HOT SPOT ‘KNARKRONDELLEN’
AN EVALUATION OF POLICE INTERVENTIONS IN MALMÖ

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‘Knarkrondellen’, which translates to ‘Drug Roundabout’, is a known hot spot for drug trading in Malmö and the police have implemented several measures to prevent the narcotic crimes. This paper sets out to investigate the impact that the police interventions, namely enhanced police foot patrols, improved street lighting and the installation of a surveillance camera, have on the crime rates and the fear of crime at the roundabout. In a multi-method approach, quantitative data from the police register and police surveys as well as qualitative observations and interviews with the residents are analyzed. The findings show that the police interventions did not reach the desired preventative effect in the given study period and indicate the occurrence of displacement. The citizens’ feeling of safety and perception of the problems did not change significantly as a result of the interventions. Overall, the surveys and interviews suggest that the police are on the right track; however, a longer follow-up period is needed in order to examine the long-term effects of the intervention measures. Additionally, an enhanced involvement of the community in the fight against drug crimes appears necessary.

Keywords: drug crimes, fear of crime, hot spot policing, informal social control, surveillance camera (CCTV)
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INTRODUCTION

According to the Swedish National Council for Crime Prevention (Brottsförebyggande rådet, 2017), approximately 90,900 drug offences were reported to the police in Sweden in 2016. This represents an amount of 6% of all reported offences during that year. Compared to other European countries, Sweden has one of the strictest laws on drug use and possession and the drug policy is based on a zero-tolerance approach. Penalties for illegal drug use or trading range from a fine up to ten years in prison depending on the degree of seriousness. The Swedish government relies on prevention and treatment in the fight against drugs, with the police being one of the main actors working to reduce the exposure and access to narcotics and to minimize the inflow of young people and adults into drug misuse. In Malmö, Sweden’s third biggest city located in the south of the country and in the media exaggeratedly labeled “the most dangerous city in Scandinavia”, the police are working actively to prevent crime at so-called crime ‘hot spots’. The preventative approaches are different from area to area and depend on the specific local problems. “Knarkrondellen”, a roundabout in Malmö’s inner city, has primarily been struggling with the presence of an open drug market and the police have implemented several measures to fight the narcotic crimes. The question is whether these measures bring about the desired preventative effect and contribute to increasing the feeling of safety in the area.

This essay sets out to investigate the impact that police interventions, such as enhanced police patrols, improved street lighting and the installation of a surveillance camera, have on the crime rates and on the fear of crime at the roundabout. Using a multi-method approach, the study has a focus on police-induced and specifically drug crimes. The findings contribute to the general understanding of the impact of police interventions on narcotic crimes, but especially add to the knowledge about police intervention effects in a Swedish context.

The paper first introduces the theoretical background of various policing strategies and intervention measures and their limitations. This is followed by a characterization of the study area and the problems at Knarkrondellen (which translates to “Drug Roundabout”) accompanied by a description of the specific intervention measures that were implemented. Quantitative and qualitative data from different sources including the police register and interviews are then described and analyzed. The results are discussed in the context of previous research and future implications in the final section.

Aim and objectives

The aim of this project is to evaluate in how far intervention measures implemented by the police (namely increased police foot patrols, improved street lighting and the installation of a surveillance camera) bring about a change in the crime rates at a known crime hot spot in Malmö. It will be examined whether the measures have an impact on the general criminality as well as specific types of crime with a focus on drug offences. The study further intends to measure the citizens’ perception of the police measures and their feeling of safety before and after the implementation of interventions. The goal is to set the development of
the actual crime rates in relation to the residents’ perception of the situation and to analyze their connection.

To achieve these aims, I will

(1) statistically analyze quantitative crime data from the police register from before and after the implementation of intervention measures at the target area and a control area,

(2) compare responses from two police surveys about the citizens’ feeling of safety in the area that were conducted before and after the implementation of intervention measures, and

(3) conduct observations of the target area as well as qualitative interviews with residents, examining their perception of the development of crime rates and their feeling of safety.

The results of the quantitative and qualitative analyses will then be compared in order to obtain an enhanced understanding of the development of criminality at this particular crime hot spot in Malmö.

**Geographical demarcation**

The area in focus in this thesis is a roundabout located in Möllevången, a district in the southern inner city of Malmö, Sweden. Next to mainly residential buildings, the traffic circle is neighbored by Folkets Park (an open park and leisure area), a family house and preschool, a small café and a recycling station. The park wall facing the roundabout is one of Malmö’s legal graffiti walls and therefore frequently changes its looks. The adjacent street heading from west to east is Kristianstads gatan, Norra Parkgatan exits to the north and Södra Parkgatan to the south. As a control area, the study will look at the larger area of Möllevången in order to compare crime rates between the roundabout and the entire district. Möllevången is thereby defined as the area within the streets of Amiralsgatan, Bergsgatan, Södra Förstadsgatan, Spårvägsgatan and Nobelvägen.

![Figure 1: Map over Möllevången and the roundabout (Lantmäteriet, 2017)](image-url)
Relevance
The purchase, sale and use of drugs and narcotics is illegal in Sweden and prohibited by the law (Narcotic Drugs Punishment Act, 1968). Accordingly, politicians, many citizens and the police see the selling and buying of these substances as a problem that needs to be solved in due time. It is especially the open drug trading on the streets that raises concern since the obvious purchase and sale and the presence of drug dealers negatively affects the safety or feeling of safety and comfort of both residents and passersby. During the last few years, numerous measures have been taken to fight the criminality in that field, including the camera surveillance and police efforts evaluated in this thesis. Many of the measures are, however, not or not sufficiently followed up and documented. This study aims to help fill this gap and provide a detailed documentation and evaluation of the interventions at the roundabout located in Möllevången. The results will be of relevance to the police, the City of Malmö, the residents and any person involved in the prevention work at the roundabout. Further interventions can be implemented based on the findings. It additionally contributes to criminological research by providing new results about and deeper insight in the use of hot spot policing and surveillance cameras in drug-related crime prevention work. While the majority of the existing research on the matter stems from the US and the UK, this study will especially contribute to Swedish research and widen the knowledge about the effectiveness of police interventions in a Swedish context.

The involvement in the study and its results are especially relevant for the residents in the buildings adjacent to the roundabout. In the course of the reorganization of the police force to a national police authority in 2015, an intensified dialogue with the citizens (‘medborgardialog’) was started. At the roundabout the dialogue commenced in 2016 with the goal to be closer to the residents, include their knowledge about the area in order to decrease the crime rates and improve the feeling of safety. Many of the citizens’ concerns, wishes and suggestions have been heard and measures according to them were implemented. To further keep up the dialogue and improve the situation, follow-up surveys are conducted within this thesis project. The participants’ benefit is the possibility to be heard, to participate in the development and consequently generate a better environment to live in. The analysis of the actual crime rates and the residents’ feeling of safety will help the City of Malmö and the police in their future work against the problems. The goal is to provide a safe and friendly environment for all people living in the area, going to school or kindergarten, passing by or otherwise affected by it.

Definitions
Due to their recurring nature in research and the literature on policing and surveillance a closer look at the terms displacement and diffusion seems appropriate. Fear of crime and the feeling of safety play an important role in this work and therefore the terms are described as well.

Displacement. An ongoing discussion when talking about preventing crime in a ‘hot spot’ area is the one about the displacement of crime. Has the criminal activity simply moved to another place? Has only the type of crime changed, or maybe the time of the day it is committed? Most studies therefore apply a ‘buffer zone’, which is an area close by that the offenders are likely to move to when the target area is under increased surveillance. The aim is to de facto prevent the
crime from happening instead of just shifting it to other places. According to Reppetto (1976), displacement can occur in the form of temporal (change in time), tactical (change in method), target (change in victim), territorial (change in place) and functional (change in type of crime) displacement. This study mainly focuses on the occurrence of territorial displacement, however temporal and functional changes might also be detected. Welsh and Farrington (2004) argue that when crime decreases in an experimental area (where surveillance is increased), increases in the adjacent area (buffer zone) and stays constant in a control area, that is an indication of displacement. The crime is moved from the targeted area to the adjacent area. As this is a known problem in prevention work, some studies anticipated the displacement and identified the areas the crime would most likely be displaced to. Police patrols in these areas can then obviate the displacement to that area (La Vigne et al., 2011).

**Diffusion.** In contrast to displacement of crime, diffusion means the distribution of benefits of crime prevention. When crime rates decrease in the experimental area and also in the adjacent area, but stay the same or increase in the control area that is an indication of diffusion (Welsh and Farrington, 2004: 513). The benefits that the increased police patrols or the use of cameras have on the target area diffused to the adjacent area as well. The buffer zone also becomes unattractive to crimes. Further, prevention measures for a certain type of crime can also diffuse on other types of crime. As a consequence, a camera that might be installed to detect burglaries or car theft might also prevent drug dealing due to the higher risk of apprehension (Clarke and Weisburd, 1994).

**Fear of crime and feeling of safety.** When researching places and crime, the issue of fear of crime is named repeatedly. It describes the feeling of individuals or groups that experience a place or a situation as unsafe and that are afraid they might become the victim of a criminal act (Gill and Spriggs, 2005: 4–5). On a neighborhood level, this fear can be caused or enhanced through “local victimization rates, rumors of nearby crimes and victims, physical deterioration, social disorder, and group conflict over the control of living space” (Skogan, 1986: 210). Research has shown that the fear of crime is highest amongst women and the elderly, groups which are statistically speaking the least victimized (Ceccato and Bamzar, 2016). This shows that the perceived fear of crime and the actual risk of being victimized can differ largely and are not necessarily connected. The feeling of safety is somewhat the opposite to fear of crime: it describes the perception of safety of individuals regarding the risk of victimization. Research has shown that the feeling of safety can be enhanced through measures such as police visibility and surveillance cameras (Wilson and Kelling, 1982; La Vigne et al., 2011, 2011), but also through a well-functioning informal social control (Skogan, 1986).

**BACKGROUND**

“Surveillance cameras alone are a not a silver bullet, but simply another crime control and investigative tool. That tool should be employed along with other policing strategies, such as community-oriented problem-solving strategies and intelligence-led policing” (La Vigne et al., 2011: 14).
Police interventions come in manifold outlines and with diverse aims. One major part of most policing strategies is the surveillance of places or individuals. Surveillance as crime prevention method can take various forms and the literature mainly differentiates between formal and natural surveillance. Welsh and Farrington (2004) state that the former aims to deter offenders from committing a crime by installing formal guards such as the police or safety guards or technology like surveillance cameras. Natural surveillance in comparison prevents criminal activity through the people that are present simply “going about their everyday business” (Welsh and Farrington, 2004: 498). This relates to the well-known theory of informal social control by Sampson and Laub (1997), who argue that a low degree of informal social control is interrelated with high crime rates. In the following, three main policing strategies are outlined, followed by a presentation of the theoretical implications and research regarding street lighting, police foot patrols and cameras as forms of surveillance.

**Policing strategies**

Policing strategies are often directed at specific geographical ‘hot spots’ where a cumulation of crime emerged and where the police address the problem by allocating additional resources to the area. This place-based policing strategy focuses on very small units such as streets blocks or addresses and can range from mere enhanced police presence at the hot spot to full multi-step programs in order to fight criminality (Weisburd and Telep, 2014). The crime-reducing effect of hot spot policing is based on the concept of deterrence and the reduction of criminal opportunity as suggested in routine activity theory (Weisburd et al., 2017). Routine activity theory as an opportunity-focused concept requires a likely offender, a suitable target and the absence of capable guardians for a crime to occur (Cohen and Felson, 1979). In this framework the police act as capable guardians and therefore limit the opportunities for criminal activities (Weisburd et al., 2017). Further, since increased police presence poses a higher risk of apprehension and punishment to the offender and thereby outweighs the benefits of the act, it is expected to have a crime-reducing effect (Weisburd et al., 2017).

A substantial body of research on hot spot policing has been gathered over the years and systematic reviews suggest that the strategy is effective in preventing crime (Braga et al., 2012; Braga et al., 2014; Weisburd et al., 2017). Place-based policing is regarded especially successful since it appears not to displace crime but rather to generate an effect of diffusion of benefits of crime control (Weisburd et al., 2017; Clarke and Weisburd, 1994). Weisburd et al. and colleagues (2017) investigate the influence of hot spot policing on larger urban areas and conclude that “hot spots policing provides strong benefits for the larger urban area in which hot spots policing is applied, especially when applied at higher dosages” (Weisburd et al., 2017: 161). They report a 10% decrease in robbery in areas with an approach focused on high intensity hot spot policing compared to areas using a random patrol model.

Another policing strategy with a similar goal but a different focus is ‘broken windows policing’. Wilson and Kelling (1982) outlined the ‘broken windows theory’ in their article on police and neighborhood safety. The assumption is that if a broken window is left unrepaired, this sends a signal that no one cares about the situation and that other windows will as a consequence also be broken in due time (Wilson and Kelling, 1982: 30–31). Thereby, broken windows can be replaced by all kinds of disorder or minor offences such as graffiti, loitering or
public drinking that “show a lack of neighborhood concern or vigilance” (Thompson, 2015: 44). The main mechanisms behind the theory are collective efficacy and fear of crime (Weisburd et al., 2015). Sampson et al. (1997) define collective efficacy as “mutual trust and the willingness to intervene for the common good” (Sampson et al., 1997: 919). A lack of neighborhood concern and care is assumed to lead to an increased fear of crime amongst the citizens, resulting in avoidance of the area and neighborhood decline (Skogan, 1986). Although Wilson and Kelling (1982) stress that it is not inevitable, it has been argued that this prevalence of disorder and the resulting desertion makes an area more vulnerable to more serious crimes (Thompson, 2015). In order to prevent serious crimes it is therefore in the interest of the police to stop petty crime and antisocial behavior at an early stage. Braga et al. (2015) report a significant association between policing disorder strategies and a reduction in crime. They stress, however, that this is only true for certain types of policing strategies: programs with a community and problem solving focus were considerably more successful than aggressive zero-tolerance approaches. Howell (2016) criticizes that broken windows policing is often misunderstood and confounded with zero-tolerance policing. While broken windows policing should focus on “replacing broken light bulbs, [...] repairing broken doors and broken elevators in public housing”, zero-tolerance policing focuses on arrests and punishment for even minor violations and thereby misses the goal of “making our public spaces safe by addressing unsafe conditions” (Howell, 2016: 1059). In the context of New York she argues that the long ongoing zero-tolerance strategy rather made public spaces dangerous places, especially for young men of color and vulnerable groups.

Weisburd et al. (2015) conducted a meta-analysis of six studies that were amongst others included in Braga et al.’s (2015) review, focusing on the mechanisms behind broken windows theory rather than the outcome. They, however, find no significant effect of disorder policing strategies on the fear of crime and collective efficacy. Since fear of crime and collective efficacy are the key mechanisms of the broken windows model in preventing crime, the logical consequence is that the overall impact of the policing strategy is not as strong as assumed.

Besides hot spot and broken windows policing, community-oriented policing has emerged as alternative policing strategy. “In its simplest form, community policing is about building relationships and solving problems” state La Vigne et al., 2011: 4 (2011: 4). Gill et al. (2014) summarize that community-oriented policing (COP) is composed of community partnerships, organizational transformation and problem solving, and that its focus lies on the involvement of the community in identifying social problems. The outreach to and involvement of the community is also what distinguished COP from problem-oriented policing, which not necessarily involves the community (Gill and Spriggs, 2005; Gill et al., 2014). Another effect of COP appears to be an enhanced trust of the citizens in the police and an improved relationship between the two (Gill et al., 2014). Community-oriented policing meant a drift away from the perception of police officers solely being crime fighters towards them providing conflict resolution, maintenance and reducing fear (Gill et al., 2014).

Gill et al.’s (2014) meta-analysis of studies examining the effects of community policing finds evidence that the policing strategy improves the relationship between the police and the citizens and enhances the trust in the police work. It does, however, not appear to decrease crime or have a preventative effect on
criminality. Interestingly, they also report that COP has no effect on the citizen’s fear of crime, despite the improvement in perceptions of disorder and police legitimacy. In conclusion they discuss whether a collaboration between the police and the community can be achieved in areas where they have no pre-existing relationship and low collective efficacy and state that the “full implementation of COP in a police department involves a long-term, multi-stage process” (Gill et al., 2014: 421). Another effect of community-oriented policing is its enhancing influence on the citizens’ willingness to report crime. Gill et al. (2014) call this increase in reports by the public a “reporting effect” (Gill et al., 2014: 419) which covers actual declining crime rates.

**Street lighting**
A method often overlooked in crime prevention work is the improvement of street lighting. It generally entails the improvement of lighting in public streets and residential neighborhoods but can also include the lighting of parking lots, public areas such as shopping malls or campuses or private facilities in order to reduce crime (Clarke, 2008). It requires cooperation between the police and city authorities that are responsible for the installation of lighting. Welsh and Farrington mention that “substantial funding was poured into CCTV schemes on the basis of questionable research, while an effective alternative in the form of improvements to street lighting-supported by high quality research-was widely known” (Welsh and Farrington, 2004: 500).

The effect of improved street lighting as a form of natural surveillance is partly based on a situational approach, partly on informal social control. According to Welsh and Farrington (2004), the “situational approach to crime prevention suggests that crime can be prevented by environmental measures that directly affect offenders’ perceptions of increased risks and decreased rewards” (Welsh and Farrington, 2004: 500). Clarke (1995) provides a theoretical base for the situational approach by relating it to rational choice theory and routine activity theory. The assumption is that individuals make rational “event decisions” (Clarke, 1995: 98) regarding the immediate circumstances and situations of a criminal event. The increased likelihood of being captured and the increased opportunity costs of criminal activity due to more light are expected to act deterrent (Doleac and Sanders, 2015; Clarke, 2008). Additionally, improved lighting can lead to an increased social activity of the residents outside their homes, thus enhancing informal social control and in consequence preventing criminal activity (Clarke, 2008).

Although one would expect to see an effect mainly at nighttime due to a higher visibility and risk of apprehension, Clarke (2008) argues that criminality can even be reduced during daytime since the new lighting shows the community’s and police’s determination and investment to control crime. It has however been opposed that increased social activities outside home might also be cause for more criminality due to empty homes and that more light might facilitate crimes such as drug dealing and prostitution (Clarke, 2008). Next to crime reduction, enhanced street lighting is also expected to have a decreasing effect on the fear of crime of the citizens. Despite the fact that little research has been published on that matter, Clarke (2008) assumes that a decrease of fear is rather an indirect consequence of a decrease of crime than the lighting itself. Whether it is the improved lighting directly or a result of fewer criminality, a reduction in fear of crime can either way be viewed as a desirable outcome.
A problem in measuring the effects of this method to prevent crime is that it is often accompanied by other interventions such as foot patrols or camera surveillance. It can be difficult to disentangle the impact of the various measures and their impact on criminality. Nevertheless, research was able to show the beneficial effects of improved street lighting. Farrington and Welsh (2007) examined several studies on the effect of street lighting in a literature review and find mixed results. While four studies from the US found that street lighting was effective in decreasing crime, the four other US studies show no effect. British evaluations are somewhat more positive, showing that street lighting indeed reduced crime during daytime as well as nighttime. Farrington and Welsh (2007) conclude that their results support the theory of informal social control in explaining the effect of street lighting rather than deterrence as in the situational approach.

**Police foot patrols**

Already in the 18th century police foot patrols were recognized as a measure to prevent crime (Ratcliffe et al., 2011). Until today this assumption relies mainly on the concepts of deterrence and the risk of detection. Representing a main measure used in hot spot policing strategies, increased police visibility is expected to keep possible offenders from committing a crime as the risk for apprehension is higher and the costs of being caught are larger than the benefits from the criminal act. The police foot patrols depict the capable guardian in Cohen and Felson’s (1979) routine activity framework and the mechanisms behind foot patrols are in general much alike those behind improved street lighting. However, the focus is more on the formal surveillance through police officers than on informal social control. Foot patrols are typically carried out by two officers and the pairs are assigned to a specific area (Groff et al., 2013). Their most important tasks next to law-enforcement are to maintain the public order, reinforce informal rules in the neighborhood and provide public service activities (Wilson and Kelling, 1982; Groff et al., 2013).

It has been proposed that foot patrols are more effective in preventing crime at hot spots than car patrols due to the immediacy of foot patrols to the public (Wilson and Kelling, 1982; Groff et al., 2013) and the perception that officers on foot are “more approachable” (Piza and O’Hara, 2012: 696). Groff et al. (2013) found in the Philadelphia Foot Patrol Experiment (PFPE) that foot patrols generated a 23% decline in violent crimes at hot spot areas. Yet, car patrols were still active in the PFPE areas as well and the authors conclude that the two forms of patrols work dynamically together; while car patrols focus on serious crime incidents, foot patrol officers concentrate on order maintenance activities. The crime-preventing effect of police foot patrols is further supported by Piza and O’Hara (2012) who investigated the foot-patrol initiative in Newark, NJ. Specifically violence, but also the number of murders, shootings and aggravated assault declined in the area with police foot patrols. While these types of crime showed no signs of displacement to the control area, robbery was affected by a displacement effect. Ratcliffe et al. (2011), who also examined the PFPE data, confirm a significant reduction of violent crimes in hot spots where foot patrol officers were present. Despite the positive results for the effect of police foot patrols in preventing violent crimes at areas with high crime intensity, research has not particularly examined the effect of foot patrols on narcotic crimes.
Next to merely investigating whether or not foot patrols have a decreasing effect on crime rates, research has also examined in how far the style of policing has an influence. Ariel et al. (2016) assert that the current “maxim of deterrence through superior force implies that police officers must apply a direct threat of total intervention, including immediate death, in order to create a localized general deterrent effect” (Ariel et al., 2016: 279). They refer to the fact that patrolling officers are generally wearing a uniform and carrying a gun, embodying a power-holding position. In their research, the authors attempt to answer the question how much of a deterrence threat is needed in order to prevent offenders from committing a crime. It was investigated whether a ‘hard’ policing strategy is necessary for the deterrent effect to develop, or whether softer, unarmed, but still uniformed police patrols (such as the Police Community Support Officers PCSO) can also reduce crime. Their findings show that the paraprofessional PCSO can indeed prevent crime by patrolling hot spots. The preventative effects of ‘soft policing’ were very similar to those of ‘hard policing’, indicating that “the probability of encountering an agent of the state is more important than the severity of the summary response an agent can make” (Ariel et al., 2016: 306–307).

Following Ariel et al.’s (2016) request for more attention and research on the optimal frequency and duration of police visits at hot spots, Williams and Coupe (2017) conducted a randomized controlled trial opposing the frequency to the length of hot spot police patrols in Birmingham, UK. Their findings indicate that the “less-frequent long visit model was more effective than the more-frequent short visit model” (Williams and Coupe, 2017: 2). Fewer, about ten minutes long visits in the target areas reduced crime and anti-social behavior to a larger extend than more frequent but only about five minute long visits. This also supports Koper’s (1995) research stating that the ideal patrol time at a hot spot lies at fifteen minutes with regard to its crime reducing effect in the time after the officers have left.

**Surveillance cameras**

CCTV (closed-circuit television) cameras are a main tool used in crime prevention in various countries and contexts. Some cameras merely record statically or following a specific programmed tour (passive), but others are monitored and controlled by the operator at specific times or around the clock (active). Modern surveillance cameras are not static and targeting one single area all the time, but can pan, tilt and zoom and sometimes they are even mobile, meaning the cameras are not fixed but can be deployed and redeployed as needed by the operator (Gill and Spriggs, 2005: 1–2).

In theory, it is assumed that the presence of a camera deters possible offenders from committing a crime and therefore acts preventative. In addition, the video footage can be used as evidence in prosecutions and assist in the identification and sentencing of offenders. Ideally, criminal behavior is not only deterred in the area covered by the camera, but also in other areas and for different types of crime. Quite a substantial body of research has been gathered regarding the use of public surveillance. The results of the studies are, however, inconsistent and although a tendency towards positive results exists, many aspects are left unanswered. The most striking hereby is that most studies focus on whether the cameras work as a deterrent and prevent future crimes, but not on why they do so. Few studies have looked into the causal mechanism when it comes to surveillance cameras in crime
prevention (Piza et al., 2017). In the following, some assumptions regarding the mechanisms behind the deterrent effect of cameras are outlined accompanied by an overview of the research conducted on the matter.

Causal mechanisms. Pawson and Tilley (1994) belong to the few who attempted to explore the mechanisms behind the cameras’ deterring effects. Although their thoughts on how surveillance cameras can prevent crime are concerning car crimes, many of the aspects can be applied to other types of crime easily. The ‘caught-in-the-act’ (1) as well as the ‘you’ve been framed’ (2) mechanism suppose that cameras can reduce car crimes because the probability of getting caught or captured on video acts deterrent. Both of these mechanisms could work just as well for narcotic crimes, violent crimes, other types of theft and any kind of antisocial or delinquent behavior. Common sense expects the risk of being caught in the act or convicted due to video evidence to have a deterrent effect on most offenders. Both mechanism 3 (surveillance cameras increase the level of security and consequently the usage of the car park) and 4 (cameras can assist in effectively deploying police officers where needed) are in line with the idea that social control has a deterring effect on offenders. While the increased number of car drivers in the car park could be labeled as informal or natural social control could the enhanced police visibility be classified as formal social control (Welsh and Farrington, 2004). Car crimes are further expected to be deterred by the general (5) and specific (6) publicity mechanisms, stating that the ‘advertisement’ of the surveillance through the public and media as well as explicit signs have a deterrent effect on offenders. These mechanisms are most likely applicable to other types of crime where the mere knowledge of public surveillance can prevent the criminal act. It can, however, not be ruled out that the offenders simply change to other types of crime or other places instead, overriding the preventative effect of cameras. Pawson and Tilley (1994) argue that car crimes that are committed quickly are less likely to decrease than those crimes that take a longer time. The ‘time for crime’ mechanism (7) takes into account the offenders’ considerations on how long it would take the police to arrive once detected and thus the cameras rather prevent those crimes that take more time. As mentioned above, all of the mechanisms used by Pawson and Tilley (1994) to explain the effects of camera surveillance on car crimes can in some way be adapted to other types of crimes. Being caught in the act or on video tapes is a risk for any offender, and social control is known to not only prevent car crimes but also for example violence (Sampson et al., 1997). Public media information or signs that inform about camera surveillance will not only prevent car crimes as suggested by Pawson and Tilley (1994), but all crimes that are usually committed in a public space that could be detected by cameras. When testing which of these mechanisms might have the biggest impact on car crime rates, the authors summarize that

“CCTV does not remove offenders by catching them. It does not need to have that degree of technical sophistication to make offenders recognizable to have an effect. It does seem that prospective offenders are (at least for a while) deterred by the (mistaken) notion that risk is increased by the operation of CCTV” (Pawson and Tilley, 1994: 303).

Previous research. In 2005, Gill and Spriggs published an extensive report on the impact of CCTV cameras on crime in the UK regarding different contexts, areas and types of crime. They further examined the reactions of the public to the
implementation of cameras regarding fear of crime and their perception of the surveillance. The results showed that only six out of thirteen studies that were evaluated showed a reduction in crime due to CCTV, of which only two were statistically significant (Gill and Spriggs, 2005: vi). Similar mixed results were found by La Vigne et al. (2011) whose findings “indicate that cameras, when actively monitored, have a cost-beneficial impact on crime with no statistically significant evidence of displacement to neighboring areas” (La Vigne et al., 2011: 12). In 2008, King et al. evaluated the effectiveness of 71 Community Safety Cameras in San Francisco with a focus on violent crimes. Although their findings indicate no effect of the camera surveillance on violent crimes, they show a substantial decline in larceny theft including pickpocketing, purse snatching and thefts from buildings and automobiles (King et al., 2008).

Most of the research on cameras in crime prevention is conducted in the UK and the US, but a small number of Swedish research does exist: Mikael Priks conducted Swedish studies on the effects of public surveillance on criminal behavior in the subways of Stockholm (Priks, 2015) and on unruly behavior in football stadiums throughout the country (Priks, 2014). Both his analyses show a reduction in antisocial behavior that can be attributed to the cameras. Regarding the stadiums he finds that “games in stadiums with surveillance cameras had approximately 65 percent less unruly behavior inside the stadiums relative to before the installation” (Priks, 2014: 1162). When looking at the Stockholm subway the results are similarly positive: the crime in the city center stations decreased by 25 percent after the installation of cameras (Priks, 2015). The effects in these results are surprisingly strong compared to the rather low to medium effects in research from the UK or US. This poses the question whether cameras are simply more effective in a Swedish setting or whether there are other effects that influence the results.

Just as for street lighting, the effect of surveillance cameras is mainly based on the situational approach. Camera surveillance can act deterrent when the possible offender weighs the increased risk against the expected rewards and thus rationally decides not to commit a crime. In the triangular of routine activity theory, the camera (just as police foot patrols) takes the place of the capable guardian and thus prevents crime. Welsh and Farrington (2004) compared the effects of CCTV and improved street lighting on crime in public spaces with the main result being that “both interventions were equally effective in reducing (total) crime” (Welsh and Farrington, 2004: 508). Since both surveillance cameras and street lighting follow similar mechanisms in reducing crime they argue for a combination of both forms of surveillance in order to maximize their deterrent effects. However, the authors were only able to test this hypothesis in car parks, where the installation of both cameras and lighting had a near significant effect on reducing car crimes.

When looking at different types of crime the evidence suggests that both cameras and improved street lighting are more effective when it comes to property crimes (burglary, car crimes) than violent crimes (assault, robbery) (Welsh and Farrington, 2004). Gill and Spriggs further state that “[i]mpulsive crimes (e.g. alcohol-related crimes) were less likely to be reduced than premeditated crime (e.g. theft of motor vehicles)” (Gill and Spriggs, 2005: vii). Although no clear explanation for this fact was given, it corresponds with the theoretical implications of rational choice in the situational approach mentioned earlier. It is
the planned offences that are reduced since the offender has the possibility to weigh costs and benefits and might decide not to commit the crime where CCTV is present. Alcohol-induced offenders on the contrary are not expected to make rational decisions but to act impulsive and therefore are not affected by the cameras. This finding is also supported by King et al. (2008) and Priks (2015), who point out that the deterrent effect of cameras was mainly limited to planned crimes such as pick pocketing and robbery. Violent, drug related crimes or vandalism were not affected by the implementation of surveillance cameras. It appears reasonable that impulsive violent, alcohol- or drug-induced incidents are not prevented by cameras, but the fact that drug handling crimes are not affected raises questions. Narcotic offences could indeed be categorized as planned crime and is therefore expected to be affected in some way by the camera surveillance. Yet, since little research exists on the influence of cameras on drug related crimes in general, this study aims to explore the association in more detail.

Several researchers have argued that cameras are especially effective in ‘closed’ areas that are easy to monitor. Studies show that car parks, subways and stadiums are areas “where many individuals are concentrated in one area and the cameras can be assumed to operate well” (Priks, 2014: 1176). On the contrary, cameras have been shown to be less powerful in open areas and parks since it is cost intensive to fully cover those areas (Priks, 2014). It further appears that the manner of how surveillance cameras are implemented and monitored has a crucial influence on their impact. In order to be successful, the installation of CCTV needs to be based on a strategy with clear objectives that includes local crime problems, community input and possible other measures that may have been implemented before (Gill and Spriggs, 2005). La Vigne et al. (2011) find that cameras that are actively monitored by an operator have a greater impact on crime than passive ones that merely record. Live monitoring allows for prevention and real-time interventions and the footage is helpful in later investigations since an active operator can zoom in on an incident, thus providing more detailed evidence. Piza et al. (2014) summarize findings from previous research that indicate a generally low rate of active monitoring despite the operators’ stress of its importance. Swedish research (Priks, 2014, 2015) correspondingly shows a positive, preventative effect on criminal behavior by cameras that are actively monitored by Swedish National Police Force officers at all times.

The findings on displacement of crime by surveillance cameras are mixed. A majority of studies report no to little evidence for displacement, diffusion or both (Welsh and Farrington, 2004). Priks (2014) finds no signs of displacement of unruly behavior to outside of the stadiums in Sweden but reports an increase in pickpocketing crimes outside Stockholm’s subway stations with camera surveillance (Priks, 2015). Although the overall number of cases was low, this indicates some displacement from inside the stations in the city to the surrounding area.

Regarding the public attitudes towards surveillance cameras it is interesting that most respondents in Gill and Spriggs’ (2005) report were indeed aware of the cameras being present, but it was also those that were aware that were more afraid of becoming victimized. The authors summarize that “[k]nowing that cameras were installed in an area did not necessarily lead to a reinforced feeling of security among respondents” (Gill and Spriggs, 2005: viii). In general, the feeling of safety increased however after the installation of CCTV according to them. This is also
supported by other studies that indicate that even if the cameras do not have an effect on crime, they still increase the peoples’ perception of safety (La Vigne et al., 2011; Priks, 2015). Gill and Spriggs (2005) report that the cameras did neither encourage respondents to visit places they would not have visited before, nor did they discourage people from visiting places. The general acceptance of the cameras was high but nevertheless declined after the installation, as did the percentage of respondents that believed that crime had gotten lower due to the surveillance cameras. Welsh and Farrington (2004) have supposed earlier that cameras “can act as a catalyst to stimulate crime reduction through a change in perceptions, attitudes, and behavior of residents and potential offenders” (Welsh and Farrington, 2004: 501).

Limitations of CCTV. Next to the advantages that public surveillance certainly provides, it naturally does not come without limitations. Several problems have been identified regarding the use of surveillance cameras that include technological and societal issues. A common critique is that the cameras have poor visibility at night or in bad weather and low resolution quality, resulting in unfeasible video footage (King et al., 2008; La Vigne et al., 2011). This may be less of a problem in the future since many modern cameras are equipped with infrared and night vision technologies (Welsh and Farrington, 2004: 501), but it is certainly a matter of time and budget whether all camera systems are endowed with the newest technology. The camera in focus in this study, however, is up-to-date and equipped with new technology allowing for clear video recordings.

Ratcliffe (2006) brings up the argument that the installation of cameras might actually increase the people’s fear of crime since it suggests that there is a crime problem in the area. It has, however, been shown that people tend not to avoid places where cameras were installed (Gill and Spriggs, 2005: ix), suggesting that the argument is implausible. Yet, the fact that people are not discouraged to visit places with cameras does not tell us anything about their attitude. Informal social control can only be effective when locals de facto act preventative. If they continue using a public space but are discouraged from intervening in antisocial or criminal behavior the mechanism fails. The guardians that routine activity relies on are not capable of preventing crime in that case, may it be out of fear of becoming involved or plain disinterest. King et al. (2008) further observe that surveillance cameras can deter witnesses from cooperating with the police as they assume the incident is recorded and no further evidence necessary.

Additionally, voices are raised against the “surveillance monster” (Stanley and Steinhardt, 2003: 4). The idea of constantly being under observation and every action being watched is perceived as an intrusion of privacy (Priks, 2014). La Vigne et al. report that “[c]ritics of public surveillance systems are typically most concerned by the potential threat to civil liberties that the technology presents” (La Vigne et al., 2011: 19). Many see their privacy impaired even though modern systems employ physical and “digital masking” ((King et al., 2008: 16), meaning the automatic recognition of objects and rendering them unrecognizable, in order to block the recording of private properties.
RESEARCH SETTING

The following section integrates knowledge gained from previous research into the context of this research project. Background information about the area in focus are provided and accompanied by a description of the specific police interventions at the roundabout that are to be evaluated.

The area: Möllevången

The roundabout in focus in this work is located in the heart of Möllevången, a district in Malmö’s southern inner city. The area, also called ‘Möllan’, is characterized by its multicultural and ethnically diverse residents, restaurants and shops as well as multiple bars and clubs. Next to residential buildings the quarter’s two main sites are Möllevångstorget, a large square accommodating a daily food market and several bars, and Folkets Park, a leisure area for both children and adults. Originally a working-class neighborhood, the district has been growing in the past and today inhabits over 11,000 people (Malmö stad, 2015), whereof more than half have a post-secondary education (54%; (Malmö stad, 2015). According to Malmö stad’s (2015) statistics, about 14% of those aged 20 or older have at least one child under 18 living with them. The unemployment rate was 4.8% in 2014 compared to an overall unemployment rate of 3.6% in Malmö. The fact that cannabis and other drugs have been sold openly at the roundabout for quite some time caused its nickname ‘Knarkrondellen’.

Why the roundabout? In 2016, Fredrik Meyer from Lunds University performed a study on why the traffic circle is an attractive place for drug transactions with a focus on its spatial structure. By conducting interviews with experts from the police, real estate management and landscape architects he examined the geographical and social organization of the area and connected it to criminological theories such as broken windows and routine activity theory. It is argued, that in order for a place to be attractive for drug transactions, it needs to be located close to well-known gathering places (such as shops or bars) but away from the main routes of the people. This way the risk of being discovered and apprehension is lower for both seller and buyer (Meyer, 2016). Since the roundabout is placed close to several big streets, bus stops and meeting places it is easily accessible and especially since the media extensively reported about the problem it is well-known by the people that drugs are available there (Meyer, 2016). Meyer states that the balance between the geographical location and possible distractions are ideal at the roundabout (2016: 28).

Interestingly, it seems that informal social control, which is expected to reduce crime, does not have an effect at the traffic circle. According to Meyer’s (2016) informants the sellers are ignoring the high number of people passing by (that could act as informal social network) and they continue providing drugs as there seem to be no consequences for them. Although a low police visibility was criticized by the informants, Meyer (2016) points out that it is not only the police but other individuals using the public space that are responsible to build a social control network that can act as capable guardian. It is, however, assumed that the fear of passersby to testify has increased and as they are not directly affected by the drug transaction they choose to still use the streets and public space but to look away instead of intervene (Meyer, 2016). Additionally, no support for the broken windows theory was found in the study since the number of graffiti and...
physical disorder – despite the effort of the responsible to remove them – remained high but this did not seem to have any lowering impact on the number of people using the streets and area as the theory suggests (Meyer, 2016). What is left unanswered by Meyer is the question whether this disorder might nevertheless have influenced the peoples’ willingness to intervene and therefore exerts an indirect lowering effect on the informal social control.

The combination of being located in an area that attracts many potential customers but also allows for an undisturbed transaction, and a weak informal social network where passersby look away is assumed to be the reason for the roundabout to be an attractive drug selling location (Meyer, 2016).

**Police interventions**

The police efforts undertaken at the roundabout are not only in accordance with one policing strategy but rather represent a combination of the policing strategies described before. Firstly, the measures are directed specifically at a crime hot spot and the additional allocation of human and technical resources to a small area clearly defines the interventions as place-based. Secondly, elements of broken windows policing can be recognized. The Police Department Malmö carried out a so-called ‘trygghetsvandring’ in 2016, which translates to ‘safety walk’. The goal with these walks through the neighborhood of Möllevången was to identify places that are unsafe and need to be taken care of, objects that need to be fixed such as broken street lighting, and the occurrence of littering that needs to be removed. The intention to maintain the physical order in the area is also mirrored in the housing management’s and City of Malmö’s effort to remove illegal graffiti and litter on a regular basis. Lastly, the community aspect is reflected in the police’s attempt to include the residents, housing management and shop owners in the area in a dialogue with the citizens (‘medborgardialog’) through surveys and meetings. The promises to the citizens (‘medborgarlöfte’) that the police made in fall 2016 are based on this dialogue and the safety walks. In cooperation with the City of Malmö they pledged to implement measures to increase traffic safety in the area, to employ social workers who work with the youth and especially to take action against the open drug trafficking by showing greater presence in the area (Police Department Malmö, 2016). Both the dialogue with the people as well as the safety walks are intended to be repeated and continued. In fall 2016 a range of actions were put in place, mainly in order to prevent the sale and purchase of narcotics. First, police foot patrols were reinforced by 22 additional uniformed officers from the 17th of November 2016 on. The installation of stronger street lights was then carried out on the 28th of November 2016 and lastly a surveillance camera was installed on the 16th of December 2016 (see pictures in appendix I). One of the main goals next to a general prevention of drug trafficking in the area was to detain the dealers from operating right in front of the door of a preschool located at the roundabout where the children could see them.

The surveillance camera located at the roundabout at Folkets Park was implemented following the dialogue between the police and the residents during which the desire for a camera was expressed by the residents. It has been installed and is monitored by the Malmö Police Department and the video surveillance is clearly indicated through signs, as required by Swedish law. The video camera is a semi-covert dome camera that is attached to a street lamp pole. The lamp is located exactly in the middle of the roundabout and the viewshed of the camera therefore covers the entire square including parts of the adjacent streets and
buildings. Due to the opaque housing and the dome form the line-of-site of the camera is not visible. It has been proposed in the literature that those models whose line-of-sight is not easily determined have a greater deterrent effect than traditional overt cameras with an obvious view line by producing “a sense of omnipresent monitoring of the viewshed at all times” (Caplan et al., 2011: 261). Despite the technical capability to do so, the video footage is, however, not actively monitored at all times

**MATERIALS AND METHODS**

This project conducts an evaluation of the efforts made by the police to reduce crime at the roundabout at Folkets Park in Malmö. It is realized in collaboration with the Police Department Malmö and the information on the intervention measures as well as the data were provided by the police officer (‘kommunpolis’) in charge for the inner-city area, where the roundabout is located. To get a picture as clear as possible, the above review of previous literature is used as knowledge base and combined with data from the police and additional interviews and observations. Crime rates from the police register before and after the implementation of improved street lighting, police patrols and a surveillance camera at the roundabout are compared. Surveys conducted by the police in 2016 and 2017 with residents regarding their feeling of safety and perception of problems in the area are analyzed. Additional interviews with residents and on-site observations complement the analysis. This triangular method with a combination of literature, quantitative data and qualitative interviews and observations allows for a broad understanding of the situation and changes due to the interventions.

The time period examined in this paper begins at the 17th of November 2016 (the date when enhanced police patrols were implemented as first measure) and, due to the given time frame of the degree project, lasts until the 29th of March 2017. This results in a period of 19 weeks. As comparison, the same time frame in the previous year is used. This way the problem of bias through seasonal variation is avoided, since crime rates at the roundabout are higher during the summer time. As target area, the roundabout and the adjacent streets (Norra Parkgatan, Södra Parkgatan and Kristianstadsstgatan) are used. As control area, the surrounding area of Möllevången is used. No buffer or displacement area is defined for this study since the places that are most suitable as buffer zones and to where crime could be displaced are in the same streets adjacent to the roundabout, just further down the street and outside the field of view of the camera. As only the street names but no house numbers or more specific locations are accessible in the data for this study, it is not possible to differentiate between target and buffer area in the same streets. The surrounding streets in the same neighborhood are however operating as control area. That way it can be distinguished between effects originating from the police measures and more general changes in crime rates or types that might influence the results in both areas. Although another control area that is not in the direct vicinity of the target area and where a camera has been implemented for a longer time would have been wishful for this study, there is no such place that mirrors the combination of residential area, public space and nightlife in Malmö. Therefore the decision was made to compare the roundabout to the adjacent area with equal demographics.
Data
Four main data sources are used to examine the impact of police interventions: data from the police register, surveys conducted by the police, qualitative interviews with residents at the target area and observations of the roundabout.

Police register data
The police register data used for the quantitative analysis are provided by the Police Department Malmö. They consist of entries from the data management system RAR (Rationell Anmälningsrutin). RAR is a case management system registering filed police reports that is also the basis for the statistics on reported crimes (Brottsförebyggande rådet, 2015). The data are obtained for the following time periods:

Time period 1: 17/11/2015 – 29/03/2016
Time period 2: 17/11/2016 – 29/03/2017

The more than 2200 entries in RAR include over 170 different types of crime and antisocial behavior. To make the information more comprehensible and suitable for statistical analysis they are grouped into weeks (19 weeks per period, starting with the 17th of November each year) and categorized according to the type of crime. This results in 11 categories including theft, robbery, traffic offences, drug offences, crimes against the person (including harassment, assault and violence), fraud, vandalism, weapons, sexual assault, no crime and other (appendix II). For the analysis, the ‘fraud’ and ‘no crime’ categories were excluded as well as crimes that occurred inside buildings and are therefore not expected to be affected by the police measures. The data are analyzed with SPSS (IBM SPSS Statistics 22, IBM, New York, US). A t-test in both the target and the control area is conducted to describe changes in overall crime rates and specific crime types. Difference-in-difference tests are run to compare the target and the control area over time.

Police-induced and public reported crimes. This study distinguishes between police-induced and non-police-induced, or public reported, offences. Police-induced crimes are those that are typically detected through proactive police work, such as person and vehicle stops. Consequently, enhanced patrols will call forward a higher number of reports of these offences, which is also referred to as “reporting/recording bias”, meaning that “reported crime rates may increase with the size of the police force, even if the true victimization rate is falling” (Levitt, 1998: 62–63). Ariel et al. (2016) add that these proactively generated crime reports by the police are ”essentially outputs rather than treatment outcomes” (Ariel et al., 2016: 292). In this study, narcotics offences, weapon crimes and traffic offences are considered police-induced. The increase in police activity and visibility in the target area is, on the other hand, expected to have a deterrent effect on non-police-induced crimes and to lead to a decrease in those (namely crimes against the person, theft, robbery, vandalism, sexual assault and others). These types of offences are typically reported by the public, more specifically victims or witnesses.

Based on these considerations three hypotheses regarding the development of crime rates at the roundabout are proposed: it is expected that after the implementation of police interventions (H1) total crime rates are subject to minor change, (H2) police-induced offences increase and (H3) public reported offences decrease.
**Police survey**

The Police Malmö conducted two surveys (one before and one after the implementation of the intervention measures) regarding the citizens’ feeling of safety and perception of problems in the Möllevången area. Both times the interviews were carried out in Norra Parkgatan at the entrance to Folkets Park by police officers and volunteers recruited by the police and in Swedish language.

The initial survey was carried out on Tuesday 17th of May 2016 and was answered by 135 respondents. The follow up was undertaken on Thursday 6th of April 2017 in the afternoon (129 respondents). The original questionnaire included six questions and asked amongst others whether the respondent experienced something in the area that makes him/her feel unsafe, what the biggest problems in the area were and what the respondent would want the police to focus their efforts on (see full questionnaire in appendix I). The follow-up questionnaire has in the course of this project been extended by three questions regarding the respondents’ awareness of the camera and their perception of the development of crime rates and the feeling of safety within the preceding year.

**Qualitative Interviews & Observation**

In addition to the police data, qualitative interviews and observations were conducted during the project. The observations are used to obtain a clearer picture of the situation at the roundabout, describe physical disorder and follow up on how the responsible (mainly housing management and the City of Malmö) react to acts of vandalism and illegal graffiti. The theoretical background herefore lies in the broken windows theory that suggests that physical disorder can lead to more serious crime. The information gained from the observations complement the analysis of the police data. Observations were carried out once a week on six occasions, repeatedly on a Wednesday morning at 9:30 a.m. by walking around the roundabout and the adjacent buildings. Observances such as new illegal graffiti, vandalism on houses or the color street light installations in the roundabout as well as the amount of litter on the ground were documented (appendix IV). Additionally, a general statement over the physical disposition of the roundabout area was noted each week.

The qualitative interviews were conducted in order to gain more information on the development of criminality in the target area from the perspective of the residents living in the area. This additional knowledge was used to interpret the results of the statistical analysis. Four semi-structured interviews were conducted whereof three were with individuals living in a building located directly at the roundabout and one was with a former head of the preschool located right at the traffic circle. The head of the preschool was in her position until January 2017 (when she changed to a different position) and could therefore provide valuable information on the situation both before and after the implementation of the intervention measures. As the researcher lives in a building adjacent to the roundabout herself, access to the buildings and the recruitment of interviewees did not constitute an obstacle. A possible bias of the interviewer due to living in the area herself was reduced to a minimum by using semi-structured interview questions that gave the interviewees the opportunity to express their own opinions and left room for new aspects to be brought up by them. Information letters explaining the aim of the study and the procedure were handed out to the participants beforehand so that they had the opportunity to consider the
information and address emerging questions. The interviews were conducted in the interviewees’ apartments (residents) and in an office (pre-school responsible). All interviews were recorded and written notes were used to summarize the given information. The findings presented in the results and discussion sections are drawn from these notes, while only the direct quotes were transcribed. Just as the observations, the interviews are used to complement the statistical analysis and bring forward information that cannot be read from the police register data.

**Ethics**

Ethical approval has been obtained from the Ethics Council of the Faculty of Health and Society at Malmö Högskola on the 20.02.2017 (HS2017 lôp nr 24).

All participants in the interviews have received information on the aim and scope of the interview beforehand and were given time to consider all information. Written informed consent was obtained from all respondents and it was made clear that the participants could pause, stop or re-schedule the interview at any time. No risks or complications due to the interview questions were anticipated since the interviews did not contain questions regarding ethnic origin, political, religious or sexual orientation or health issues. They did further not entail personal data on offences that involve crime, judgments in criminal cases, coercive measures or administrative deprivation of liberty. Merely the question whether the respondent saw or experienced something in the neighborhood that made him/her feel unsafe was beforehand regarded as somewhat critical since it had the potential to raise memories of a possible negative experience and therefore to affect the respondent. This questions has, however, regularly been used in research such as the annual Nationella Trygghetsundersökning in Sweden. The Ethics Council did not object to the use of the question in the interviews (appendix XIII).

**Limitations**

The RAR dataset repeatedly lists two or three entries with the same time and place stamp regarding narcotic offences, such as “drug possession” as well as “drug use” or “drug transaction”. It cannot be read from the dataset whether these entries refer to one individual for several offences or to multiple people, such as a group of friends, for one offence each. Therefore, they are included in the analysis as separate incidents. Although this might lead to an overestimation of narcotics offences compared to other types of crime, it does not affect the comparison between the time periods or between target and control area since the relative change stays the same.

As mentioned before, the imprecise demarcation of the target area is a limitation to this study. The fact that the available police register data are street dependent, meaning the entries on offences only include street names but no more specific information such as house numbers or intersections, makes it impossible to exactly account for offences at the roundabout. Instead, the results are based on streets that actually exceed the roundabout area, which is why no displacement area could be defined for this study. Realizing a more precise target area would have been possible given a larger time frame and extended technical resources. Future research should aim for a demarcation of the target area as concise as possible in order to be able to also test for displacement effects.
No scientific interviews with police officers were conducted in the course of this study. Interviews with police officers could provide better insight in their manner of policing, their expectations of the intervention measures and the collaboration with the community. Future research should aim to include these information in order to explore the rationale behind specific police interventions and integrate those with the expectations and wishes of the community. Further, police and community officers can provide additional information on the situation of criminal behavior in an area that cannot be read from a dataset.

Ideally, participants for a survey are chosen randomly, so that every individual has the same chance of getting chosen for an interview (Diekmann, 2016). Although the police surveys attempt to reach a diverse group of respondents, the sample cannot be labeled randomized. The timing of the survey on a weekday in the afternoon brings about a specific type of respondents that is at the roundabout during that time. It can, for instance, be assumed that most employees are still at work at that time which means they are underrepresented in this survey. On the contrary, groups of people that are free during the day, such as the elderly, might be overrepresented. Since especially the elderly usually experience a higher fear of crime (Ceccato and Bamzar, 2016) the results might be biased and the fear overestimated.

Next to the preventative effect surveillance cameras are assumed to have, they can also serve as evidence in criminal proceedings. This means that even if the cameras might not have a direct impact on the actual crime rates, they might still be beneficial as the footage can be used in court. This study, however, does not investigate the use of camera footage as evidence and is therefore not able to give any statement on the utility and indirect effects the camera at the roundabout might have apart from its direct preventative purpose.

Although cost-benefit analyses are an important tool to evaluate in how far measures are effective compared to the costs, it is not in the scope of this study to examine the costs of the police interventions. It would, however, be interesting for future prevention programs to investigate the costs of installing and maintaining a camera and implementing enhanced police resources in relation to the effect on crime rates in a Swedish context.

**RESULTS**

The results from this study show that the total number of crimes at the roundabout (as listed in RAR) decreased by about 9% from the study period 2015/16 to 2016/17 (see appendix V). Looking at specific types of crime, an increase can be observed for robbery and drug offences (Figure 2). An outstanding increase (600%) occurs regarding crimes violating the weapons act. In contrast, acts of theft, vandalism and crimes against the person decreased at the roundabout. In the control area, the overall number of crimes decreased by 6% from 2015/16 to 2016/17. While weapon crimes, robbery, and drug offences increased, a decline in vandalism and theft can be noted.
Paired t-tests\(^1\) were conducted for both areas separately to compare the crime rates between the time periods 2015/16 and 2016/17 (see appendix VI). In the target area, a significant difference in the mean number of criminal acts can be found for violations of the weapons act \((t=-2.364; \ p=.030)\). At the control area, a significant change can be noted for theft \((t=3.462, \ p=.003)\), vandalism \((t=2.295, \ p=.034)\) and weapon crimes \((t=-2.577, \ p=.019)\).

Drug offences have increased in both areas, although the growth is considerably larger in the control area \((30.5\%)\) than at the roundabout \((18.4\%)\). Figure 3 shows the development of narcotic crimes at the roundabout compared to the control area in the time period 2016/17. The vertical line in week 1 marks the beginning of the increased police patrols, during week 2 the street lights were installed and in week 5 the surveillance camera was placed at the roundabout. The data show an increase in the amount of drug crimes at the roundabout after the enhanced police patrols started. The numbers start decreasing after the installation of the street lights and experience another drop after the camera was implemented. In week 7 the rate even drops to zero. It can be observed that drug crimes in the control area decline after enhanced police patrols were implemented, strongly increase after the installation of improved street lighting and then follow a similar decrease to the one that can be seen at the control area. After week 7 narcotic offences are slowly increasing again in both areas with another drop towards the end of the time period.

![Figure 2. Change in crime rates for different types of crime from time period 2015/16 to 2016/17 in % (without weapon crimes and sexual assault).](image)

In week 11 a strong increase in drug offences can be observed in the control area. Since the data for narcotic crimes in that week contain several entries with the same time and place stamp, it is either possible that one individual is listed e.g. for

\(^{1}\) Paired t-tests were conducted since the ‘experimental group’, the roundabout, stayed the same for both measurements (Field 2013). However, independent t-tests were conducted as a robustness test but no differences in the significance levels were found.
drug use, possession and transfer or that a group of individuals was registered for these different offences. As described in the limitations section before, the cases are considered as separate incidents due to the uncertainty of their context.

In 2015/16, most police-induced offences were reported on Saturdays (29%) and Sundays (19%) (appendix VII). The following year, crime rates decreased to 10% on Sundays and 19% on Saturdays, but at the same time increased to 24% on Fridays, which is about twice as much than in 2015/16. Regarding the time of the day (Figure 4), the data have been grouped in three-hour-intervals to get an overview of the daytime that most offences occur in. For both years, the interval with the most reported incidents at the roundabout is from 21:00 to 24:00 p.m.
The percentage of crimes in that time period increased in 2016/17 compared to the year before, just as in the time period from 15:00 to 18:00 p.m. However, during the time interval from 18:00 to 21:00 p.m. a decrease from 29% to 11.5% in reported incidents can be observed.

**Difference-in-difference.** A difference-in-differences (DiD) estimator was calculated to estimate the effect of the police interventions. The DiD estimator is comparing the differences in the mean crime rates between the target and the control area before and after the implementation of police interventions (2015/16 vs. 2016/17) (Gertler et al., 2011). Although the difference in means can simply be calculated by hand, running it in a regression allows obtaining standard errors and the significance level of the effect. Therefore, three dummy variables have been created: $\gamma_a$ as dummy for the area (1=roundabout, 0=control area), $\lambda_t$ as dummy for the year (1=2016/17, 0=2015/16) and $T_{at}= \gamma_a \cdot \lambda_t$ as dummy for the product of $\gamma_a$ and $\lambda_t$ (1=if $\gamma_a=1$ and $\lambda_t=1$, 0=all other cases). To obtain the DiD estimator, a regression with the form

$$y_{at} = \beta_1(area) + \beta_2(year) + \beta_3(area \cdot year) + \epsilon$$
$$y_{at} = \beta_1 \gamma + \beta_2 \lambda + \beta_3 T_{at} + \epsilon$$

was run (Field, 2013; Columbia University, 2013). Thereby, $y_{at}$ is the outcome variable ‘crime rates’ and $\epsilon$ the error term (Field, 2013). The regression coefficient $\beta_1$ stands for the mean difference in crime rates between the target and the control area before the implementation of interventions (difference between the two groups pre-intervention). The coefficient of the time variable, $\beta_2$, is defined as mean difference between crime rates in the control area before and after the implementation of interventions (time trend in the control group). $\beta_3$ is the difference-in-differences estimator we are interested in that reports the difference in changes over time (Columbia University, 2013). The resulting relative DiD value of -0.03 (Table 1) states that the mean change in crime rates from pre- to post-interventions was 3% smaller at the target area than in the control area. This DiD estimator depicts a negligible difference in mean crime rates that does not reach a significance level ($p=.547$).

**Table 1:** Mean and relative differences in means of total no. of crimes and difference-in-differences estimator $\beta_3$.

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control area</strong></td>
<td>M= 42.95 (1)</td>
<td>M= 40.42 (0.94)</td>
<td>-2.53 ($\beta_2$) (-0.06)</td>
</tr>
<tr>
<td><strong>Target area</strong></td>
<td>M= 7.84 (1)</td>
<td>M= 7.16 (0.91)</td>
<td>-0.68 (-0.09)</td>
</tr>
<tr>
<td><strong>Difference</strong></td>
<td>-23.11 ($\beta_1$) (0)</td>
<td>-33.26 (-0.03)</td>
<td>1.85 ($\beta_3$) (-0.03)</td>
</tr>
</tbody>
</table>
When conducting the same regression for drug crimes (appendix VIII), the difference in the change of means from pre- to post-implementation is slightly smaller at the roundabout ($\beta_3=-0.11$, $p=.482$), indicating a larger increase in narcotic offences in the rest of Möllevången compared to the roundabout.

In a next step, the difference-in-differences analysis was conducted separately for police-induced and public reported (non-police-induced) crimes. For the crimes that mainly appear in the data because the police proactively generated them, the overall number of crimes increased in both areas (see appendix IX). The change in mean crime rates at the target area was almost equal to the one in the control area ($\beta_3=-0.04$, $p=.229$) when comparing the two time periods. Regarding those crimes, that are usually reported by the public and not detected by the police on-site, the mean number of incidents declined by 17% in the control area and 25% at the roundabout (see appendix X). This results in a minor difference ($\beta_2=-0.08$, $p=.097$) in the change of means that does not reach but is close to a significance level of 5%.

In summary, it can be observed that the relative difference in the change of mean crime rates has a negative value ($\beta_3$) for both total crimes as well as police-induced and public reported crimes. This shows that the relative change in means over time is larger at the target area than in the control area for total and public reported crimes, where crime rates decreased. For police-reported offences, which increased over time, this means that the relative mean change was larger in the control area. The relative differences are, however, very small, suggesting that crime rates overall changed to about the same extent in the target and the control area. Moreover, none of the differences in mean changes of crime rates reached a significant level.

**Police surveys.** The two surveys conducted by the police show no large differences with regards to the problems identified by the citizens and their expectations of the police work. While the first survey in May 2016 was answered by only 39% men, in 2017 the number increased to 53%. The biggest group (38%) of respondents in 2017 was 36-50 years old, about a third was 20-35 and 23% were over 50 years old (the age was not recorded in 2016). Among the statements on what is the best about living in the area around the roundabout, the proximity to shops and park areas were the most frequently named. Three main changes can be observed: in 2017, 72% named the proximity to shops compared to 63% in 2016 and 21% named affordable housing (34%). Notably, the respondents mentioning ‘a safe residential area’ as an asset rose from 17% in the first year to 22% in the follow-up. The percentage of individuals who had seen or experienced something that made them feel unsafe stayed the same at 76% in both surveys, with the main reason for this insecurity, drug trafficking, being stable at 79%. In contrast, the number of respondents that named concern about their car, motorbike or bike as reason for insecurity declined from 35% to 21%. When asked about the problems in the area, drug dealing is the most frequently mentioned problem, followed by cars driving too fast and littering (Figure 5). All three perceived problems slightly decreased from 2016 to 2017. An unchanging high percentage of respondents wish for the police to concentrate their efforts on narcotic crimes (about 70%) as well as to increase their visibility in the area (see appendix XI). A larger number of people would like the police to concentrate on youth crime. Regarding the police’s and City of Malmö’s combined effort, those answering the surveys prioritized an increased police presence and meeting places for the youth
amongst the suggested measures (appendix XII). However, the wish for more police in the area decreased slightly after the implementation of interventions. The request for speed bumps significantly declined even more since speed bumps had been installed in the area in the meantime ($\chi^2 = 3.850, p = .0497$). Interestingly, camera surveillance was named more often as a desired police measure by the respondents in 2017, after the implementation of a camera in fall 2016. Except for the decrease in the demand for speed bumps, none of the changes were statistically significant.

<table>
<thead>
<tr>
<th>Problem</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Littering</td>
<td>50.4</td>
<td>43.0</td>
</tr>
<tr>
<td>Vandalism</td>
<td>34.6</td>
<td>28.1</td>
</tr>
<tr>
<td>Drug dealing</td>
<td>75.9</td>
<td>73.4</td>
</tr>
<tr>
<td>Residents being assaulted</td>
<td>6.8</td>
<td>8.6</td>
</tr>
<tr>
<td>Joyriding with a car/moped</td>
<td>27.8</td>
<td>32.8</td>
</tr>
<tr>
<td>Cars driving too fast</td>
<td>54.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Disturbing youth</td>
<td>26.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Other</td>
<td>3.8</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Figure 5. Answers from the police survey in %.

In the follow-up survey in 2017 the respondents were additionally asked whether they were aware of the camera that was installed. 59% reported that they knew about the surveillance camera, while 41% answered ‘no’. Of those that were aware of the camera, 83% also reported that they had seen or experienced something that made them feel unsafe. In contrast, only 68% of those that did not know about the camera mentioned something similar. On the other hand, the respondents with knowledge of the surveillance mentioned ‘a safe residential area’ in 17% of the cases, whereas 22% of those not being aware named this as the best thing about the area.

When asked whether they perceived a change in their feeling of safety in the area during the previous year, 44% of the respondents reported that there was no change while 28% stated that they felt safer now. However, at the same time a third of the interviewed describe they perceived an increase in criminal activity during the previous year (compared to 32% that perceived no change).
Qualitative interviews and observations. Four interviews have been conducted that lasted between 17 and 42 minutes. Informant 1 (20170417a), 2 (20170417b) and 3 (20170419) are residents living in a building adjacent to the roundabout and Informant 4 (20170418) is the former head of the preschool. All interviews were conducted face-to-face. A recurring statement in the interviews with the residents is that none of them is feeling unsafe or threatened because of the drug dealers’ presence. Informant 2 and 3 report that they do not take detours to avoid the dealers and Informant 2 states that he rather feels unsafe because of the drunken people that are in the area especially on weekend evenings due to the many bars in the area. All four informants describe that the open drug trading has moved away from the roundabout since the camera appeared. However, Informant 1, 3 and 4 clearly state that the drug sales merely moved a few hundred meters up Norra Parkgatan and continues there. Although this means that the narcotic crimes are not prevented but displaced, both Informant 2 and 4 state that this is a good improvement since “it is much calmer now, the drug trade is not as visible anymore as it was before. Neither do I see the dealers in the same way” (Informant 4, 20170418). Informant 2 adds that “of course it is nice, nice not having to see it [the drug trafficking]” (Informant 2, 20170417b). Only Informant 4 had heard of the police’s ‘medborgarlöfte’ before, the residents were not aware of it up to the interviews. The respondents are discordant when it comes to the reason for the changes. While Informant 1 does not assume that police patrols have an influence and Informant 3 ascribes the effect to the weather, the lights and the camera, Informant 4 believes that the police patrols have had an impact on the drug market as much as the camera.

The observations of the physical disorder at the roundabout show that graffiti and litter are regularly removed in order to keep the area clean. It was noticed that some houses are more taken care of than others, meaning that some graffiti stay longer on house walls and entrance doors whereas others are cleaned immediately. This difference is likely dependent on the housing management. In general, all graffiti on the color light installation in the roundabout were cleaned regularly and litter such as plastic bags and paper removed. However, the fight against physical disorder and vandalism of the house walls and color lights appears to be an ongoing struggle since new illegal graffiti occurs almost immediately after the old one was removed.

DISCUSSION

The findings of this study are to some extend in line with previous research regarding the mixed results and rather minor effect of the intervention measures.

It is not surprising that narcotic crimes increased at the target area after the onset of enhanced police patrols, regarding the fact that a higher amount of controls is expected to result in a higher number of detected and reported crimes (Levitt, 1998). The following decrease after the light installation is presumably a combination of the higher visibility and a first deterrent effect of the still ongoing high number of controls. The drop to zero narcotics offences in week 7 supports this effect, indicating that the dealers were at least for a short while driven away from the roundabout and the immediate surroundings. The fact that drug offences
increased to a larger extent in the control area could be interpreted as an indicator for displacement, however, the parallel decline of narcotic crimes in the control area and the roundabout over time rather indicates an effect of diffusion of benefits than of displacement.

Hypothesis 1, which assumed that only minor changes in the total number of crimes would be found, is supported by the findings. The mean change in crime from 2015/16 to 2016/17 depicts a rather small, non-significant decrease at the roundabout. However, since the interventions were mainly directed at narcotic offences, the overall number of crimes might not be that indicative in determining the impact of the police measures.

Indeed, Hypothesis 2, which suggested that police-induced crimes would increase after the implementation of interventions, is supported by the findings. Again, this effect is likely related to the fact that a higher police presence leads to a higher number of detected crimes. As the roundabout is a small-scale area, it is supposed that the police did not solely patrol the roundabout but also spread over the rest of Möllevången. This could explain the simultaneous increase in the control area. Nevertheless, in order to see whether the interventions have the desired crime-decreasing effect in the long run, the police efforts need to be evaluated on a regular basis over a longer period of time.

Further, Hypothesis 3, which expected a decline in public reported crimes in the target area, is also backed by the data. The average number of non-police-induced offences at the roundabout decreased by 25%. The parallel decrease in the control area suggests that the police interventions additionally had a significant positive effect in the form of diffusion of benefits to the control area. It is also possible that the decrease was larger at the roundabout than in the control area because of the street lights and the camera. While police patrols and their deterrent effect likely spread over the whole of Möllevången, the lights and the camera can only directly have affected the roundabout.

The analysis of the amount of crimes committed per weekday and time of the day identifies some considerable changes. First of all, while the day with the highest crime rates used to be Saturday in 2015/16, it is Friday in 2016/17. A possible explanation for this could be that the police put more focus on Saturdays and thereby deterred offenders. The results suggest that the offences have been displaced to Friday and Wednesday, where the rates increased considerably. It can, however, not be ruled out that another, unknown factor caused this shift. Regarding the time of the day, the level of reported incidents decreased in the time periods from 18:00 to 21:00 p.m. and 00:00 to 03:00 a.m. which used to be among the time spans with the highest crime levels. The strong decrease from 18:00 to 21:00 p.m. potentially is a consequence of the improved street lighting, since it is already dark at that time during the winter months and the stronger lights at the roundabout might deter offenders due to the higher risk of apprehension. Although the same outcome cannot be found for the time period from 21:00 p.m. to midnight, it is possible that the effect only occurred in the earlier time span because there are in general still more individuals on the street, for example on their way home from work or to after-work activities. This would suggest that the crime-preventing effect of informal social control comes into force in addition to the situational deterrence. As for the weekdays, other circumstances might, however, have had an influence on this development.
Several other factors need to be kept in mind when interpreting the effect of the police interventions. First of all, the relatively low statistical power of the sample (with 0-7 drug crimes at the roundabout and 0-14 incidents at the control area; see Figure 3) should be taken into consideration. Secondly, it has been argued in previous research that cameras in a closed, easy to monitor area are more effective (Priks, 2014). Although this study is not able to distinguish between the single effects of the police patrols, the street lighting and the surveillance camera, it could be reasoned that the implementation of the camera at the roundabout, a very open space, does not contribute meaningfully to the overall effect. Additionally, no information is available on the frequency and length of the police foot patrols as well as their manner. When interpreting the results it certainly would be interesting to know whether police officers simply stopped and searched more people or whether they also talked to the citizens, trying to build a relationship with the community. Since previous research suggests that fewer but longer visits to a hot spot are more effective in reducing crime, a closer look at the amount and duration of foot patrols at the roundabout could bring about more insights on their specific impact on crime. Furthermore, the follow-up period might arguably be too short. In order to see the long-term effects of the measures further research is desirable. This would allow for an analysis of the rate of narcotic crimes and other offences in the long-run, beyond the initial increasing effect of the police interventions in the first weeks.

The findings from the police data analysis do not provide explicit evidence for a displacement of drug offences. With the exception of an increase of narcotic crimes in week 3 and 11, the development of crime rates in the control area follows a similar pattern than the one at the target area. The increase in week 3 is likely an effect of the increased police patrols, not only in the target area but also in the rest of Möllevången. The difference-in-differences analysis found a minor but non-significant divergence in the mean change of drug offences. It shows that the open sale and purchase of narcotics has seen a stronger increase in the control area than at the roundabout, suggesting a slight effect of displacement to the area around the roundabout. Interviews with the residents give anecdotal evidence that the drug trafficking has indeed moved away from the roundabout itself but established again in the same streets, just outside the viewshed of the camera. Although this development cannot be reflected in the police data due to the street names remaining the same, the respondents in the interviews state that the dealers are still present and merely moved “two streets away” and are now located in front of “another day care center [Familjens Hus]” (Informant 4, 20170418). This strongly argues for the deterrent effect of the camera, forcing the dealers to move in order not to be caught on video footage. It, however, challenges the impact of the increased police patrols, since the suspects do not seem to be impressed by their presence and continue their activities in the same area.

Overall, these findings propose that the desired decreasing or preventative effect on drug crimes has not been reached in the given time frame. Yet, those responsible at the police are well aware that the camera is not the silver bullet in fighting crime. It is, however, a starting point since it at least yielded the effect that criminal activities moved away from the direct vicinity of the preschool.
**The police survey.** When looking at the findings from the two police surveys concerning the feeling of safety of the citizens, no large differences between the two years can be found. The percentage of people that experienced something that made them feel unsafe did not change after the implementation of more police patrols, lighting and a camera. This perception is also reflected in the answers from the residents when they were asked whether they feel safer since the implementation of the camera. Informant 1 states: “I think I have never felt unsafe before. [...] For me it doesn’t really make a big difference” (20170417a). According to the police surveys 2017, narcotics remain the main cause for insecurity, although the police interventions seem to have a small effect on the citizens’ perception of the problems since the naming of drug trafficking, cars driving too fast and littering all decreased slightly. The decrease in cars driving too fast might be related to the speed bumps that were installed in several places in the area, which is also mirrored in the lower number of people wanting the police to put up speed bumps in 2017 compared to 2016. The barriers were positively received by the residents: “I like those [the speed bumps], more than the camera” (Informant 3, 20170419). The same effect can however not be observed when it comes to the surveillance camera: the fact that after the installation of the camera an even larger number of people would like the police to focus on camera surveillance is surprising. This could on the one hand be interpreted as the wish of the citizens to install even more cameras in the area. On the other hand, it might reflect the fact that a large part of the respondents was not even aware of the presence of the camera. This large amount of 41% is surprising in any case, since only people living in the area were interviewed, the camera got quite a lot of attention in the media when installed and additionally is clearly marked. The desire for more police presence decreased slightly from 2016 to 2017, most likely because the police was actually more present, but remains high with 63,3% and is still the main activity the respondents would like the police to focus on.

Strikingly, it seems as if those residents that were not aware of the camera experience less incidents in the area that make them feel unsafe and would rather label the area as ‘safe’ in comparison to those who knew about the camera’s presence. This finding goes along with Gill and Spriggs’ (2005) conclusion that the awareness of a camera does not necessarily lead to an increased feeling of safety. Although it cannot be distinguished in this study whether the effects were caused by the police patrols, the improved lighting or the camera, this finding still contradicts the findings by for example La Vigne et al. (2011) and Priks (2015), who argue that the cameras improve the feeling of safety amongst citizens. It rather supports Ratcliffe’s (2006) assumption that the knowledge of a camera increases the fear of crime. It does, however, not seem as if the respondents that feel unsafe avoid the streets and places around the roundabout since the surveys took place in the very same area. This is underpinned by the interviews that were conducted with the residents at the roundabout, in which the interviewees all agreed that even though they are aware of the problem they do not avoid the area. This could, however, also disclose an issue with collective efficacy, since even though the people don’t stay clear of the place they still refrain from intervening. Or as Informant 1 puts it: “They [the drug dealers] don’t want to be bothered by me and I don’t want to be bothered by them” (20170417a).
All in all, the police interventions don’t seem to have influenced the citizens’ perception of the problems, feeling of safety and wishes to a large extent. A possible explanation is that a change in perceptions and feelings needs more time than a few months. Additionally, the small effect might be due to the remaining high numbers of crime. Since police-induced crimes even increased after the implementation of intervention measures at the roundabout (or rather were detected more often) and the non-police-induced offences practically did not change, it appears quite logic that the perception of the citizens regarding crime rates and problems in the area has not changed much either. Yet, it is striking that the manifold presence of intervention measures, which were based on a dialogue with the citizens and their wishes, did not improve the feeling of safety meaningfully.

Despite the fact that a decrease in crime rates due to formal surveillance measures will only reflect in the data after a longer period of time, it is especially the natural surveillance aspects that need time and continuous work to take effect. Looking back at the mechanisms behind broken windows policing and measures like improved street lighting and surveillance cameras, we observe that they all to some extend rely on collective efficacy and informal social control. While the police and the city authorities can initiate the fight against criminality and implement formal forms of surveillance as a start, the community as a whole is needed in order for social control to emerge and have an impact on criminality. It appears as if the community at the roundabout is not yet involved and connected enough in order for it to provide a functioning social control. Informant 3 puts it in the nutshell when he says “I don’t really care that much, cause, like, it’s not my battle. [No, the dealers don’t bother you?] No. Not that much. In theory, yes, but, no” (20170419). Although this might not be representative for everyone living in the area, it reflects the tenor of the interviews with the residents quite good. Except for the former head of the preschool (Informant 4), the residents (Informant 1, 2 and 3) had never heard of the police’s ‘medborgarlöfte’ (“What are these promises?” Informant 2, 20170417b) or felt like they were involved in the development at the roundabout. Even Informant 4 reports that she had been skeptical regarding the benefit of the promises until she was involved in the area and the dialogue and “saw what benefit it has. Now I understand it in a completely different way” (20170418). These findings suggest that more information need to be provided to the citizens living in the area regarding the police’s work and the residents’ possibilities to be a part of it. Informant 1, 3 and 4 all stated that they would be interested in taking part in the dialogue with the police. Additionally, ideas need to be developed that support the establishment of community cohesion and actual neighborhood concern, which then can lead to informal social control and a decrease in crime. In line with that, Informant 1 suggests that “a focus group maybe, or like a discussion round or just a meeting could work. I think that would be nice. [...] Maybe that would be a good occasion, too, to like get to know who lives in your area, next to you” (20170417a).
CONCLUSION

In this study, the effects of three police intervention measures on crime and primarily drug offences at a roundabout in Malmö were evaluated. The results suggest that the combined impact of increased police foot patrols, improved street lighting and the installation of a surveillance camera has not reached the desired preventative effect on crime rates in the given follow-up period. While a temporary increase in narcotic and police-induced crimes in general can be ascribed to the enhanced proactive patrols, it is uncertain whether the interventions would bring about a stable decline in the long run. The occurrence of displacement of the open drug market to a few hundred meters further might be a small success from the viewpoint of the preschool and the residents at the roundabout, who don’t have to witness the open trade any longer. Yet, with regard to the general problem of open drug use, purchase and sale in the area, this is a drop in the ocean. Previous research and the findings from this study suggest that the police are on the right track with regards to their efforts to include the community and city authorities in their activities. However, far more work has to be put into the involvement of the citizens and the building of an actual community that experiences neighborhood concern. It appears that this is the most promising method to prevent criminal activity, although it for sure requires a larger amount of time and effort than for example a surveillance camera. The question is whether the police, but especially the citizens that live, work and spend time in the area are willing to invest this time and effort in order to build a safe and friendly environment to live in.

The findings from this study clearly ask for further research in the area. First of all, a follow-up study to evaluate the long-term effects of the police interventions is desirable. On that basis broader and more reliable conclusions and recommendations regarding the future police work can be made. This should also include interviews with police officers as well as an analysis of the frequency and length of police foot patrols at the roundabout. Since the control area in this study appears to rather be a displacement area and the border between target and control area is blurred due to technical limitations, prospective studies could benefit from a more concise geographical demarcation. Further, subsequent research should look deeper into the separate impacts of police patrols, street lighting and surveillance cameras. Although previous research indicated that a combination of intervention measures might be the most successful strategy in preventing crime, it seems reasonable to obtain an overview over how effective the individual measures are before integrating them.
REFERENCES


Lantmäteriet (2017) *Map over Möllevången and the roundabout*.


APPENDICES

APPENDIX I. Picture of the roundabout with the street lighting and surveillance camera in the middle. Detailed pictures of the street lighting and surveillance camera and the sign indicating the camera.

Ina Hennen, 14.05.2017

Ina Hennen, 01.06.2017

Ina Hennen, 15.03.2017
### APPENDIX II. Categorization of crimes obtained from RAR.

<table>
<thead>
<tr>
<th>Crime Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| Theft      | Attempted burglary of apartment  
Completed burglary in apartment  
Theft of fuel  
Theft of diesel  
Theft from bike  
Theft through break-in in cinema, theater, entertainment, public and local youth meeting point  
Theft through break-in in shop, department store, commercial showroom  
Theft through break-in in factory, warehouse, workshop (not garage)  
Theft through break-in in garage, gas station, car repair shop  
Theft through break-in in hotel, pension  
Theft through break-in in sports and swim facility  
Theft through break-in in café, patisserie, restaurant, food place  
Theft by break-in in the basement, attic  
Theft through break-in in kiosk, vending machines, display cabinets  
Theft through break-in in office  
Theft through break-in in school, library, teaching facility, preschool, leisure centre  
Theft through break-in on construction site, in shed (temporary barracks, wagon or the like)  
Theft of other commercial carriage (but not pickpocketing or professional goods transport)  
Theft of or from motor vehicles, trailers and caravans  
Theft without break-in, pickpocketing, theft from or of any object someone carries with him/her, not against disabled individual  
Theft without break-in, pickpocketing, theft from or of any object someone carries with him/her, against disabled individual  |
| Robbery    | Robbery against an individual (not disabled)  
18 years or older, with firearm, outdoors  
Robbery against an individual (not disabled)  
18 years or older, without firearm, outdoors  
Robbery against an individual (not disabled)  |
| Traffic offence | Traffic offence  
Safety belt offence  
Gross negligence in traffic  
Unlawful driving, aggravated unlawful driving  
Driving without a license  
Other traffic offence (only fine crime)  
Other traffic offence  
Other traffic offence against vehicles/traffic  |
| Drug offence | Narcotics law, use (only use)  
Narcotics law, possession (only possession)  
Narcotics law, transfer/dealing  |

Theft without break-in, from accommodation (apartment, villa), not against disabled individual  
Theft without break-in, from accommodation (apartment, villa), against disabled individual  
Theft without break-in, from basement, attic  
Theft without break-in, from office  
Theft without break-in, purse snatching, not against disabled individual  
Theft, other theft through break-in  
Theft, shoplifting of cultural goods, without break-in, from the church, museum, community center, art gallery, library and archives  
Theft, shoplifting without break-in, other theft or shoplifting without break-in  
Theft, shoplifting without break-in from shop, including connection to gas station, department store, commercial showroom  
Theft, shoplifting without break-in in cinema, theater, entertainment, public and local youth meeting point  
Theft, shoplifting without break-in, in sports and swimming facility  
Theft, shoplifting without break-in, in the café, patisserie, restaurant, food place  
Theft, shoplifting without break-in in medical and dental office, hospital  
Theft, shoplifting without break-in, school, library, teaching room, nursery, recreation centers  
Theft of non-motorized means of transportation, bicycle  
Theft of motor vehicle, other (including snowmobiles)  
Theft of motor vehicle, attempted car theft  
Theft of motor vehicle, completed Car theft  
Theft of motor vehicle, moped  
under 18 years, without firearm, outdoors  
robbery, with firearm, shop robbery  
robbery, without firearm, shop robbery  
robbery, without firearm, other robbery  
regulation, etc. where only a fine is part of the penal code  
Drunk driving under the influence of narcotics  
Drunk driving, aggravated drunk driving  
Hit and run  
Hit and run parking damage  
Reckless driving  |
<p>| Crime against the person | Harassment against girl under 18 harassment against a group Harassment against a woman 18 years or older Harassment against a man 18 years or older unlawful harassment against a group Unlawful threat to woman 18 years or older Unlawful threat to man 18 years or older harassment against group, not internet-related Unlawful threat to woman 18 years or older, not internet-related Unlawful threat to man 18 years or older, not internet-related Unlawful threat to boy under 18, not internet-related Aggravated assault outdoors, against woman 18 years or older, familiar with the victim Aggravated assault, outdoors, against man 18 years or older, familiar with the victim Aggravated assault, outdoors, against man 18 years or older, unfamiliar with the victim Aggravated assault outdoors, against woman 18 years or older, familiar with the victim Aggravated assault, outdoors, against man 18 years or older, unfamiliar with the victim Assault, outdoors against girl 7-14 years, familiar with victim Assault, outdoors against boy 15-17 years, familiar with victim Assault, outdoors against boy 15-17 years, unfamiliar with victim Assault, outdoors against woman 18 years or older, familiar with the victim Assault, outdoors against woman 18 years or older, unfamiliar with the victim Assault, outdoors against man 18 years or older, familiar with the victim Assault, outdoors against man 18 years or older, unfamiliar with the victim Violent/threat against officer Kidnapping, illegal restraint Violence against officer (unable to work for less than a day) Violent resistance Attempted murder or manslaughter with use of firearms against man Completed murder or manslaughter with the use of firearms against man |
| Vandalism | Vandalism, other damage (not graffiti) Vandalism, graffiti on public transport Vandalism against the state, municipal, county (not graffiti)Vandalism, property damage, graffiti Vandalism on motor vehicle |
| Weapons | The Law on Prohibition of knives and other dangerous objects/weapons law Weapons Act, other violation of weapons laws |
| No Crime | Fire without suspicion of crime No crime False alarm Lost goods (only lost property) Other death without suspicion of crime (not associated with traffic accident) Traffic accident without suspicion of crime Body injury or disease (associated with traffic accident) Misuse of alarm device |
| Other | Alcohol Act, illegal acquisition of alcoholic beverages, illegal beverage processing General Dangerous negligence, causing fires that are not recognized as arson, etc. General Dangerous negligence, other serious negligence Used for fine crime or other offenses not included in this list but covered by anmälning- and suspicion routine. Defamation crimes against women 18 years or older Behavioral misconduct offence against tobacco law High-handedness with child Missing person (not mountain) Creating danger to another, not for workers receiving and handling of stolen goods Environmental offence, littering Unlawful constraint and bugging etc. Illegal movement and position of excise goods Unauthorized use Wrongful disposal, other unlawful disposal Abuse of judicial procedure Violation of contact prohibition Other offenses under special legislation for which imprisonment is included in the range of penalties Other violation of chapter 16 (except 16§) Other violation of chapter 17 Other violation of chapter 14 Violation of chapter 8, arbitrary law, unlawful use of force, self-administered justice Damage, vehicle fire or fire on another motor vehicle (not arson 1301) Damage through fire (including motor vehicle) Blackmailing Trespassing Misconduct, incl. rough |</p>
<table>
<thead>
<tr>
<th>Sexual assault</th>
<th>Sexual coercion incl. aggravated, sexual exploitation of dependent person incl. aggravated, sexual intercourse with an offspring or siblings, against a girl 15-17 years</th>
<th>Sexual assault against girl under 15 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexual assault against woman 18 years or older</td>
<td>Sexual assault, exhibitionism</td>
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</table>

**APPENDIX III. Medborgardialog survey.**

<table>
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<tr>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age*</td>
<td>&lt;20</td>
<td>20-35</td>
</tr>
<tr>
<td></td>
<td>36-50</td>
<td>50&lt;</td>
</tr>
</tbody>
</table>

1) What is the best thing about living in this area? Choose up to three options!
   - Proximity to park areas
   - Proximity to shops
   - Good schools
   - Affordable accommodation
   - Good neighbors
   - A safe residential area
   - Other

2) Have you seen or experienced something in the area that makes you feel unsafe or afraid or that you perceive as a problem?
   - Yes
   - No
   - Don’t know

3) If you answered yes to the previous question, which of the following things caused your feeling of insecurity or did you perceive as a problem? Choose up to three options!
   - Burglary
   - Concern about your car, motorbike, moped or bike
   - Concern about assault in the area
   - Groups of youths
   - Drug handling/sale
   - Traffic problems, joyriding with moped or car
   - Other

4) Do you perceive the following as a problem in your area? Choose up to three options!
   - Littering
   - Vandalism
   - Drug trafficking or individuals under the influence of drugs
   - Resident being assaulted
   - Joyriding with car/moped
   - Cars driving too fast
   - Disturbing youth
   - Other

5) Are you aware that the area at the roundabout Kristianstadsdgatan is monitored by a camera?*
   - Yes
   - No
6) Have you perceived a change in your feeling of safety in the area under the previous year?*
   ○ Yes, I feel safer
   ○ Yes, I feel more insecure
   ○ No, it stayed the same
   ○ Don’t know

7) Have you perceived a change in criminal activity in the area under the previous year?*
   ○ Yes, it increased
   ○ Yes, it decreased
   ○ No, it stayed the same
   ○ Don’t know

8) If you could prioritize the police’s work, what activities should the police focus on? Choose up to three options!
   ○ Prevent burglary
   ○ More operations against narcotic crimes
   ○ More operations against traffic crimes
   ○ More operations against youth crimes
   ○ More operations against aggravated violence
   ○ Enhanced visibility in the area
   ○ Other

9) If you could prioritize the police’s and the City of Malmö’s combined effort in the area, what would you focus on? Choose up to three options!
   ○ Increased police presence
   ○ Better lighting
   ○ Meeting places for the youth
   ○ Speed bumps
   ○ Camera surveillance
   ○ More green and park areas
   ○ More security guards in the area
   ○ More activities in school
   ○ More community activities in the area
   ○ Better communication
   ○ Other

*These questions only appeared in the 2017 follow-up survey
## APPENDIX IV

Excerpt from the notes made during the observations at the roundabout (not including the notes for the specific houses).

<table>
<thead>
<tr>
<th>Date</th>
<th>Color light installation</th>
<th>Roundabout</th>
<th>Overall impression</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.03.2017</td>
<td>Only one graffiti in front of Södra Parkgatan 27B, all others clean</td>
<td>Benches &amp; garbage bins clean, only few litter in the roundabout like small papers/plastic and some broken glass</td>
<td>Relatively clean, seems like graffiti has recently been removed, very little litter &amp; disorder, no broken objects; Cleaning team removing graffiti from house walls arrived during the observation</td>
</tr>
<tr>
<td>15.03.2017</td>
<td>All clean from the inside, 2 of them with graffiti on the back</td>
<td>Benches &amp; garbage bins clean, some litter in the roundabout like plastic packages, plastic bags, paper</td>
<td>New/different graffiti compared to last week, not too much on the house walls but on back of light poles and ad signs, more litter than before, recycling station seemed recently cleaned</td>
</tr>
<tr>
<td>22.03.2017</td>
<td>Lot of graffiti on the back/sides of the lights, 4 graffiti on the front (new)</td>
<td>Little garbage but rather clean</td>
<td>Some graffiti was removed, but those on the recycling station are still the same. Some buildings are a lot more taken care of in general than others. All in all quite clean</td>
</tr>
<tr>
<td>29.03.2017</td>
<td>4 graffiti on the front (same as last week), posters and graffiti on the back and sides</td>
<td>Plastic litter</td>
<td>A lot of graffiti still the same as last week, seems as no one removed them during the week, not very taken care of in general inside the roundabout. House walls are fine though</td>
</tr>
<tr>
<td>12.04.2017</td>
<td>Clean on the back except for a poster, clean in front, have recently been cleaned (graffiti was on the front for quite a while)</td>
<td>Quite a lot of litter, plastic and paper, flowers and trees begin to bloom, makes the roundabout look nicer</td>
<td>Some graffiti has been there for quite a long time, others have recently been removed, but lots of garbage and in general not so much taken care of in the last days as it seems</td>
</tr>
<tr>
<td>19.04.2017</td>
<td>Clean except for one sticker on one of them, no graffiti on front and back</td>
<td>Quite clean, full of flowers, little garbage, benches clean, two big advertisement signs for 1st of May demonstration</td>
<td>No big new graffiti, some still there that are the same for weeks, recently cleaned inside the roundabout, all in all quite taken care of</td>
</tr>
</tbody>
</table>
APPENDIX V. Change in crime rates for different types of crime between 2015/16 and 2016/17.

<table>
<thead>
<tr>
<th></th>
<th>Roundabout</th>
<th></th>
<th>Change (%)</th>
<th>Control area</th>
<th></th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015/16</td>
<td>2016/17</td>
<td></td>
<td>2015/16</td>
<td>2016/17</td>
<td></td>
</tr>
<tr>
<td>Theft</td>
<td>53</td>
<td>39</td>
<td>-26,4%</td>
<td>353</td>
<td>267</td>
<td>-24,4%</td>
</tr>
<tr>
<td>Robbery</td>
<td>3</td>
<td>5</td>
<td>66,7%</td>
<td>18</td>
<td>23</td>
<td>27,8%</td>
</tr>
<tr>
<td>Traffic offence</td>
<td>11</td>
<td>10</td>
<td>-9,1%</td>
<td>108</td>
<td>122</td>
<td>12,9%</td>
</tr>
<tr>
<td>Drug offence</td>
<td>38</td>
<td>45</td>
<td>18,4%</td>
<td>82</td>
<td>107</td>
<td>30,5%</td>
</tr>
<tr>
<td>Crime against the person</td>
<td>21</td>
<td>18</td>
<td>-14,3%</td>
<td>95</td>
<td>95</td>
<td>0%</td>
</tr>
<tr>
<td>Vandalism</td>
<td>16</td>
<td>7</td>
<td>-56,3%</td>
<td>93</td>
<td>61</td>
<td>-34,4%</td>
</tr>
<tr>
<td>Weapons</td>
<td>1</td>
<td>7</td>
<td>600%</td>
<td>4</td>
<td>20</td>
<td>400%</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>7</td>
<td>7</td>
<td>0%</td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>5</td>
<td>-16,7%</td>
<td>56</td>
<td>66</td>
<td>17,9%</td>
</tr>
<tr>
<td>Total crimes</td>
<td>149</td>
<td>136</td>
<td>-26,4%</td>
<td>816</td>
<td>768</td>
<td>-5,9%</td>
</tr>
</tbody>
</table>
**APPENDIX VI.** Paired t-test comparing mean crime rates per week between 2015/16 and 2016/17 at the roundabout and the control area.

<table>
<thead>
<tr>
<th></th>
<th>Roundabout</th>
<th></th>
<th></th>
<th>Control area</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD) 15/16</td>
<td>M(SD) 16/17</td>
<td>t</td>
<td>p  (2-tailed)</td>
<td>M(SD) 15/16</td>
<td>M(SD) 16/17</td>
<td>t</td>
</tr>
<tr>
<td>Theft</td>
<td>2.79 (2.016)</td>
<td>2.05 (1.508)</td>
<td>1.681</td>
<td>.110</td>
<td>18.58 (4.741)</td>
<td>14.05 (3.894)</td>
<td>3.462</td>
</tr>
<tr>
<td>Robbery</td>
<td>.16 (.375)</td>
<td>.26 (.452)</td>
<td>-.809</td>
<td>.429</td>
<td>.95 (1.026)</td>
<td>1.21 (1.084)</td>
<td>-.690</td>
</tr>
<tr>
<td>Traffic offence</td>
<td>.58 (.692)</td>
<td>.53 (.612)</td>
<td>.271</td>
<td>.790</td>
<td>5.68 (3.233)</td>
<td>6.42 (3.115)</td>
<td>-.779</td>
</tr>
<tr>
<td>Drug offence</td>
<td>2.00 (2.082)</td>
<td>2.37 (2.033)</td>
<td>-.502</td>
<td>.622</td>
<td>4.32 (3.874)</td>
<td>5.63 (3.270)</td>
<td>-.1065</td>
</tr>
<tr>
<td>Crime against the person</td>
<td>1.11 (1.286)</td>
<td>0.95 (1.747)</td>
<td>.348</td>
<td>.732</td>
<td>5.00 (2.646)</td>
<td>5.00 (3.543)</td>
<td>.000</td>
</tr>
<tr>
<td>Vandalism</td>
<td>.84 (.834)</td>
<td>.37 (.684)</td>
<td>1.694</td>
<td>.107</td>
<td>4.89 (2.514)</td>
<td>3.21 (1.903)</td>
<td>2.295</td>
</tr>
<tr>
<td>Weapons</td>
<td>.05 (.229)</td>
<td>.37 (.496)</td>
<td>-2.364</td>
<td>.030*</td>
<td>.21 (.419)</td>
<td>1.05 (1.433)</td>
<td>-2.577</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>.37 (.496)</td>
<td>.37 (1.464)</td>
<td>.000</td>
</tr>
<tr>
<td>Others</td>
<td>.32 (.582)</td>
<td>.26 (.562)</td>
<td>.000</td>
<td>1.000</td>
<td>2.95 (1.747)</td>
<td>3.47 (2.695)</td>
<td>-.728</td>
</tr>
<tr>
<td>Total crimes</td>
<td>7.84 (2.754)</td>
<td>7.16 (3.686)</td>
<td>.271</td>
<td>.790</td>
<td>42.95 (9.300)</td>
<td>40.42 (8.255)</td>
<td>.957</td>
</tr>
</tbody>
</table>

*significant to the level p ≤ .05
**APPENDIX VII.** Percentage of police-induced crimes per weekday in 2015/16 and 2016/17 at the roundabout.

![Percentage of police-induced crimes per weekday](image)

**APPENDIX VIII.** Mean and relative differences in means for drug offences and difference-in-differences estimator $\beta_3$.

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control area</td>
<td>M= 4.32 (1)</td>
<td>M= 5.63 (1.30)</td>
<td>1.31 (0.30)</td>
</tr>
<tr>
<td>Target area</td>
<td>M= 2.0 (1)</td>
<td>M= 2.37 (1.19)</td>
<td>0.37 (0.19)</td>
</tr>
<tr>
<td>Difference</td>
<td>-2.32 ($\beta_1$) (0)</td>
<td>-3.26 (-0.11)</td>
<td>-0.94 ($\beta_3$) (-0.11)</td>
</tr>
</tbody>
</table>

**APPENDIX IX.** Mean and relative differences in means for police-induced crimes and difference-in-differences estimator $\beta_3$.

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control area</td>
<td>M=10.21 (1)</td>
<td>M= 13.11 (1.28)</td>
<td>2.89 ($\beta_2$) (0.28)</td>
</tr>
<tr>
<td>Target area</td>
<td>M= 2.63 (1)</td>
<td>M= 3.26 (1.24)</td>
<td>0.63 (0.24)</td>
</tr>
<tr>
<td>Difference</td>
<td>-7.58 ($\beta_1$) (0)</td>
<td>-9.85 (-0.04)</td>
<td>-2.26 ($\beta_3$) (-0.04)</td>
</tr>
</tbody>
</table>

**APPENDIX X.** Mean and relative differences in means for public reported crimes and difference-in-differences estimator $\beta_3$.

<table>
<thead>
<tr>
<th></th>
<th>2015/16</th>
<th>2016/17</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control area</td>
<td>M= 32.74 (1)</td>
<td>M= 27.32 (0.83)</td>
<td>-5.42 ($\beta_2$) (-0.17)</td>
</tr>
<tr>
<td>Target area</td>
<td>M= 5.21 (1)</td>
<td>M= 3.89 (0.75)</td>
<td>-1.32 (-0.25)</td>
</tr>
<tr>
<td>Difference</td>
<td>-27.53 ($\beta_1$) (0)</td>
<td>-23.43 (0.08)</td>
<td>4.11 ($\beta_3$) (-0.08)</td>
</tr>
</tbody>
</table>
APPENDIX XI. Answers from the police survey in %.

<table>
<thead>
<tr>
<th>Activity</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work against burglary</td>
<td>10,1</td>
<td>9,4</td>
</tr>
<tr>
<td>More operations against narcotic crimes</td>
<td>30,2</td>
<td>30,5</td>
</tr>
<tr>
<td>More operations against traffic crimes</td>
<td>37,2</td>
<td>39,1</td>
</tr>
<tr>
<td>More operations against youth crime</td>
<td>42,6</td>
<td>49,2</td>
</tr>
<tr>
<td>More operations against aggravated violence</td>
<td>71,3</td>
<td>68,8</td>
</tr>
<tr>
<td>Enhanced visibility in the area</td>
<td>58,9</td>
<td>55,5</td>
</tr>
<tr>
<td>Other</td>
<td>3,1</td>
<td>7</td>
</tr>
</tbody>
</table>

If you could prioritize the police's work, what activities should the police focus on? Choose a maximum of three options!
APPENDIX XII. Answers from the police survey in %.

If you could prioritize the police’s and the City of Malmö's combined effort in the area, what would you focus on? Choose a maximum of three options!

<table>
<thead>
<tr>
<th>Option</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased police presence</td>
<td>70,9</td>
<td>63,3</td>
</tr>
<tr>
<td>Better lighting</td>
<td>10,4</td>
<td>17,2</td>
</tr>
<tr>
<td>Meeting places for the youth</td>
<td>46,3</td>
<td>45,3</td>
</tr>
<tr>
<td>Speed bumps</td>
<td>33,6</td>
<td>22,7</td>
</tr>
<tr>
<td>Camera surveillance</td>
<td>36,7</td>
<td>27,6</td>
</tr>
<tr>
<td>More green and park areas</td>
<td>8,2</td>
<td>10,9</td>
</tr>
<tr>
<td>More security in the area</td>
<td>24,6</td>
<td>18,8</td>
</tr>
<tr>
<td>More activity in the schools</td>
<td>20,9</td>
<td>25,8</td>
</tr>
<tr>
<td>More community life in the area</td>
<td>20,1</td>
<td>18</td>
</tr>
<tr>
<td>Better communication</td>
<td>3,7</td>
<td>9,4</td>
</tr>
<tr>
<td>Other</td>
<td>3,7</td>
<td>9,4</td>
</tr>
</tbody>
</table>
APPENDIX XIII. Ethics Council recommendation HS2017 løp nr 24.

Utlåtande
2017-02-20
HS2017 løp nr 24

Project: Knarrkronobilen Folkets Park – An evaluation of hotspot policing in Malmö
Student: Ins Hennem
Supervisor: Manne Gerell
The Ethical Council: Claes Andersson and Camilla Nordgren

Ethical Council Statement:

This Student Project will investigate the effects of a specific crime prevention effort in Malmö dated November 2016. Four different data sources will be used. Three of these data sources refer to material that the police has collected or will collect: (1) A baseline survey dated May 2016, n=135; (2) A follow-up survey Spring 2017, n=135; (3) Register data on crime rates between 2014 and 2017. The final data source, (4) will be approximately 5 interviews with residents conducted by the student.

Comments:
- The Ethics Council suggest that the student collect a certificate about access to data-source 1-3 from responsible parts at the Malmö Police Department before start of the study. A copy of this certificate should be sent to the Ethics Council on the following address: etikradet@mah.se
- The Ethics Council suggest that the information sheet that will be provided to potential participants before consent, should be distributed on beforehand so that participants will have the opportunity to consider the information, and to address additional questions, before giving consent. Instructions about this process, when and how consent will be collected, should be added to the information sheet. The Ethics Council consider that this minor change can be executed by the student in cooperation with the supervisor, and information on these changes shall not be sent to the Ethics Council.

On behalf of the Ethical Advise Board
Claes Andersson and Camilla Nordgren