



What are you looking at? Visitors' perspectives on CCTV in the night-time economy

European Urban and Regional Studies
2016, Vol. 23(1) 23–39
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0969776413481369
elr.sagepub.com



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Abstract

In urban policy discourses across Western Europe, video surveillance is often considered an important tool to increase the safety of consumers in city-centre areas in general, and in nightlife districts in particular. However, the question of whether closed-circuit television (CCTV) actually promotes experiences of safety is neither straightforward nor resolved. Although this topic has received substantial attention in the academic literature, relatively little research has been conducted on how users of public spaces perceive CCTV whilst in the midst of situations. By directly confronting study participants in the presence of CCTV cameras, we explore nightlife district visitors' perceptions and understandings of CCTV in situ, in relation to safety when out at night in Utrecht and Rotterdam, the Netherlands. Potential differences regarding gender and ethnicity are also considered. We found, first, that our study participants' awareness of CCTV during the practice of 'going out' was a continuum rather than a dichotomy (aware or unaware) and that fuller awareness of CCTV is related to greater personal safety. Second, we observed a large gap between the policy discourses surrounding CCTV and the understanding of nightlife district visitors regarding how CCTV works. It is suggested that one way of aligning visitors' understanding and policy discourses is to shift the latter from a focus on ensuring safety towards offering assistance. For the delivery of such assistance in practice, CCTV needs to be integrated further with other forms of policing and surveillance, especially those forms that are compatible with a spatiotemporal logic of embodiment and situatedness.

Keywords

Awareness, CCTV, lived experience, nightlife districts, night-time economy, urban night

Introduction

This paper analyses the understandings and perceptions people have of closed-circuit television (CCTV) in public spaces in the nightlife districts in the city centres of Utrecht and Rotterdam, the Netherlands. The focus on nightlife districts is in keeping with the increased interest in the night-time economy in the urban studies literature more generally. In addition to such topics as the exclusion

of particular social groups from urban nightlife (Boogaarts, 2008; Grazian, 2009; Measham and

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Hadfield, 2009; Schwanen et al., 2012; Valentine et al., 2010) and the homogenization of the types of nightlife facilities on offer (Chatterton and Hollands, 2003), the role of the night-time economy in urban regeneration initiatives and governmental attempts to stimulate urban economies across Europe has attracted considerable attention among academics (Chatterton and Hollands, 2003; Crawford and Flint, 2009; Helms et al., 2007; Hobbs et al., 2000; Roberts and Eldridge, 2009). Our emphasis on CCTV reflects that public safety in urban nightlife – and public spaces more generally – has become a central concern of national and city-level governments: increased surveillance and policing have become faithful allies of policies to stimulate city-centre economies in the neo-liberal era (Coleman, 2004; Helms et al., 2007; Raco, 2003). Policy-makers' interest in public safety in the night-time economy is also intensified by, and intersects with, concerns over (binge) drinking, the health implications of alcohol consumption (Jayne et al., 2011; Measham and Østergaard, 2009) and alcohol-fuelled disorder (Hadfield et al., 2009; Roberts and Eldridge, 2009).

We are, of course, fully aware that CCTV is not the only form of surveillance in towns and cities. In the context of the night-time economy's regulation, the practices of police officers on the ground, door staff at bars and clubs, private security firms, voluntary organizations such as neighbourhood vigilante groups and consumers of urban space are equally if not more important (Garland, 2001; Hadfield et al., 2009; Loader, 2000; Newburn, 2001; Yarwood, 2007). In this paper, we nonetheless concentrate on the relationship between CCTV and safety because in many ways CCTV 'has become the standard way to restrain crime and guarantee security' (Koskela, 2002: 259).

It is, therefore, not surprising that the academic literature on the public understanding and perception of CCTV is substantial. Much of the existing literature has considered the extent to which people are aware of CCTV presence in a given area, or what we will term knowing 'of' CCTV. Less headway has been made in addressing questions about what people know 'about' CCTV – how they think it works and enhances their safety. More importantly, most past work on people's perceptions and understandings of

CCTV has adopted a retrospective approach: rather than studying CCTV-related experiences in the midst of the experience, research participants are asked to reflect on their experiences at other times and often in other places (for instance, at home when filling out a questionnaire). We do not intend to criticize retrospective approaches, as they have greatly improved understanding of the links between CCTV and safety. It is nonetheless important to explore CCTV cameras when people are immersed in the situation: it can shed light on ways of being and participating in the world of the nightlife district that would otherwise be forgotten or sidelined, and provides access to what is directly felt and experienced by both the researcher and the participants in the specific atmosphere of a vibrant nightlife district. The world is after all not pre-given to the subject but emerges from his/her practices (Merleau-Ponty, 1962; Simonsen, 2007).

In this paper, we use short, on-site interviews to understand people's understanding and perceptions of CCTV when out at night in the Dutch cities of Utrecht and Rotterdam. We examine their situated knowledge of the availability of CCTV and their understandings of how CCTV works and enhances their safety, by confronting them with CCTV cameras in two different nightlife districts. Concurrently, we consider differences along lines of gender and ethnicity in participants' responses for two reasons. First, participation in, and experience of the night-time economy in Utrecht and Rotterdam differ substantially between men and women and between white people and other ethnic groups (Schwanen et al., 2012). Additionally, there is an extensive literature showing that safety and fear of crime, as well as surveillance and policing, are experienced in different ways by men and women (Koskela, 2002; Mehta and Bondi, 1999; Pain, 2000; Ware et al., 2011).

Perceptions and understandings of CCTV in the academic literature

Knowing 'of' CCTV

Public awareness of CCTV has attracted considerable attention in the academic literature (Ditton, 2000; Helten and Fischer, 2004; Honess and Charman,

1992; Spriggs et al., 2005; Van Eijk et al., 2006) and studies are in agreement that a considerable proportion of the public 'does not know' of CCTV presence. Honess and Charman (1992) found that approximately one-third of the general public were aware of city-street CCTV when provided with a list of possible locations in a study of four UK cities. A second, site-specific questionnaire yielded comparable outcomes when participants were asked if they had noticed any cameras 'in this street'. Similarly, a Dutch study in The Hague found that 106 out of 150 passers-by – one-third of whom responded at night-time – did not know whether any cameras were present at their current location (Van Eijk et al., 2006). Ditton (2000) found that three months after the installation of the CCTV system, 33% ($n=1026$) of visitors to Glasgow city-centre knew CCTV was in operation in the immediate locality. This increased to 41% ($n=1030$) in the following year. Measuring awareness as the ability to spot 'the next or nearest' camera, Helten and Fischer (2004) found that only 8% of 203 surveyed visitors to a shopping mall in Berlin were able to point out the nearest camera, while 6% spotted another camera. Nevertheless, 61% thought the area in which they were interviewed was under video surveillance. Helten and Fischer (2004) therefore suggest that people are quite capable of guessing whether sites are under CCTV surveillance, but that they are not interested in the exact location of the cameras. Interestingly, Spriggs and colleagues (2005) tested awareness in two city centres separately for day- and night-time (recruiting ceased approximately 4 h after dusk). When asked whether there was already a CCTV system operating in 'their area' at night, awareness ranged from approximately 54% to 70% (Spriggs et al., 2005: 17), depending on the location studied. Day-time awareness scored about 5% (Spriggs et al., 2005) higher in both cases.

Most of the studies discussed above considered differences between men and women. Ditton (2000), Van Eijk and colleagues (2006) and Honess and Charman (1992) showed that women tend to exhibit levels of awareness of CCTV that are 10 to 20 percentage points lower than awareness levels of men. All these studies also showed that awareness is reduced to a cognitive quality: CCTV is something a person is consciously aware of, or not. In terms of

measurement, awareness tends to be examined with relatively standardized techniques and explained through *yes* or *no* answers, sometimes including *don't know*. Exactly what is measured varies, however, across studies. The study by Helten and Fischer (2004) is perhaps the most sophisticated, in that these authors have considered both people's ability to pinpoint a camera and their beliefs as to whether the area was under video surveillance. They found a marked discrepancy between ability and belief, which raises questions about what awareness actually entails for users of public spaces. There may well be more to awareness than a simple *yes* or *no*.

Knowing 'about' CCTV

Findings from questionnaires and interviews show that participants often understand CCTV in the context of personal safety (Helten and Fischer, 2004; Honess and Charman, 1992; Koskela, 2003; Zurawski and Czerwinski, 2008). For example, when Spriggs and colleagues (2005) asked for reasons for supporting CCTV, the majority of the respondents answered in vague terms of it making them 'feel safer'. However, using survey data collected among 216 passers-by in Hamburg's amusement district in 2006, Zurawski (2010) showed that support for CCTV surveillance was not clearly or strongly related to the respondents' feelings of safety at the time and place of the study. He also employed regression analysis to show that feelings of safety (or lack thereof) tended to be generated by factors other than CCTV surveillance, and particularly by familiarity with the area. More generally, findings as to whether CCTV has a positive impact on feelings of safety among members of the general public are mixed at best (Taylor, 2011).

The contentious nature of the link between CCTV and personal safety means that more attention is warranted regarding the understanding and perception of how CCTV creates safety. A useful starting point in this regard is Webster's (2009) threefold typology of mechanisms in CCTV surveillance: non-active, reactive and proactive systems. Non-active CCTV systems function only as a visual deterrent, creating the illusion of surveillance. Reactive systems are capable of recording and

replaying footage and of identifying perpetrators retrospectively. Proactive systems involve real-time, live monitoring, which allows an immediate response, in addition to recording and playback facilities (Webster, 2009). In policy circles, it is often assumed that all three mechanisms reduce crime, as well as fear of crime (Hood, 2003; Webster, 2009).

Survey research has established that many members of the general public also believe CCTV to have preventative and retrospective functions. In Ditton's (2000) study, for instance, 72% of the participants thought CCTV prevented crime, 81% thought it helped to catch perpetrators, and 79% thought it reduced the likelihood of being victimized (Ditton, 2000). In a study of 1240 respondents in Helsinki, Koskela (2003) found comparable results, but with somewhat lower values: 70% considered CCTV as helpful in crime investigation, 58% believed it helped to prevent crime and more than one-third thought it increased their personal sense of security. Nevertheless, she also stated: 'as a rule, people did not seem to know very much about video surveillance' (Koskela, 2003: 4). Research has, however, also found that the way CCTV surveillance is organized matters, regarding its perceived effectiveness. Studies by both Sætnan et al. (2004) and Helten and Fischer (2004) found that participants felt safest when the recorded CCTV footage was monitored live and when this was done by professionals (police/private security guards). No noticeable (statistically significant) differences were found in this regard between men and women.

While highly informative, studies such as those by Sætnan and colleagues (2004) and Helten and Fischer (2004) do not make clear why the combination of recording and livemonitoring is preferred over other video surveillance arrangements. Nor do they provide detailed insight into nightlife district visitors' own constructions of the links between CCTV and safety (given the strong researcher-led character of such studies). This, however, turns out to be of crucial importance when questionnaire data is compared with information on the safety-CCTV relationship collected with qualitative methods. If the latter are used, 'commonly-accepted safety' may become questioned by study participants: 'it is possible that when asked to comment on a statement

such as "I feel safe in places where there's video surveillance", most people may assume they would feel safe, and therefore agree. But when they reflect a bit more on it (...) they don't really think it gives them all that much security' (Sætnan et al., 2004: 37). If and how CCTV should provide this 'commonly-accepted safety' is not discussed in conventional studies and, moreover, seems not entirely clear to the interviewees themselves.

The value of in-depth studies is also evident from a recent study of teachers' and pupils' understandings and experiences of CCTV in three UK schools (Taylor, 2011). Interviews showed that some of the pupils did not feel safer because they did not believe CCTV to have a deterring, preventative function: they considered it a reactive tool with little impact on the occurrence of an event in the first place. Care should, of course, be taken in generalizing these findings to other contexts, including nightlife districts. Nonetheless, they do suggest that more in-depth research into the capacities of CCTV surveillance, from the perspective of public space users, is required to alter safety perceptions.

Gender and ethnicity

Such research should also explore, in more detail than in previous studies, how the perceived capacities and effects of CCTV are differentiated along the lines of gender and ethnicity. Issues of safety, fear and violence in public spaces have long since been examined by feminist geographers (Koskela, 1997; Mehta and Bondi, 1999; Pain, 2000; Ware et al., 2011). Regarding nightlife districts, Grazian (2009: 912) has argued that 'women (as well as men) have historically experienced nightlife arenas as distinctly and overtly gendered', and that women have to deal with harassment and unwanted attention routinely (see also Sheard, 2011; Waitt et al., 2011). Widespread is the (stereotypical and unjustifiable) belief that women are more vulnerable and fearful in public spaces (Mehta and Bondi, 1999; Pain, 2000; Waitt et al., 2011) and would, therefore, benefit more from (knowledge of) CCTV cameras (Honest and Charman, 1992; Koskela, 2002). However, it has also been pointed out that 'video is unable to identify situations where a [gender] sensitive interpretation

of a social situation is needed' (Koskela, 2002: 263). General intimidation, staring, (sexually explicit) verbal harassment and drunken rowdiness all exemplify situations that women in particular fear, and where CCTV is inadequate as an instrument. CCTV is much more effective in identifying violence and aggression, which are not only the most common cues for fear in men, but also the forms of crime in which men are involved most frequently (Day et al., 2003; Ware et al., 2011). In a way, then, CCTV as a surveillance and policing technique has a built-in bias favouring men.

Feminist scholars have also argued that other axes of social differentiation need to be considered in relation to safety, fear and violence in public spaces (Bondi and Rose, 2003; Pain, 2001). One such dimension is ethnicity, which is particularly relevant when nightlife districts are considered. Dutch research has shown ethnic minorities, such as black people and people of Arabic descent, to be seriously underrepresented among night-time economy participants (Schwanen et al., 2012), and interviews with young people from the Netherlands of Turkish descent have indicated that many of the latter do not feel at ease and sometimes feel discriminated against in nightlife districts (Boogaarts, 2008). However, to the best of our knowledge, no study has so far considered in great depth if and how understandings and perceptions of CCTV are differentiated along ethnic lines. We will therefore look at both gender and ethnicity in our empirical analysis.

Research design

Research sites

Our study considers and compares the understanding and perceptions of CCTV among night-time economy participants in Rotterdam and Utrecht (Figure 1). These cities have been selected because of the stark differences between them in the discourses and practices of CCTV surveillance and the regulation of the night-time economy more generally (Van Aalst et al., in press). Key differences include the greater number of public CCTV cameras in the city-centre of Rotterdam (350, against 87 in Utrecht) and the

more extensive live-monitoring in Rotterdam (24 h/7 d, against 6pm–2am on Mon–Wed, 2pm–6am on Thu–Sat and 2pm–2am on Sun). In fact, Rotterdam has the most CCTV cameras of all Dutch cities. CCTV was first installed in Rotterdam in 2000, and in Utrecht in 2001. In both cities, CCTV's legitimization revolves centrally around crime and disorder prevention and increasing safety perceptions among night-time economy participants and local residents. However, different discourse coalitions – assemblages of narratives and metaphors, actors and practices (Hajer, 2004) – have come into existence around CCTV, which have resulted in different roles of CCTV in night-time economy regulation in Rotterdam and Utrecht (Van Aalst et al., in press). CCTV has come to be understood as a continuously watching 'extra' eye on the streets of Rotterdam, but as a spy that puts non-criminals under surveillance in Utrecht. It is therefore no surprise that Utrecht's city council has recently (2008) decided to freeze the number of cameras to those available at present, whilst the possibility of a further increase in the number of public cameras is still open in Rotterdam. In both cities, live-monitoring occurs under supervision of the police, but linkages between CCTV operators and police officers on the ground tend to be developed to a greater extent in Rotterdam. In short, CCTV is more embedded in the overall policing strategies in Rotterdam than in Utrecht.

Short, on-site interviews

At sites from which at least one public CCTV camera was clearly visible at the Schouwburgplein square in Rotterdam and the Neude square in Utrecht (Figure 1), a team of two researchers – both male, white and in their twenties – approached passers-by between 10pm and 2am on Thursday, Friday and Saturday nights in June and July 2010 and asked whether they were willing to participate in a short, on-site interview. Those who agreed to participate were subsequently asked for verbal consent about the researchers audio-taping the interview. The interview itself began with asking people to indicate, on a scale from one to ten, how safe they felt at that particular site, at that specific moment, and why they felt that way. Participants were also made aware of the presence of

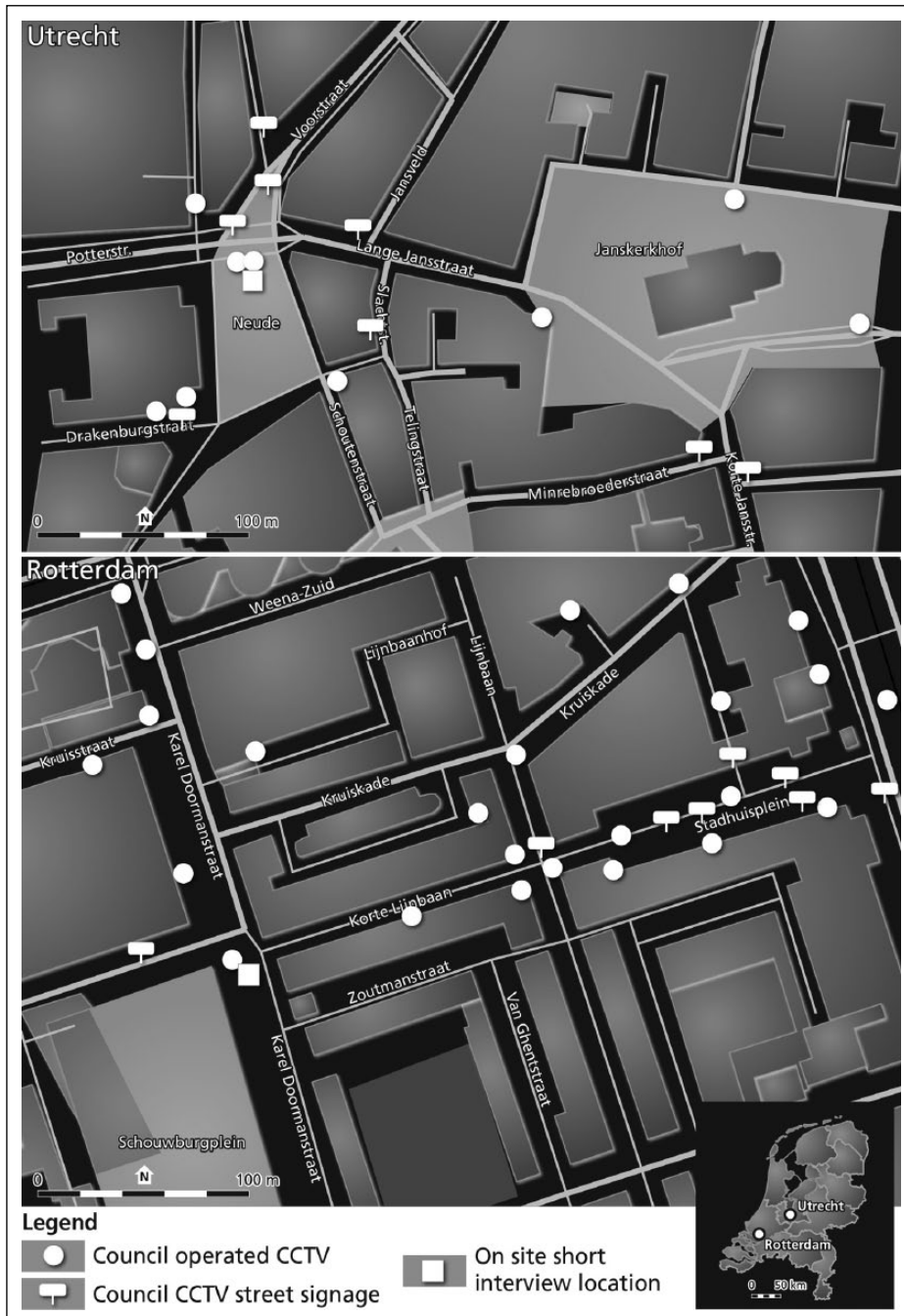


Figure 1. Interview locations and CCTV in Rotterdam and Utrecht nightlife districts.

CCTV surveillance in situ. By prompting them, we first examined their awareness of CCTV and then asked whether the fact that cameras had been pointed

out to them altered their feelings of safety. From the responses to this question, we were able to derive valuable insights about how participants thought

CCTV worked and affected their safety. Additional questions were asked on how participants felt about being filmed by mobile devices, but these are analysed elsewhere (Timan and Oudshoorn, 2012).

The interview itself was designed to last less than 5 minutes to minimize disruption to participants' nightlife or other practices. We decided not to ask about background characteristics (age, ethnicity, etc.), familiarity with the area or the purpose of being there. This obviously reduces our ability to explore systematic differences between participants in understandings and perceptions of CCTV, but also meant that the interviews were short and pleasurable for the participants. Gender, ethnicity and age were estimated by one of the two researchers completing the interviews on the basis of the participants' appearance. While not as robust as asking, in our opinion this proved important in keeping the short on-site interviews open, flexible and spontaneous.

As an approach, the short on-site interviews differ from other research methods in three respects. First, they were open and flexible. Second, they sought to foreground visitors' personal experience of video-surveillance. Third, they aimed for spontaneous reactions rather than reflective thoughts, because the former were probably closer to how visitors experienced video-surveillance when they encountered it during normal (that is, without interventions by researchers) visits to nightlife districts. The idea was to create an informal setting in which the co-presence of the researchers, participant and CCTV generated unique opportunities to understand CCTV in situ, for both the participant and the two researchers involved. By prompting our participants, we anticipated a range of impulsive reactions, often not acquired through other research methods.

All interviews have been transcribed verbatim, coded and analysed; the quotes below have been translated from Dutch to English. All participants have been given names that reflect their gender and start with either U or R, depending on the city in which they were interviewed.

Participants

Our intention was to capture the understanding and perceptions of CCTV of both men and women and of people from different ethnic backgrounds, whilst

minimizing any biases to participants' responses due to alcohol intake or peer pressure social processes such as showing off in (larger) groups of young people. The researchers therefore approached every fifth group of two or three persons passing by between 10pm and 2am. However, in every occasion, only one person of this group participated and they were interviewed separate from the group to account for in-group effects. The timing of the interviews was based on our earlier observational research in Rotterdam and Utrecht, which had shown instances of public drunkenness to be fairly uncommon before 2am (Schwanen et al., 2012). The focus on groups of two or three persons meant that groups in which peer pressure is probably strongest were excluded. It also meant that more women and non-white persons were included in our sample, as our earlier observations had shown these to be least likely to traverse the nightlife districts of Rotterdam and Utrecht unaccompanied (Schwanen et al., 2012).

In total, 84 passers-by participated in the short, on-site interviews. Table 1 shows that our sample is perfectly balanced in gender terms, which suggests that our choice to focus on groups of two or three persons has been effectual. In terms of ethnicity, we have been less successful in obtaining a balanced sample, particularly in Utrecht. However, Table 1 also shows that we have recruited a slightly higher percentage of non-white persons than the proportion in the total transient visitor population in the nightlife districts in of Rotterdam and Utrecht. In terms of age, our sample consisted mainly of young adults presumably aged 18–30. Some interviewees were estimated to be younger than 18 or above 30. The dominance of young adults also aligns with our earlier observations and studies of who participates in the night-time economy (Bromley et al., 2003).

Knowing 'of' CCTV

Based on the responses to the question 'do you know that you are being filmed at this moment by a security camera?' during the short, on-site interviews, we suggest that CCTV awareness cannot be understood in a dualistic (yes or no) fashion, but that knowing 'of' CCTV lies somewhere along a continuum. About 15% of the participants held knowledge of

Table 1. Representativeness of the study's participants (%).

	Study participants (N = 84)	Systematic observations of night-time economy participants ¹	Residential population (municipality) ²
Rotterdam			
Male	50.0	67.7	49.1
Female	50.0	32.3	50.9
White/Caucasian	43.8	57.8	64.9
Non-white (Black, Arabic, Latino, Asian or other descent)	56.2	42.2	35.1
Utrecht			
Male	50.0	62.6	48.4
Female	50.0	38.4	51.6
White/Caucasian	86.5	88.8	78.5
Non-white (Black, Arabic, Latino, Asian or other descent)	13.5	11.2	21.5

¹See Schwanen et al. (2012) for details.

²Derived from Rotterdam Databank (2011) & WistUdata Utrecht (2011).

CCTV at the level of the material artefact of the camera, and were able to specify the location of the camera(s) during the short interview. A few even spotted a camera before they were prompted (which is a type of response that is much less likely to be recorded with questionnaires or even more reflective interviews than with our approach). Another two-fifths could be considered fully unaware of the availability of CCTV surveillance, as their response to our question began with 'no' or was negative. Some participants were even completely surprised, which suggests that, within the 'unaware' group of participants, there may be differences that might have gone unnoticed with other research methods (especially questionnaires).

Nonetheless, the remainder of our participants – slightly more than two-fifths – could not be allocated to a straightforward aware or unaware category. Their responses suggested a high degree of heterogeneity towards knowledge 'of' CCTV, to be positioned somewhere in between those extremes. A critical aspect of that heterogeneity concerned the level of geographical (un)certainly regarding the exact location of the camera(s): whilst unable to identify specific cameras, participants thought or assumed that there were cameras operating in the area, which they defined with reference to a variety

of geographical scales. These ranged from the 'the big cities' (a common term to denote Amsterdam, Rotterdam, The Hague and Utrecht), the city (i.e. Rotterdam or Utrecht), the city centre or the square.

More generally, our findings suggest that knowing 'of' CCTV is geographical on two levels. It pertains both to people's awareness of material artefacts (i.e. cameras), which they may – or may not – be able to spot within the area in which they live, and to their beliefs about the availability of CCTV in certain areas. For some participants, these beliefs had come into existence on the basis of encounters with CCTV cameras in other places in the past. In most cases, those beliefs appeared to have been generated through exposure to public and media discourses about CCTV systems.

Systematic differences in the level of awareness between participants in Rotterdam and Utrecht or on the basis of gender and ethnicity are fairly modest (Table 2). Awareness is slightly higher in Utrecht, although the difference is not statistically significant ($p < 0.20$). This finding is rather surprising, given the large number of public CCTV cameras in Rotterdam's city centre and the greater role CCTV surveillance plays in the regulation of the night-time economy of Rotterdam (see above). For gender, the differences are larger (yet also not significant at $p < 0.20$);

Table 2. CCTV awareness, by city, gender and ethnicity.

	Unaware		Geographical Uncertainty		Aware of camera as material artifact		Total	
	N	%	N	%	N	%	N	%
City ($\chi^2=0.6$; $p=0.74$) ¹								
Rotterdam	14	45.2	13	41.9	4	12.9	31	100
Utrecht	19	37.3	23	45.1	9	17.6	51	100
Gender ($\chi^2=2.2$; $p=0.33$)								
Male	13	32.5	19	47.5	8	20.0	40	100
Female	20	47.6	17	40.5	5	11.9	42	100
Ethnicity ($\chi^2=1.3$; $p=0.52$)								
White	26	44.1	24	40.7	9	15.3	59	100
Non-white	7	30.4	12	52.2	4	17.4	23	100
Total	33	40.2	36	43.9	13	15.9	82 ²	100

¹Chi-square test for difference in awareness level between the two cities.

awareness levels are somewhat lower among the female participants. The same is true for white participants. For non-white participants, the percentage in the middle category of geographical uncertainty (the 'in between' category) is particularly large. Simply using an aware/unaware dichotomy to classify awareness levels may thus yield particularly inaccurate representations for this group.

The question nonetheless remains, whether it is important to think of CCTV awareness as a continuum rather than a dichotomy. We think it does: there may well exist a (complex) relationship between people's CCTV awareness and their perceived safety. If it is assumed that greater knowledge of the presence of cameras as material artefacts on average increases CCTV's potential to enhance safety perceptions among passers-by, then combining the 'in between' category with either the aware or the unaware group will result in an under- or overestimation of the effects ascribed to CCTV on people's experiences. The assumption that CCTV's potential to have an effect is greater when people are aware of its presence is not unreasonable. It resonates with policy-makers (including those in Utrecht and Rotterdam) and academics (Taylor, 2011; Zurawski, 2010) and with some of the study participants. According to Una, for instance, the presence of CCTV 'doesn't matter much, considering nobody

knows of it' and 'if people knew about it, if it were really known about, then I think it would be better'.

What is more, our interviews offer some qualified support for the notion that greater awareness of CCTV goes hand in hand with higher levels of perceived safety. If we plot the participants' scores for perceived safety at the time and place of the interview against their awareness level, we observe a positive effect in general (albeit only with a statistical significance value of $p=0.17$), as well as for participants in Rotterdam ($p<0.10$) and those of white persons ($p<0.05$) (Table 3). This is, of course, not to suggest that CCTV awareness *causes* peoples to feel safer. Table 3 only shows a statistical relation, and other – potentially more important causative – factors, such as familiarity with the area (cf. Zurawski, 2010) are not taken into consideration. Besides, the median scores for perceived safety are high in general (notwithstanding minor differences between the two cities and between white and non-white participants). Moreover, none of the participants explicitly mentioned CCTV surveillance when they were asked why they gave a particular safety score. We interpret this as indicating that CCTV surveillance is not the dimension of a situation that they think of first, in relation to their own safety. That is, CCTV may play a role but it certainly is not the most salient factor that makes the participants feel safe.

Table 3. Perceived safety scores on a ten-point scale, by CCTV awareness, city, gender and ethnicity.

	Unaware		Geographical Uncertainty		Aware of camera as material artifact		Total	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
City								
Rotterdam ($K=5.3; p=0.07$) ¹	7.80	8.00	8.00	8.00	9.10	9.00	8.10	8.00
Utrecht ($K=0.6; p=0.76$)	8.90	9.00	8.90	9.00	9.10	10.00	8.90	9.00
Gender								
Male ($K=0.5; p=0.80$)	8.90	8.00	8.60	9.00	8.90	9.00	8.70	8.75
Female ($K=4.0; p=0.13$)	8.40	8.00	8.50	8.00	9.40	10.00	8.50	8.25
Ethnicity								
White ($K=7.4; p=0.02$)	8.40	8.00	9.00	9.00	9.30	10.00	8.80	9.00
Non-white ($K=3.8; p=0.15$)	8.80	8.50	7.70	7.75	8.80	9.00	8.20	8.00
Total ($K=3.6; p=0.17$)	8.50	8.00	8.60	8.50	9.10	9.00	8.60	8.50

¹Kruskall–Wallis test for difference in perceived safety across awareness levels.

Nonetheless, given that safety scores differ between the three awareness levels, we suggest that research into the relationship between CCTV presence, people's awareness thereof and their safety perceptions is more likely to reach erroneous conclusions if CCTV awareness is dichotomized. This risk is greater for groups of participants where the 'in between' awareness category is particularly large, as with non-white participants in our study.

Surveillance, by all means

In spite of their short duration, the on-site interviews rendered rich and diversified information on how the participants perceived and thought CCTV surveillance worked. At the coding stage of the interview analysis, three central themes emerged that captured the most important aspects of the participants' understanding and perceptions of how CCTV works: temporality, human touch and heat of the moment.

Temporality

Ulla's remark that 'you can only look back at footage, eh?' expresses a view many participants shared. No fewer than 44 (52%) participants mentioned the retrospective capacities of CCTV systems. For them, recorded images enabled a review of what had happened, to trace, arrest, and/or prosecute perpetrators

and serve as evidence. These findings align with previous studies (Ditton, 2000; Koskela, 2003; Spriggs et al., 2005). Yet we extend that earlier work by linking those retrospective capacities to participants' experience of safety in the nightlife district:

Interviewer: Does that [knowing that a camera is there] make the situation here safer now?

Rafael: Hmm. Yes, in some respects it helps, yes it does.

Interviewer: How then?

Rafael: Now, if a crime is committed you can always look back, look at what happened, you know.

Interviewer: Yes.

Rafael: That's actually the only thing that a camera is good for.

Rose: Um, now, now I consciously know that a camera is hanging there, I should feel a lot safer. Because if anything should happen now, then I know from it that it's on the film.

Interviewer: And then?

Rose: Then the person who might do something to me can be caught.

By using phrases such as 'in some respects' and 'I should', Rafael and Rose seem to suggest that there

are limitations to the extent to which they feel CCTV cameras enhance their experience of safety. Further analysis suggested that the ability of CCTV to create safety depends greatly on the time frame in which its effects manifest themselves. In the particular situation when a nightlife district visitor feels uncomfortable or unsafe, CCTV cannot *do* anything: at that particular moment and in that specific place it is mute and passive and cannot offer our participants safety. It only affords some kind of post-event revenge on the perpetrators. For this reason, Udine says cameras offer *pseudo safety* rather than actual safety. Its retrospective abilities are also identified by Unia: ‘Yes, it’s more, perhaps not so much that I feel safer at that moment, but I find it reassuring that if anything should happen, that the chances that it’s recorded and that the offender will be caught are greater’.

The workings of CCTV are, however, not strictly retrospective according to participants. Several participants (7 out of 84, or about 8%) understood CCTV as a means to prevent and protect from ‘harm’ or ‘others’ and thus as a future-oriented and preventative measure. Note that the share of participants bringing up the preventative function is roughly six times lower than the corresponding percentage for the retrospective function. Ubbo was one of the participants foregrounding the deterring function of CCTV: ‘I know that people are less likely to do something stupid if there are cameras about. It isn’t always a help if anything happens, but people are not so likely to do stupid things if they know that there are cameras hanging there’. However, like other participants, he expressed doubts as to whether cameras were of much use at the exact moment when something is happening. Responses such as Ubbo’s and Udine’s highlight that our participants’ views on CCTV in relation to their safety depended critically on what it could do – or rather could *not* do – in the midst of a situation when something happens to them.

Human touch

Live-monitoring of CCTV cameras increased the feelings of safety for a couple of the participants (2 out of 84). Their number was, however, lower than was expected in light of the earlier studies by

Sætnan et al. (2004) and Helten and Fischer (2004). One participant who highlighted the importance of live-monitoring was Unice. She explained that ‘because such a camera, it is being watched continually, so then you know that it’s safer here’ and thus ascribed an element of active and continuous human involvement to video surveillance. She understood CCTV not as the recording of a situation, but as somebody watching. Nevertheless, this did not automatically promote safety for other participants. Some described what is best summarized as *intervention*, prompted by live-monitoring, as what they actually believed promoted safety. Umar was one of them: ‘I think that it does make a difference for people if they see, if they experience that filming actually has an effect [...] Not so much the immediate film but more the feeling of safety it gives that immediate action will follow’.

These findings are interesting for several reasons. For one, they suggest that nightlife district visitors consider it important that CCTV surveillance is animated by human action. At least some of our participants desired CCTV to be a hybrid object (Latour, 1999), in which the technical artefacts of camera, software and so on are seamlessly woven together with people viewing the footage in real time and with the emergency services on the ground, such as police officers and private security guards who can react on cues from the control room. To put it differently, for CCTV to enhance visitors’ experiences of safety, those people engaged in and responsible for video-surveillance should be capable of mediating (Latour, 1999) in the midst of the nightlife district. These conclusions align with those by Klauser (2007: 345), who argues that there is poor integration between CCTV control rooms and the public spaces that people frequent that are under CCTV control – a situation which in his terms lacks ‘a human element of proximity’. Therefore, CCTV is soon forgotten or ignored by users of public space(s).

Nonetheless, our interviews also suggest something else: even when that human element of proximity is present, the nightlife district is monitored live and control rooms are in direct contact with emergency services (which is the case in both Rotterdam and Utrecht), people who participate in the night-time economy may still question the

effectiveness of CCTV systems in relation to their own safety. This, as our analysis indicates, is because they do not believe intervention, instigated by CCTV operators on the basis of camera footage, to be possible in the first place. In only 12/84 = 14% instances did our participants consider CCTV as enabling 'intervention' by police officers or others on the ground. The following remarks exemplify the mismatch between how CCTV is actually set up and how it is understood by visitors of nightlife districts:

Udine: No, I don't think that at the moment I'm being attacked that I'll get help because a camera is hanging there. That's what I think. That's what I know for sure.

Umar: I did once have an experience when something happened and I thought, yes, what a pest. And then there was immediately a policeman on a mountain bike standing next to me [...]. And I thought gosh, that policeman got here fast. No, the control room had phoned him. [...]. Yes, that certainly does give you a safe feeling.

Whereas Udine suggests that a lack of understanding of how video surveillance is actually arranged can adversely affect her perceptions of safety, Umar's words indicate that a better understanding of those arrangements can stimulate one's sense of safety. However, they also make clear that this increase in safety is conditional upon the police or others on the ground being able to intervene within a short time-span (which reinforces our earlier point about the importance that people give to action and involvement in the midst of the situation): there are strict requirements that follow-up actions on the ground have to satisfy before surveillance assemblages comprising video technology, watchers, police officers, bikes and other agents can make a difference to a people's experience of safety in public spaces in nightlife districts.

Heat of the moment

Ulco's experience of being caught in a fight is even more explicit in highlighting how people's experiences can affect their perceptions of CCTV in relation to their safety. During the short on-site interview he recalled that 'when I was going out in my own town, and I was in the view of a camera, a big fellow came and stood in front of me and he began to hit me, I'd never seen him before'. CCTV surveillance did not prevent Ulco from being punched, as the system was incapable of generating some form of intervention before or immediately after he was being punched. He therefore concluded that 'It doesn't make me feel any safer particularly'.

The sentiment expressed by Ulco is more general: 20 participants (almost a quarter of the total) considered CCTV-based intervention to be ineffective in promoting their safety. For them, CCTV surveillance is always lagging behind. The response time of emergency services was considered too long relative to the perceived speed with which incidents unfold. Urias explained this in rather dramatic terms: 'But [it is] not that I immediately feel any safer. Look, suppose someone wants to stab me, then he'll stab me. That takes two seconds, not even that, it's in and out and I've been stabbed. So no, I don't really feel any safer'. Roxy is no less clear: 'Then it doesn't make much sense if someone comes along a couple of minutes later'. Consequently, there is no guarantee that nightlife district visitors feel more, and certainly not entirely, safe when CCTV is in operation. It is the 'immediacy' of an 'incident' that CCTV cannot control, especially in events unfolding after semi-conscious, instinctive acts (that is, not the result of reflective thought). Such actions are particularly likely to play out in nightlife districts (Latham and McCormack, 2004), where expressions of anger/rage, love, jealousy and the like are often more common than during daytime. Alcohol consumption may be important here, as it can intensify emotions and diminish self-restraint among some visitors of the nightlife district. As Ulanda suggested, 'I don't know whether people who've been drinking or whatever and who could possibly do something to me would actually know what they are doing'.

Differences by city, gender and ethnicity

In terms of differences between the two cities, we wish to highlight two findings. First, Rotterdam participants thought of CCTV somewhat more frequently in terms of live-monitoring and 'prevention', and somewhat less as 'recording and/or reviewing images' than those in Utrecht. The retrospective function was mentioned by 15 out of 32 (46.9%) participants in Rotterdam, against 29 out of 52 (55.8%) in Utrecht. The corresponding shares for the prospective functionality of deterrence are 12.5% and 5.7%, respectively. Second, the participants in Rotterdam thought of CCTV about twice as often in terms of 'human touch' (8 out of 32, or 25%) than in Utrecht (6 out of 52, or 11.5%). No noticeable differences were found in terms of the frequency with which CCTV was described as ineffective in the 'heat of the moment'. Whilst the nature of the city-level differences described here is in keeping with the different role CCTV plays in each city's regulation of the night-time economy, perhaps the most significant findings are the rather low shares of participants who thought of CCTV in terms of 'human touch' or considered its prospective functionality of deterrence altogether. The findings about city-level differences should nonetheless be treated with caution, as the number of interviewees in our study is relatively limited. Subsequent research with larger samples is desirable.

In Utrecht, more than in Rotterdam, white participants tended to understand CCTV slightly more frequently in terms of 'prevention' than did non-whites. There were few gender differences in Utrecht, but gender did matter in Rotterdam. The participants in Rotterdam who understood CCTV as live-watching and intervention were almost all female, whilst those who mentioned the preventative effects of CCTV were all male. Further research with different methods (for instance, in-depth interviews) is needed, in order to clarify these gender differences. However, it might be that because men tend to be more cognitively aware of CCTV presence than are women (see previous sections), men also implicitly assume that other nightlife district visitors, including potential perpetrators of crime and disorder, are also well aware of where video surveillance is in operation.

Conclusions and discussion

From the analysis of situated understandings and perceptions of CCTV in public spaces in the nightlife districts of Rotterdam and Utrecht, we draw four conclusions. First, it appears that fuller awareness of CCTV presence may result in perceptions of greater personal safety among participants in the night-time economy. Studies examining this suggestion should nonetheless avoid reducing CCTV awareness to a binary 'yes or no' phenomenon. As we have shown, there is a large category of people in between aware and unaware who have some sort of knowledge of CCTV. Allocating these people to mutually exclusive aware or unaware categories runs the risk of erroneous conclusions about the relationships between CCTV presence, awareness and perceived safety. In fact, to others interested in examining CCTV awareness, we would recommend developing an approach to 'measurement' that is as open and flexible as ours and that also explores awareness when people are in the midst of situations and practices where CCTV can have an effect. Such an approach can articulate a degree of complexity and richness of perception that would otherwise be sidelined.

At the same time, we also wish to highlight the limitations of the approach described in this paper. We did not consider people's familiarity with a given area and their biography of past encounters with crime and disorder, but with hindsight believe that these should have been given more attention in the approach we adopted. Additionally, whereas our approach foregrounds participants' spontaneous reactions to CCTV in situ, the questions we asked also, and inevitably, induced a form of conscious thinking in them. As a result, the awareness demonstrated in this paper is of a cognitive kind. In the exchanges between researchers and participants, a few of the participants hinted at a form of awareness beyond knowledge of and/or about CCTV. They explained that they had such knowledge but also that they hardly ever thought about CCTV on a night out. The information we collected did not enable us to explore this dimension of awareness in any depth. More research using the method we have developed, as well as others, is needed to examine this form of awareness and its relationship to safety.

Second, there are profound limitations to the capacities of CCTV systems to actually improve people's perceived safety. This becomes evident once people's understanding of how CCTV works and relates to their own situation are analysed: CCTV surveillance is seen much more widely as a technology that is effective in the aftermath of an incident, rather than during the event or in an anticipatory manner, and CCTV is considered by many of our participants as always 'lagging behind'. We believe that the identified limitations stem from the fundamental difference in the spatiotemporal logics that underpin people's understandings of safety and CCTV surveillance. Our participants understood safety in profoundly embodied ways, and evaluated CCTV from the perspective of their own lived bodies – the bodies they are and through which they participate in the world (Merleau-Ponty, 1962) – which are always tied to a concrete place in the here-and-now. The logic of CCTV is, however, disembodied and differently attuned in a temporal sense. As a system of practices, CCTV is, on balance, weaker in dealing with the present (through mobilising emergency services on the ground when an incident is taking place) than the future (through prevention) and particularly the past (through playing back). Had we adopted a research method with less emphasis on spontaneity and openness, the difference in spatiotemporal logic would probably not have been foregrounded to the same extent.

In many ways, our findings about the limitations to CCTV's capacities align with the observations by Taylor (2011) and Koskela (2002), but there is also a difference from the latter study. Koskela argued that women in particular were aware of the limits of what CCTV can control, but we found concerns about CCTV's efficacy in ensuring personal safety to be roughly equal across genders.

Third, in light of the considerable differences in the role of CCTV in the discourses and practices of regulating public spaces between Rotterdam and Utrecht, it is remarkable that the participants' understanding and perceptions of CCTV are relatively comparable in both cities. There were differences, but these were minor and generally not statistically significant. This result was unexpected in light of Rotterdam's greater emphasis on regulation and

policing of the nightlife district and the greater embeddedness of CCTV surveillance in regulation in this city. In addition to sampling effects, the lack of greater awareness among the Rotterdam participants may reflect that police officers, zero-tolerance policing tactics and private security guards (especially door staff for bars and clubs) are visibly present to a greater extent in Rotterdam than in Utrecht (Schwanen et al., 2012). This presence may push CCTV – a technology that many participants feel cannot enhance their safety when something happens as much as 'real people' can – into the background.

Nonetheless, whilst also sizable in Utrecht, the gap between policy-makers' and politicians' legitimizations of CCTV surveillance, in which prevention and increases in perceived safety are critical factors, and the views of nightlife district visitors, was particularly large in Rotterdam. It thus appears that the discourses (re)produced by local policy-makers in Rotterdam are only very partially shared by the citizens frequenting the nightlife premises in the city centre. The discrepancy in views between policy-makers and citizens is, we argue, not a consequence of poor integration between CCTV control rooms and the spaces under surveillance or a lacking 'human element of proximity' (Klauser, 2007: 345), as officials in Rotterdam have gone to great lengths to strengthen linkages between CCTV operators and police staff on the ground. Rather, our short interviews have revealed that nightlife district visitors, both in Utrecht and Rotterdam, are generally poorly informed about how, where and when CCTV systems are used and embedded in more general policing strategies. The implication is that information and awareness campaigns targeting city-centre users may reduce the discrepancy, but the discrepancy will probably not disappear, given that the participants in our study were sceptical about CCTV's capacity to prevent disorder and harm.

Fourth, our analysis shows that differences along the lines of both gender and ethnicity in CCTV awareness and evaluations of CCTV in the context of perceived safety are generally small in Utrecht and Rotterdam. This certainly does not invalidate more general claims that the relations between CCTV surveillance and safety, fear and violence in public space are differentiated in terms of gender

and ethnicity, but might reflect the fact that, at the specific times of night and in the particular places where our short on-site interviews have been conducted, levels of perceived safety tended to be high irrespective of gender and ethnicity. It is not unlikely that our results would have been different had we focused on the late night or early morning (when disorder is much more prevalent) or in other, more deserted places.

What then do these conclusions mean for the governance of safety in nightlife districts? We offer a threefold reply. The first and rather obvious point is that visitors should be much better informed about how CCTV systems work and how surveillance at a distance is integrated with police officers and other services on the ground. Additionally, expectations among policy-makers and politicians about the safety-enhancing effects of CCTV should be moderated and reconsidered. One way to do this is to rethink what CCTV is and what it is for. It seems to us that its scope should be diverted, from ensuring safety, to offering assistance to the nightlife district visitor. It is, after all, impossible to guarantee that ‘nothing will happen’: the best that public authorities, the police and others can do is offer help should anything unpleasant occur. A shift from a language of control to one centred on help aligns much better with how people seem to understand CCTV and what they expect from it.

As already implied by our insistence on offering help as the guiding principle of how CCTV surveillance in the nightlife setting should be organized, it is imperative to integrate CCTV even further into other forms of policing and surveillance. Linkages need to be strengthened, in particular with those forms of surveillance and policing that are compatible with a spatiotemporal logic of embodiment and situatedness in the here-and-now. One way to achieve more fully fledged surveillant assemblages (Haggerty and Ericson, 2000) or security networks (Newburn, 2001) that are of real benefit to users of urban spaces would be to integrate CCTV surveillance not only with police officers, but also with door staff at bars and clubs, private security firms and neighbourhood vigilante groups. In the (near) future it might even be possible to share some footage recorded with public CCTV cameras with interested or dedicated citizens who can access recordings in real time via mobile devices.

What is at any rate *not* desirable from a nightlife district visitor perspective is a ‘managerialist’ approach to the surveillance of public space, premised on rationalization and cost saving and which would entail replacing personal policing through CCTV surveillance and/or mechanising the interpretation of CCTV footage using dedicated computer code. Not only does that approach diminish the possibilities to identify forms of harassment that provoke fear in women and other specific social groups in particular (Koskela, 2002), it also reduces the human touch in surveillance and policing and reinforces a spatiotemporal logic that is in tension with that of the people using public space.

Acknowledgements

We are thankful to the study participants for their time and contribution, and to the editor and reviewers for their helpful comments on earlier versions of this manuscript.

Funding

This research is part of the project Surveillance in Urban Nightscapes, financed by the Netherlands Organization for Scientific Research (NWO), grant MVI-313-99-140.

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