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The journey to crime of "itinerant crime groups"

Stijn Van Daele and Tom Vander Beken

Abstract

Purpose: Most researchers have found that property crimes have a local focus: offenders tend to operate in the vicinity of their residence. This has led the police to organize themselves to concentrate their resources in highly populated, urban areas. Over the last decade mobile property offenders have been found in various Western European countries that differ from this norm. These groups of mainly Eastern European multiple offenders engaging in property crime tend to travel further than other offenders. As such, their operations differ from most criminals, challenging the way the police are organized and undermining criminological theories on journey to crime. The aim of this paper is to look at the specificity of mobility patterns of these groups, to examine the precise interpretation of their mobility and to consider the implications.

Design/methodology/approach: The paper uses the Belgian police database containing all serious property crimes in Belgium for the period 2002–2006. Some basic offender characteristics have been identified, and for these offenders, journey-to-crime patterns have been established.

Findings: Eastern European multiple offending groups tend to commit their crimes in rural areas. Although they start their journey in regions considered "crime importing", they carry out their crimes in "crime exporting" areas. As such, they are atypical, challenging traditional theories on journey-to-crime and the way in which police forces are organized.

Research limitations: Observing a special group is one thing, explaining these differences is another. Further research is needed, in particular with regard to the motivational aspects for these offenders.

Originality/value: whereas most researchers have found crime (including property crime) to be mainly local, the present research focuses on more mobile offenders. The challenges that these groups create for law enforcement authorities make it important for them and their patterns of activity to be understood.

Keywords: distance decay; mobility; property crimes; itinerant crime groups

Paper type: Research paper

Introduction

Traditional criminological research on journey-to-crime has found that most offenders operate on a local level. The reasons for this can be found in routine activities (Cohen and Felson, 1979), awareness space (Brantingham and Brantingham, 1981b) and rational choice (Cornish and Clarke, 1986). Because criminal operations tend to be oriented locally, police authorities can be organized locally, with broader data sharing and police operations only occurring in extraordinary cases or for particular crime types (Virta, 2002, Bowling and Foster, 2002, Yarwood, 2007, Newburn, 2008).

Since the late 1990s, Belgian law enforcement agencies have noticed an increasing number of offenders (Dupuis, 2004) who are engaging in "regular" property crimes, but with higher levels of mobility. Instead of staying around their residence, these groups choose to travel further during their criminal operations. Because of the mobility of these offenders, they have been called "itinerant crime groups" (De Ruyver, 2006). After half a decade of fine-tuning, the phenomenon was defined and recorded in Belgian criminal policy, in the so-called *Kadernota Integrale Veiligheid (Belgian Ministerial College, 2004)*. The key features of systematic offending, group offending, Eastern European origin and operation from the main Belgian cities or abroad, were assigned to these groups. Another key feature is their high level of mobility, which is mentioned in the definition and confirmed by empirical research (Van Daele et al., 2008, Van Daele, 2008). Due to their levels of mobility, the activities of these groups seem to conflict with general observations concerning limited offender mobility.

They also challenge some common principles of police management and organization. Mobile criminals create a need for police forces to cooperate, share their knowledge and conduct joint

investigations. The fact that this now occurs for rather "ordinary" property crimes may cause a shift in the organization of police activities.

In the present paper, we want to address to what extent these groups are more mobile. Are they just more mobile, or also mobile to a different extent? Additionally, we attempt to examine where they operate more precisely. In this way, we want to focus on patterns of these groups, compared with other offenders, and what the implications are for police authorities.

Distance decay

Criminology research can start its work from a variety of positions, including the various dimensions of crime identified in the literature (Brantingham and Brantingham, 1981a, Cohen and Felson, 1979): legislation, the criminal, the victim or target of the crime, and the crime site, where offenders and targets meet. The place where a crime takes place is an interesting subject to study. According to Sherman (1995), place is six times more predictive for future offences than the identity of the offender.

A recurrent observation in the study of crime and place and – particularly – criminal mobility is the fact that most crimes are committed near the residence of the offender and the number of crimes decreases as distances increase, the so-called distance decay function, or curve (see for example Turner, 1969, Phillips, 1980, Rhodes and Conly, 1981, Rengert et al., 1999, Lundrigan and Canter, 2001, Rattner and Portnov, 2007, Van Koppen and Jansen, 1998, Bernasco, 2006, Canter and Hammond, 2006, Canter and Youngs, 2008, Brantingham and Brantingham, 1981b, White, 1932).

Although this curve is of a fairly standard shape, the average distances vary with the nature of the crime. Nevertheless, most studies have found distances of less than 7km or 4.5 miles (White, 1932, Edwards and Grace, 2006, Phillips, 1980, Reppetto, 1974, Wiles and Costello, 2000, Capone and Nichols, 1976, Sarangi and Youngs, 2006). For property offences, slightly longer distances have been observed than for violent crimes.

Travelling takes time, cost and effort. As a result, people will only travel when there is added value in doing so. This principle of least effort works in all human behaviour (Zipf, 1949), including crime. Or, as Rossmo (2000) describes it, "apparently, the world is lazy." In general, both target oriented and offender oriented explanations account for this pattern. For an extensive review of journey-to-crime research and the principles/motivations that influence crime travelling, we refer to another section of his work (Rossmo, 2000).

The current research

Although the distance decay curve is widely accepted, it is still the subject of debate. Van Koppen and De Keijser (1997) argue that the distance decay curve gives only aggregated results, from which no individual-level conclusions can be drawn. Rengert et al. (1999) criticised Van Koppen and De Keijser's study on four grounds, including their methodological approach, and their interpretation of previous literature. The authors of this present research will not go into detail about each argument, but are more interested in the conclusion:

"the next step is to identify how distance decay parameters vary between groups of offenders (i.e., ethnicity, gender, region), and what that says about their offending behaviour" (Rengert et al., 1999).

The research was executed within the framework of a broader study on "itinerant crime groups". Various features were ascribed to these offenders: systematically offending, being part of offender groups, having an Eastern European origin, and operating from the main Belgian cities or abroad. We extracted these features and analysed each of them, first separately, afterwards combined. The aim of the article is not theory-testing, but to present some empirical findings to conclude that distance decay variations even occur when making rather basic group divisions. In relation to "itinerant crime groups", the policy implications of the findings are also discussed.

Method

This study used data on serious property crimes in Belgium drawn from the General National Database of the federal police forces and covering the years 2002–2006. A dataset containing a total of 140,619 offender–offence pairs was obtained, which included all serious property offences with known perpetrators. Serious property offences were those with aggravating circumstances, the main examples being burglary, robbery, ram raids, etc. All offences where the residence of the offenders was unknown were then excluded. The result of this selection process was data for 67,981 offender–offence pairs in which covered distances could be calculated. Working with offender–offence pairs is rather abstract, but has been done by other researchers before (Kleemans, 1996, Bernasco and Block, 2009).

Due to the large size of the sample and encountered difficulties with automated detailed geocoding (see for example Wiles and Costello, 2000), a simplified codification of locations was used. The surface area of Belgium measures less than 31,000km² (12,000 sq. miles), and includes 589 municipalities. With just over ten million inhabitants, average population density is 340.8 people/km² (872.5 people/sq. mile). The longest distance that can be traveled is about 300km or about 185 miles. The research particularly focused on offenders who were found to be more mobile. Due to this focus, the Lambert coordinates of the centre of each municipality were used to localise residences and crime places. Euclidian distances between the home base and crime site were then calculated. In the case of intraregional operations, the distance was measured by dividing the area surface square root by two. This formula is borrowed from previous work by Bernasco (2006). This approach does not use an artificial division of the Belgian area, but focuses on social reality by using municipalities as areas. An advantage is that this method clusters upon the centres of the municipalities and, therefore, reflects the unequal spread of opportunities throughout the country. Unfortunately, this biases the results too. Intraregional crime trips, which do occur often, cannot be estimated very accurately. As a consequence, the method used is only appropriate for analyzing mobile offending.

Mean distances were calculated by the method described above. However, in order to make group comparisons and graphical representations easy to read, distances were then divided into 10 classes of 10km (6.2 miles) each. Class 0 contains all distances ranging from 0–9.9km (0–6.1 miles), class 1 from 10–19.9km (6.2–12.3 miles), class 2 from 20–29.9km (12.4–18.6 miles) and so on. Due to this simplification, information on the existence of a buffer (Besson, 2004, Rossmo, 1995, Rhodes and Conly, 1981, Canter and Larkin, 1993) was lost. This is not only due to the use of classes, but also because less detailed coordinates were used.

Nevertheless, this did not hamper the observation of distance decay patterns, which is why we believe this rather rough division to be sufficient.

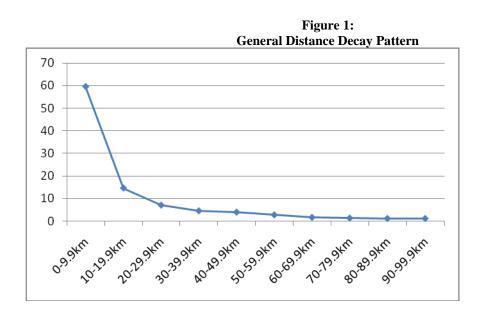
As no data on the residence of offenders who lived abroad were acquired, other than the country they lived in, only those offenders who lived in Belgium were taken into account. According to the data, criminals living in Belgium committed 93.9 percent of the offences in the sample. This underestimates travelling to some extent, as criminals operating transnationally fall outside the scope of the sample. The reason the information was limited in this way is not related to fundamental concerns, but rather to the nature of the data set, which did not allow for any accurate estimates on distances at an international level.

The data recorded some personal characteristics for each offender. As the aim of the broader research framework was to investigate the so-called itinerant crime groups in Belgium, relevant features were extracted. In line with the definition of these groups as established by the Belgian Council of Ministers (2004), four features were extracted. In this definition, it is argued that these offenders are: (1) group offenders, (2) systematic/multiple offenders, (3) of Eastern European origin and (4) operating from outside Belgium or from one of Belgium's main cities. Information on these features was obtained from the database.

Each variable was divided into several categories and average distances and distance decay patterns for the various groups were established. As outlined above, in order to facilitate comparisons between the various groups, the distances were simplified by using categories of 10km (6.2 miles) each. This enabled particular groups to be compared more easily.

Results

Before dividing the sample up into specific groups, some information on the whole sample was drawn out. The average distance – between home (Rengert, 2004) and offence location – covered to commit a serious property offence in Belgium (N=67981) was about 19.1km, or 11.9 miles. This is considerably higher than most literature indicates. It is likely to be caused by the nature of our data, which are gathered nationwide, whereas most journey-to-crime studies only take into account crime trips within one city. Including crime trips that begin in Sheffield and end outside the city, Wiles and Costello (2000) also observed longer distances of 6.8 miles (10.9km) on average, compared with only 1.9 (3.0km) miles for crime trips within Sheffield.



Notwithstanding these long average distances, a regular distance decay pattern was observed (figure 1). This pattern indicates that 59.5 percent of the serious property crimes were committed within 10km (6.2 miles) of the offender's home. With increasing distances, the number of offences committed decreased consistently. This swift decline results in only 14.6

percent of crimes being committed between 10–19km (6.2–11.8 miles) away from home, and 7.0 percent between 20–29km (12.4–18 miles).

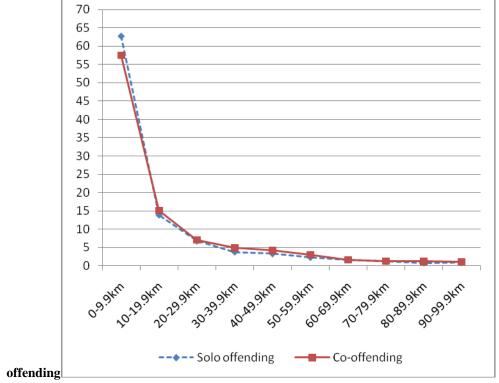
Distances and decay

After the general distance decay pattern had been established, the various features assigned to these groups were considered: co-offending, multiple offending, nationality and type of residential area.

Co-Offending

A first factor involved co-offending. The mean distance for offences committed by two or more people (N=41590) was 20.1km (11.3 miles), compared with 17.6km (9.7 miles) for offences committed by an offender acting alone (N=26391). This very modest difference is to be expected, giving the limited correlation (Pearson's r= .052) between number of offenders and distances traveled. This similarity was also reflected in the distance decay curve of both groups, which was very similar (see figure 2).

Figure 2:
Distance Decay Patterns and Co-

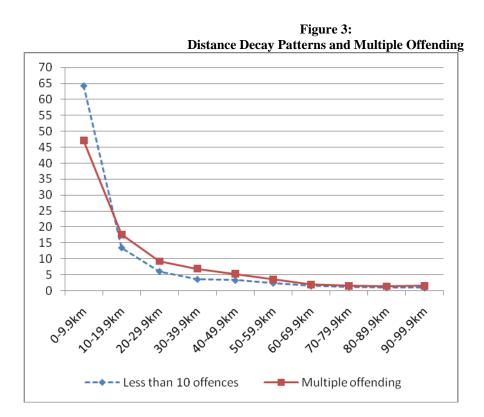


This can also be found in previous work by Bernasco (2006). He concluded that offenders mostly traveled from the residence of one of the offenders. As the present method calculated one offence by two offenders twice, the second distance will be larger, influencing the result and seeming to indicate more offences being committed further away.

Multiple Offending

In the definition of itinerant crime groups, the targeted offenders are systematically offending, and can be understood as being multiple offenders. Using the method of Elffers (2003) and Ferwerda et al. (1995), those who have committed ten or more offences were classed as "multiple offenders". The mean distance traveled for the crimes committed by multiple offenders (N=19485) in this study was 22.8km (14.2 miles), compared with 15.0km (9.4 miles) for the others (N=48779). This difference is significant at the .01 level. It confirms the link between the number of offences and traveled distances as found by Barker (2000), which

is translated in a Pearson's r of .115 in our sample. Whereas Barker concluded that number of offences and distances traveled were only correlated within the first five offences, this was not the case here. Although lower than in total, distance and number of offences were still correlated, even within the group of multiple offenders. (r=.07, p<.001) This higher mean distance was also represented in the distance decay pattern (see figure 3).



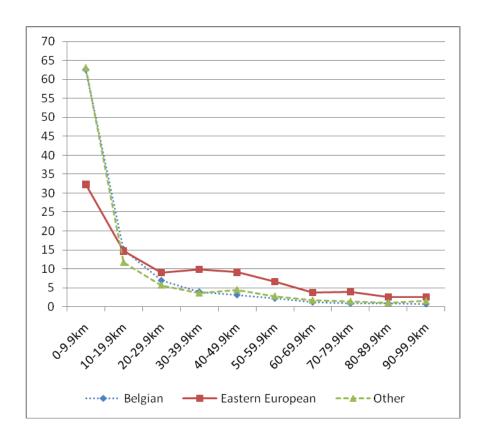
Multiple offenders committed their crimes further away from home more often than other offenders. Only 47.1 percent of the offences they commit were carried out within 10km (6.2 miles) of where they lived, compared with 64.2 percent for the other offenders. Nevertheless, this difference does not have an implication for the existence of the classical distance decay pattern for both groups. Thus, multiple offenders traveled further than other offenders, but this does not imply they filter out their immediate awareness space.

Nationality of Offender

A final offender characteristic that the data set enabled us to investigate is nationality. The first group was made up of criminals with Eastern European nationality (N=7078). This group was chosen because of specific criminal activity that has occurred in recent years. Since the turn of the century a number of Western European countries (including Belgium, France, the Netherlands, and Germany) have recorded an increase in the involvement of Eastern European criminal gangs in property crimes (De Ruyver, 2006: 5; Spapens and Fijnaut, 2005: 83–85; Korps Landelijke Politiediensten, 2004: 87; Van der Laan and Weenink, 2005). Due to the high level of interest in these particular offenders, who commit a considerable amount of property crimes in Belgium—25 percent is often mentioned (De Ruyver, 2006; Ponsaers, 2004)—we chose to identify Eastern European offenders as a separate group. They included nationals from what used to be the Eastern Bloc, including the former Soviet republics and the Soviet satellite states, but also including the countries that were covered by the Federal Republic of Yugoslavia and Albania. The second group contained all Belgian offenders (N=51383) and a third group contained all offenders from other nationalities (N=9518).

The average distances traveled were 34.7km (21.7 miles) for Eastern European offenders, 17.0km (10.6 miles) for Belgian offenders and 19.2km (12 miles) for the third group. Eastern European offenders apparently tended to travel twice as far as other offenders. The resulting distance decay pattern is shown in figure 4.

Figure 4: Distance Decay Patterns and Nationality



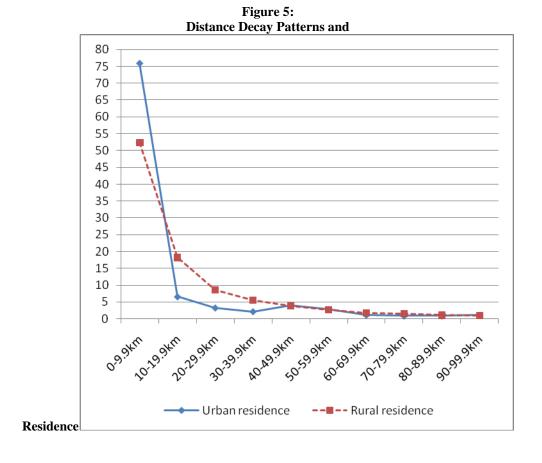
For offences committed by Belgian offenders or the third group, patterns of offences tended to follow the classical distance decay curve. More than 60 percent of offences were committed less than 10km (6.2 miles) from home, sharply declining afterwards.

Eastern European offenders, however, produced a very different distance decay curve. Only 32.3 percent committed their offences close to home, while 14.7 percent and 9 percent committed offences in the second and third distance categories. The number of offences committed increased again slightly in the fourth and fifth category, after which the proportion remained consistently higher than that of the other groups. For property crimes committed by Eastern European offenders, the establishment of a distance decay pattern is clearly not straightforward. The distance traveled on crime trips among these Eastern European offenders was nearly double that of other offenders. This is also accompanied by a slightly deviating distance decay pattern, which has not yet been observed for the other features.

Another observation has also been made concerning nationality. In our dataset, less than half of the offenders had a registered residence. This percentage was lowest for Eastern European offenders (35.8 percent), compared with Belgian (52.6 percent) and other foreign offenders (41.2 percent). This indicates that residences of Eastern European offenders were more difficult to assess than for other offenders, possibly due to their moving more frequently (Ponsaers, 2004). Attributing a temporary residence to all crimes in the data would probably cause crime trips to be overestimated. It is quite possible that anchor points (Rengert, 2004) and residence interpretation (Wiles and Costello, 2000) cause such deviations.

Residence in an Urban or Rural Setting

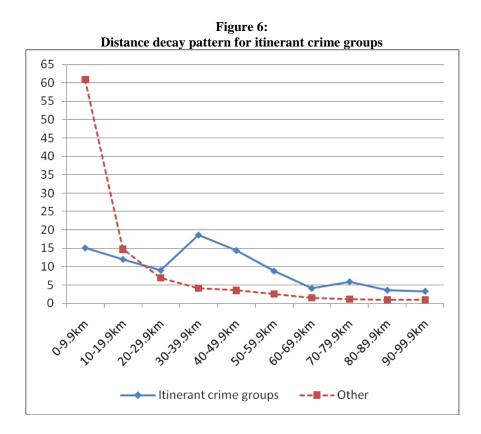
We also explored whether living in an urban or rural area was significant in terms of distance traveled to commit an offence. Belgium has seven cities with more than 100,000 inhabitants: Brussels, Antwerp, Ghent, Charleroi, Liege, Bruges and Namur. These were classed as urban areas, while the rest of the country was classed as rural. Distances were studied in relation to where the offender lived. The mean traveled distance for offenders living in one of these seven cities was 14.5km (9.1 miles) (N= 20882), compared with 21.2km (13.2 miles) for those living in rural areas (N=47099). This confirms the general premise that urban residents have less need to travel: work, shopping and leisure activities are more likely to take place within a small area, while this is not the case for rural residents. Therefore, we could expect the awareness space (Brantingham and Brantingham, 1981b)—and, therefore, the crime trips size—of offenders living in rural areas to be larger, something that has been found before by Clinard (1944).



An expected observation is that offenders living in urban areas committed a higher percentage of offences in their immediate environment. This percentage was higher than for those who live in rural areas (75.8 percent vs. 52.3 percent). The number of crimes committed then swiftly declined with distance, and only 6.6 percent of crimes were committed within the second distance band in the case of urban residence, compared with 18.2 percent for those from rural areas at the same distance. However, the second small peak in the fifth band, which accounts for 4 percent of the offences, was unexpected when compared with only 2.2 percent of offences in the fourth. Therefore, although a general distance decay pattern was observed, this pattern tends to deviate slightly for offenders from urban areas.

Combining the features: itinerant crime groups

The Belgian definition attributes four features to these groups. We have found each feature separately to be related to higher mobility, although only two—nationality and residence—showed slight changes in the distance decay pattern. As a final step, we combined all features and studied the distance decay pattern for these groups (N=2095). The mean traveled distance for itinerant crime groups was 42.8km (26.8 miles).



Comparing the distance decay pattern with the generally observed pattern (Figure 6), we notice striking differences. For itinerant crime groups, there was not much decay to consider. On the contrary, distances between 30 and 50km (roughly 20 and 30 miles) were more frequently traveled than distances of less than 10km (6 miles). Despite the general tendency to stay near home, members of itinerant crime groups appeared to favour targets that were located further away.

Discussion

Using police data on serious property offences in Belgium, differing crime—residence distances have been identified. For those features of itinerant crime groups identified by policy makers, traveled distances and distance decay patterns were examined.

Each separate characteristic showed longer average distances traveled, but most of these differences did not affect the decay pattern. Small exceptions were distances between 30 and 50km (20 and 30 miles), which appeared slightly overrepresented for Eastern European offenders and criminals living in urban areas. Combining the various features, a serious shift in the decay pattern was observed: the heart of the distance pattern was moved from crimes at less than 10km (6 miles) from home to offences committed at over 30km (20 miles) away from home.

This confirms what Rengert al. (1999) suggest, that distance decay patterns may vary between offender groups. A general representation of distance decay may conceal a lot of information. A simple division of offenders into some easily identified groups revealed substantial differences in distances traveled, and even differing distance decay patterns. We did not, in this paper, analyze our findings at the individual level. Thus, we do not attribute the distance decay pattern to some sort of ecological fallacy. We would put it even more strongly: distance decay variations and deviations do not only occur at the individual level. Even on an aggregated level, with a limited number of distinctions, variations and deviations appear. Unfortunately, these differences become invisible when the general distance decay pattern is observed.

This observation provides a theoretical framework for further study and analysis of distance decay patterns. A second step is how these differences can be interpreted, particularly in relation to the phenomenon of itinerant crime groups. The varying distance decay patterns can be explained using three approaches: Target-oriented and offender-oriented approaches, which are the most common, and a route-oriented approach.

The first approach is target-oriented. Cohen and Felson (1979), in their routine activity approach, developed the idea that changing life-patterns influenced the rise in crime in the 1960s. As crime requires a convergence in time and space of likely offenders, suitable guardians and the absence of capable guardians, the change in routine activities within the eventual victims' population dispelled the presence of capable guardians. Those routine activities are all recurrent and prevalent activities that provide for basic population and individual needs (Cohen and Felson, 1979). Cohen and Felson highlighted in particular the shift from routine activities at home to elsewhere, leaving residences unattended for longer periods. In relation to robberies, research by Groff (2007) strongly supports this, concluding that crime will increase as the amount of time spent away from home rises. In a recent poll, Belgian people appeared to commute longer and further than the European average (Stepstone Survey, 2009, J.I.R., 2009). Because Belgian people are willing to commute longer, they will more often stay in rural areas, although they work in one of the main cities. One could therefore argue that the amount of time spent away from home is higher in residential areas that are situated between 30km and 50km (20 and 30 miles) from the main cities. This can be seen as a macro-level approach.

As such, a routine activities approach could partly account for the longer distances and the fact that targeting rural areas could be successful. Target-oriented differences may explain a

proportion of these patterns. Yet, they cannot account for the differences between various offender types. After all, the targets are the same for all offenders. Whether they decide to stay around the larger cities or to travel to rural areas depends on the individual target perception and appreciation, not on the targets themselves. If two offenders head out for a search, starting from the same city, there are no objective target-related reasons why offender A will look near home and offender B will travel further or vice versa.

A second group of explanations is offender-oriented. Important characteristics in this perspective are age, experience and ethnicity. The least mobile offenders are young and inexperienced, and belong to visible minority groups (Gabor and Gottheil, 1984). Due to this last feature, we distinguished three instead of two groups of nationalities. Alongside the group of Eastern European offenders, we distinguished Belgian from foreign offenders, as the latter belong to a minority. We measured experienced by comparing the number of offences committed, as Barker (2000) indicates that distances will increase with the number of offences committed.

Eastern European offenders committed more offences on average and, thus, are more experienced. They were also older than Belgian offenders: Their average year of birth was 1976, compared to 1978 for the Belgian offenders and 1974 for the "other" group. According to the analysis of variances, these differences are significant at the .01 level. This may explain why Eastern European offenders travel further than Belgian offenders. However, this does not explain why the distances traveled by the third group are shorter. Finally, visible differences in ethnicity can explain variations in mobility (Gabor and Gottheil, 1984, De Poot et al., 2005). Although Eastern Europeans have a different nationality to the country in which they

are living, their ethnicity often does not visibly differ from Belgian offenders and therefore their mobility is less restricted than might be expected for foreign offenders.

These explanations possibly account for some of the longer average distances traveled. Yet, they do not explain the generation of a second peak between 30-49.9km (18.6-31.0 miles). A third explanation is therefore necessary, and this can be considered route-oriented. Elffers (2004) discusses the effect of so-called barriers that create higher cost increases on short distances. These might be waterways, inaccessible terrains, and so on. However, routes can also function as facilitators for travelling further. In our sample, most offences were committed in the area where the offender lived. Other popular target areas were those easily accessed by using the network of Belgian highways. It appears that urban areas not only increase nearby crime opportunities, they also make it easier for offenders to travel further. Of course, the question remains why this is different for Eastern European offenders compared to others. Ponsaers (2004) suggested that the so-called "itinerant crime groups" conflict with prevailing criminological theories. This assumption is, perhaps, a step too far. Nevertheless, it would benefit from further research on personal motivations for travelling. The offenderoriented explanations should therefore be further opened up to other characteristics and personal issues, such as motivation, lifestyle, habits and perception. Further elaborating these features could, in combination with an understanding of the evolutions in the environment, help us to better understand the method of these groups and take up the current and upcoming challenges (Verfaillie and Vander Beken, 2008).

From a theoretical perspective, these findings indicate that distance decay patterns do very between rather basic groups distinctions. The observation of this pattern is important from a policy perspective as well. Rattner and Portnov (2007) distinguished crime-exporting from

crime-importing regions. Considering each feature separately, an overall focus on local offenders is still in place, despite the differences between various types of offenders. When we combined these features and, thus, discussed so-called itinerant crime groups, another picture appeared.

Although itinerant crime groups mainly operate from large cities that do provide plenty of crime opportunities, they opt to travel further and mainly target places at 30–50km (20-30 miles) from their residence. These groups do not initiate their crimes in crime-exporting regions. On the contrary, they start in areas that provide plenty of criminal opportunities. Nevertheless, these groups do export crime to other areas. As such, their methods pose new challenges to law enforcement authorities. Due to the concentration of people and criminal opportunities, police resource management has mostly focused on urban areas. However, these groups tend to commit their crimes at greater distances from home. Given that the main Belgian cities are located about 50-60km (30 to 40 miles) from each other, these groups target those areas that are located between the cities. This creates more work for police forces in rural areas. Moreover, rural police forces cannot fight these groups by themselves, as the gangs operate across a number of regions, and therefore each police force only knows about some of their crimes. As a consequence, rural police forces need to cooperate in order to achieve maximum results. They also need to cooperate with teams from urban areas, as the latter can provide information on where these groups reside. Such strategies have been widely adopted in Belgium, under coordination of the Federal Prosecutor (Balthau, 2006, FOD Justitie et al., 2007). In other countries where this phenomenon has been observed (Van Geffen, 2009), the approach is less coordinated and more related to individual cases. Given the growing awareness of the phenomenon of Eastern European property crime gangs, most countries could well benefit from a more comprehensive framework within which these groups can be combated. After all, these groups do pose challenges to criminology, both from a theoretical perspective and from a police management and police priorities perspective.

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