dat niet alleen de CCTV-camera's en/of politieagenten een nachtelijk landschap vormen, maar dat een groot aantal andere actoren en actanten van invloed zijn in het nachtelijke landschap. Het in kaart brengen van de nachtelijke landschappen van Groningen, Utrecht en Rotterdam maakt een vergelijking mogelijk tussen verschillende surveillance assemblages. Hieruit blijkt dat, hoewel surveillance-technologieën misschien 'vergelijkbaar' lijken, ze verschillend worden ingezet op deze drie plekken. Dit benadrukt de noodzaak om de lokale cultuur en de lokale context mee te nemen in analyses omtrent surveillance en de nachtelijke stad.

Een ander belangrijk inzicht dat is voortgekomen uit het in kaart brengen van de uitgaansgebieden in verschillende steden, betreft de opkomst van nieuwe, mobiele manieren van toezicht. Niet alleen vanuit de hoek van het officiële toezicht zien we mobiel- en op het lichaam gedragen- camera's, ook bezoekers van de nachtelijke stad hebben steeds vaker de mogelijkheid tot het opnemen en het delen van (audi0) visuele informatie. Deze veranderingen in het landschap van mensen en technologieën veranderen mogelijk ook ideeën en praktijken over wat het betekent om te kijken en om bekeken te worden.

Om erachter te komen hoe deze verandering in het nachtelijk landschap wordt ervaren door bezoekers van de uitgaanscentra in de nacht, heb ik in hoofdstuk 3 onderzocht of en hoe burgers reageren op zowel de CCTV- als mobiele camera's in uitgaansgebieden. Een van de belangrijkste bevindingen van het empirisch onderzoek is dat mobiele camera's, onder specifieke omstandigheden, ook als surveillance-technologieën worden ervaren. De mobiele camera's zouden kunnen worden gezien als een democratische technologie vergeleken met CCTV, omdat de burger zelf controle heeft over wat wordt gefilmd en wat er zal gebeuren met de beelden, in tegenstelling tot de gesloten technologie van CCTV. Deze openheid van mobiele camera's, leidt echter tot onzekerheid onder de gefilmden of bekekenen.

Een andere belangrijke bevinding is dat de respondenten in ons onderzoek niet alleen rekening houden met de mobiele camera als een vorm van toezicht, maar zij dit toezicht ook als sterker ervaren dan het gebruik van CCTV camera's, met name als het gaat om privacy.

Het gebruik van de mobiele telefoon camera in het nachtelijk landschap creëert niet alleen de mogelijkheid te onderzoeken hoe deze hybride wordt ervaren door bezoekers van uitgaanscentra, maar ook om te bestuderen of de gebruikers van mobiele telefoons hun activiteiten verbinden met toezicht en surveillance. De aanwezigheid van mobiele telefoons wordt vaak over het hoofd gezien door wetenschappers in Surveillance Studies omdat de mobiele telefoon camera niet wordt opgevat als een surveillance-technologie. Naast surveillance technologie die wordt gebruikt aan de zijde van de officiële toezichthouders (zoals politie of een lokale overheid), biedt de mobiele telefoon burgers de mogelijkheid om zelf ook te 'toezicht' te houden in de openbare ruimte en/of om bewijsmateriaal te maken en te delen, door zelf opnames te maken in de publieke ruimte.

Om de verschillende vormen van gebruik van mobiele telefoons en sociale media in een nachtelijk landschap in relatie tot vraagstukken van toezicht te analyseren, wend ik mij tot de theoretische notie van participatief toezicht. In hoofdstuk 4 heb ik twee soorten van gebruik van de mobiele telefoon camera's en bottom-up- gemaakt beeldmateriaal onderzocht door een onderscheid te maken tussen mobile cameragebruik tijdens een avond uit, waar de handeling van het filmen een punt van onderzoek wordt, en na een avond uit, waar het delen van gegevens de belangrijkste kwestie wordt met betrekking tot toezicht en privacy. Het delen van beeld-of geluidsmateriaal via sociale media, daarbij bijdragend aan potentiële surveillance-data, wordt door deze respondenten als niet per se positief of negatief gezien: ze zijn 'gewoon' bezoekers van het nachtelijk landschap die wat toevoegen aan de pool van gegevens op het Internet.

In hoofdstuk 5 heb ik de door de politie gedragen bodycamera onderzocht als een andere opkomende vorm van mobiele surveillance technologie. Dezelfde vraag als in hoofdstuk 4 kan hier worden gesteld: Hoe verhouden deze nieuwe hybriden zich in een nachtelijk landschap t.o.v. bestaande toezicht-praktijken en hoe veranderen ze surveillance praktijken? In termen van toezicht, zou de bodycamera als symmetrisch kunnen worden gezien t.o.v. de mobiele telefoon camera (in termen van gebruiker-gekozen momenten om op te nemen, mobiel, opnames op menselijke hoogte, directe verbinding tussen de camera en de gebruiker etc.). Echter, in de praktijk vertoont de bodycamera meer overeenkomsten met de logica van een CCTV-camera (bijvoorbeeld: onzekerheid over de werking van de bodycamera bij degenen die worden bekeken, een nauwelijks preventieve werking, het divergerende doel van monitoring en gericht toezicht van burgers). Onderzoek naar het beleid, het ontwerp en het gebruik via verschillende methodes zoals script-analyse, interviews en participerende observaties maakte een gedetailleerde analyse mogelijk van hoe de bodycamera-politieagent hybride werkt in de praktijk, en dus hoe het toezicht in lokale nachtlandschappen verandert.

In hoofdstuk 6 analyseer ik hoe belangrijke belanghebbenden (stakeholders) van toezicht in de Nederlandse nachtlandschappen de huidige situatie en de toekomst van de surveillance technologieën beoordelen.Een gerichte methode werd ontwikkeld om ingenieurs, beleidsmakers en politieagenten te laten deelnemen aan een discussie omtrent opkomende surveillance technologieën en de mogelijkheden en wenselijkheden van verschillende toekomsten van toezicht in de nachtelijke stad. Deze methode is gebaseerd op een combinatie

van Constructive Technology Assessment (CTA) en ontwerpgerichte onderzoeksmethoden. De deelnemers van deze workshop kwamen uit beleids-, ontwerp- en gebruikerspraktijken van (camera)toezicht. Tijdens de workshop werden deze deelnemers uitgedaagd om, in groepsverband, een overzicht te maken van wat zij vinden dat surveillance-technologie is, hoeveel invloed de gekozen technologie-en volgens hen hebben op het nachtelijk landschap en om te reageren op drie gegeven toekomstscenario's van toezicht in Nederlandse steden. De aangeboden technologieën varieerden tussen surveillance technologie en consumenten-technologie. Dit is gedaan om het debat te sturen naar opkomende technologieën die mogelijke veranderingen teweeg brengen in het landschap van het toezicht, zoals mobiele telefoons en sociale media. De vraag op wie technologieën invloed (moeten) hebben, werd bewust opengelaten om te zien wat (surveillance) technologieën doen in de openbare ruimte volgens deze deelnemers.

Deze workshop toonde aan dat nieuwe technologieën zoals sociale media volgens deze stakeholders wel degelijk een rol spelen bij toezicht. De vraag over wat goed toezicht is, of zou moeten zijn, werd door deze deelnemers vaak beantwoord in technologische termen: goed toezicht gaat vooral over het gebruik van efficiënte en geavanceerde technologische hulpmiddelen. Deze benadering van goed toezicht kan worden begrepen in termen van de achtergrond van de deelnemers aan de workshop: alle actoren behoren tot de wereld van de organisatorische bewaking en dragen verantwoordelijkheid voor het ontwerpen, reguleren en uitoefenen van toezicht in nachtelijke landschappen die gevuld zijn met technologische apparaten. Dat gezegd hebbende, werd tijdens de workshop duidelijk dat de outsiders van deze workshop (mensen vanuit de praktijk van surveillance) minder gefocust waren op techno-logische oplossingen en vaker de aandacht richten op het belang van de menselijke actor.

Conclusies: Participatie, delen en nieuwe media

Politie-gedragen bodycameras en mobiele telefoons vertegenwoordigen respectievelijk een top-down en een bottom-up ontwikkeling in surveillance netwerken zoals zichtbaar in het Nederlands nachtleven en ze kunnen worden geïnterpreteerd als een stap naar meer symmetrie van camera's in deze ruimten. Bij het analyseren van deze opkomende technologieën gebruikte ik het concept van participatief toezicht. Via de opkomende technologieën, zoals beschreven in dit proefschrift, is de kwestie van de participatie opnieuw aangewend. In eerdere beschrijvingen van participatieve surveillance werd dit concept uitgelegd in termen van soorten van toezicht die niet alleen vrijwillig zijn, maar die ook speels en 'leuk' van aard zijn. Echter, in mijn toepassing van dit concept op huidige surveillance-praktijken zoals onderzocht in dit proefschrift, concludeer ik dat deelname aan surveillance niet altijd vrijwillig is, of bewust. Vaak wordt deelname gemedieerd door de gebruikte technologieën en hun interface.

In het geval van de bodycamera heb ik laten zien dat gedurende het traject van idee tot ontwikkeling de bedoeling van deze camera verschuift van een camera die moet helpen om het geweld tegen politieambtenaren tegen te gaan, naar een mobiele CCTV camera; de gebruikerspaktijken van deze camera wijken sterk af van de vooraf gestelde doelen. Dit heeft een effect op zowel de werkpraktijk van surveillerende politieagenten als voor de bezoekers

van de nachtelijke stad, die geconfromteerd worden met een nieuwe, niet altijd even expliciete vorm van surveillance.

De casus omtrent het gebruike van moeiele-telefooncameras laat zien dat deze bezoekers zelf ook de mogelijkheid hebben tot het maken van audio-visuele opnames in de nachtelijke stad. De mobiele telefoon en daaraan gekoppelde sociale media in het surveillance landschap impliceren een delegatie van verantwoordelijkheden waarin nachtelijk bezoekers worden uitgenodigd om gemaakte data te delen. Mijn proefschrift laat zien dat veel daden van participatie aan surveillance, bijvoorbeeld door het plaatsen van foto's op Facebook, vaak onbewust plaatsvinden. De gebruiker van een upload-dienst of sharing platform is vaak onwetend en zich onbewust van het potentiële gebruik van zijn of haar gegevens door derden. Participatie gaat verder dan de intentie of actie van een bezoeker van de nachtelijke stad die iets heeft opgenomen tijdens een avondje uit en dat heeft gedeeld; het omvat ook -vaak onzichtbare- netwerken waarin officiële toezichthouders ook meekijken. Ik heb laten zien dat nieuwe technologieën, zoals mobiele telefoons, nieuwe plekken van toezicht creëren, en dat door middel van dergelijke technologieën, plekken van toezicht wordt uitgestrekt van de fysieke nachtelijke stad en het hier-en-nu naar digitale plekken tijdens en na een avond uit.

De potentiële bijdrage aan surveillance-data via technologieën zoals de bodycamera en de mobiele telefoon kan gezien worden als een onderhandeling tussen de interface en de gebruiker. Inzoomen op zowel interface design en veronderstellingen in programmeer praktijken zou een nieuw licht kunnen werpen op hoe en waarom deze technologieën worden gebruikt en hoe de onderhandelingen van toezicht worden ingeschreven in deze interfaces.

Aanbevelingen voor de praktijk

Vanuit theoretische inzichten omtrent surveillance in de nachtelijke stad zijn er een aantal praktische punten, of aanbevelingen, te maken voor de praktijk van toezichthouders. Hiermee doel ik zowel op beleidsmakers, makers van surveillance technologie en de eindgebruikers van deze technologieën. Een van de belangrijkste punten om onder de aandacht te brengen is de noodzaak om te kijken naar welke verantwoordelijkheden omtrent surveillance worden ingeschreven in technologie, omdat de praktijk van surveillance wordt gevormd door zowel mens als technologie. Beleidsmakers en technologie-ontwikkelaars zouden (nog meer) moeten kijken naar de praktijken van eindgebruikers (politie-agenten, maar ook bezoekers van uitgaansdistricten) en hun interactie met verschillende technologieën om te begrijpen hoe zaken als toezicht, maar ook veiligheid, worden ervaren en gemedieerd. Ook zouden deze belanghebbenden betere methodes kunnen ontwikkelen om technologische trends buiten de ontwikkeling van surveillance-technologie (bijvoorbeeld sociale media) te incorporeren in innovaties. Niet alleen op praktisch niveau hebben trends zoals sociale media invloed op de nachtelijke stad. Ook in termen van verwachtingen ten opzichte van de technologie en ideeën omtrent bijvoorbeeld beeldeigendom en privacy bij eindgebruikers zijn van invloed op hoe toezichtbeleefd wordt.

Dit soort inzichten zijn belangrijk als het gaat om de uitdaging om maatschappelijk verantwoord te innoveren. Maatschappelijk verantwoord innoveren kan, zoals aangegeven door het NWO-MVI-programma, inderdaad worden gestimuleerd door het injecteren

van maatschappelijke en ethische vragen in het ontwerpproces in een eerder stadium dan in huidige ontwerp-praktijken gebruikelijk is. Echter, de vragen en uitleg rond wat maatschappelijk innoveren betekent gaan verder dan slechts het ontwerpproces van een technologische innovatie. Deze vragen hebben een veelheid van andere belanghebbenden, zoals beleidsmakers, gebruikers (in dit geval de toezichthouders) en de betrokken actoren (de bekekenen). In plaats van het herhalen van typische vragen in het (beleids)discours rondom surveillance, zoals 'werkt een camera' of 'hoeveel camera's hebben we nodig om een veilig centrum te maken', is het waardevoller om te kijken naar wat er gebeurt in een nachtelijk landschap in termen van wie er daadwerkelijk gebruik maken van welke soorten technologieën en voor welke doeleinden. Dit biedt een ander perspectief op het beleid voor de invoering van surveillance technologieën en hun rol in het vormgeven van het toezicht.

De uitdaging voor ontwerpers en voor ontwerp-processen ligt niet alleen in het anticiperen op het gedrag van de eindgebruiker, maar ook in het verbinden van lokale ontwerp-keuzes betreffende specifieke surveillance toepassingen met een groter netwerk van surveillance technologieën. Voor politieagenten en andere toezichthouders betekent het veranderende technologische landschap ook dat de manier van werken van deze toezichthouders onder de loep genomen zou moeten worden. Het landschap van de surveillance is complexer geworden: deze complexiteit moet ook worden weerspiegeld in huidige- en toekomstige surveillance praktijken.

WHAT ARE YOU LOOKING AT?