Reporting crime : effects of social context on the decision of victims to notify the police

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REPORTING CRIME

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1 | INTRODUCTION[1.1]

1.1 Introduction

Controlling crime is one of the principal tasks of any government. Of course, for this to occur, crime must come to the attention of the criminal justice system. In this regard, a victim's decision to report victimization to the police is crucial. Victim reports are the main source of information for the police (Bennett & Wiegand, 1994; Greenberg & Ruback, 1992; Mayhew, 1993) and are the basis for most of the subsequent actions of the justice system. However, a lot of criminal victimization is not reported to the police and, consequently, many offenders will never be found and prosecuted. For example, only half of all incidents of six types of crime in 17 industrialized countries are reported to the police (Bouten, Goudriaan, & Nieuwbeerta, 2002; see also Chapter 2, Table 2.5). This is also true for the Netherlands, where every year over three million people (almost one in five citizens) become victims of one or more crimes (CBS, 2004; see also Table 2.2). Therefore, understanding the conditions under which victims report (or do not report) is crucial for the development and implementation of crime control strategies. This importance is emphasized by the attention given by the government to stimulating reporting crime (Eysink Smeets, Nijmeijer, & Van Goor, 2003). New ways in which citizens can file a report have been developed over the past several years, for example the possibility to report (minor) crimes via the Internet (Nijmeijer, Van Goor, Eysink Smeets, Balke, & Tolboom, 2002).

When and why crime victims (do not) report their victimization to the police has been the subject of empirical criminological research since the seventies, partially due to the emergence of population surveys on victimization such as the National Crime Survey in the United States (Biderman & Lynch, 1991). In many of these victimization surveys, victims are asked in retrospect about their motivations to report or not report certain crimes. To be precise, those who say that they have reported their victimization to the police are asked why they have done so, and those who say they have not reported their victimization are asked why they have not. Some of the most common reasons victims give for not reporting a crime are: the crime was not serious enough, the police could not do anything, the police would

[1.1] This chapter is largely based on: Goudriaan, H., Nieuwbeerta, P., & Wittebrood, K. (2005). Overzicht van onderzoek naar determinanten van aangifte doen bij de politie [Overview of research on determinants of reporting to the police]. *Tijdschrift voor Veiligheid en Veiligheidszorg*, *4*(1), 27-48.

not do anything, it was not suitable for the police, or it could be solved without help from the police. Common motivations for reporting a crime include: a crime like that should be reported, the offender should be caught, to get money from the insurance, to recover property, or to prevent it from happening again. This information on victims' motivations (not) to report is certainly informative, but the questions are asked in retrospect and it is possible that victims formulate these motivations afterwards to 'justify' their behavior and not the other way around. In other words, the direction of the causality is unclear and therefore they are not very useful as predictors of victims' reporting behavior. Furthermore, because only victims who reported a crime are asked why they did so and those who did not file a report are asked why they did not, these variables are useless in models that are designed for predicting reporting behavior. Still, the motivations give hints as to what factors might explain why some crimes are reported and some are not.

In studies that try to predict reporting behavior, a distinction can be made between three common theoretical models, each of which focuses on a different mechanism. The most common model, which will be called the economic model throughout this book, is a simple cost-benefit model in which crime seriousness is thought to be the most important predictor of victims' decision (not) to report (Skogan, 1984). Crime seriousness has indeed proven to be an important determinant of reporting (Fiselier, 1978; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977; Van Dijk & Steinmetz, 1979), but according to many researchers, other factors are important as well. The second model – the psychological model – is a cognitive decision model. It claims that personal characteristics of the victims and their direct social network are also important mechanisms behind the decision to report a crime (Ruback, Greenberg & Westcott, 1984). Similar to the economic model, however, this model does not incorporate factors that compose the broader social contexts in which crimes and victims are nested, while many social scientists have emphasized that human decision-making and behavior is influenced by such contextual factors (e.g. Granovetter, 1985; Nee & Ingram, 1998). The third model used to predict reporting behavior is a (macro-)sociological model. It explains reporting behavior at an aggregated level and claims that reporting percentages are determined by social structures in society (Black, 1976). In contrast to the first two models, this model ignores the fact that reporting is an individual-level behavior and that differences between crime incidents and individuals not related to societal structures can influence victims' decision-making.

Theoretical development and empirical progress in research on crime reporting behavior are mostly embedded in the different models used by researchers, who often have different social scientific backgrounds. The present study is targeted to investigating crime victims' decision-making by integrating the three different

models into one model of crime reporting. It will be argued that it is not sufficient to exclusively focus on micro-level factors or factors composing the social context, but that the effects of these factors on the reporting behavior of crime victims should be studied simultaneously. This idea is certainly not new in criminology, let alone in the social sciences in general. Many social scientists have long recognized the need to incorporate contextual effects in explanations of individual behavior, but such an integrated model is not common in theories on reporting behavior (for two exceptions see: Baumer, 2002; Ménard, 2003). The general question addressed in this study is: *To what extent can crime victims' reporting behavior be explained by the context in which crimes and victims are embedded, while controlling for the effects of crime incident and victim characteristics?* By integrating the three main theoretical explanations of reporting behavior into a single socio-ecological model, this study models the influence of characteristics operating at different contextual levels, as well as crime and victim characteristics.

In this book, the effect of the context on victims' decision to report is examined: (1) across a large sample of respondents, (2) across different social contexts, (3) for violent as well as property crimes (while many studies focus on just one crime category or crime type), (4) using an analysis technique (multilevel analysis) that has been designed especially for the nested nature of the data presented in most chapters, and (5) using different research methods: not only victimization data from population surveys are used, as is predominantly done in studies on crime reporting, but use is also made of an experimental vignette study among juvenile students. The different social contexts that are studied (ad 2), are the type of crime location and the relationship of this factor with who the offender is, the victims' neighborhood, and the victims' country. The victimization data used (ad 5) stem from large-scale national as well as international standardized questionnaire surveys and are combined with independent data on contextual factors.

The remainder of this chapter is organized as follows. In Section 1.2 the definition of reporting behavior used in this book is given. Section 1.3 presents an overview of the three common theoretical models used in research on the determinants of reporting. Important empirical findings based on these theories are given. In Section 1.4, an integrative socio-ecological model is introduced and it is argued that victims' decision-making can be best understood by not only taking into account crime and victim characteristics, but also the influence of factors that compose the broader context, since crimes and victims are nested within that context. The research questions and main hypotheses in this study are presented in Section 1.5. Section 1.6 introduces the data sources used in this thesis and explains the analytical strategy. An overview of the subsequent chapters in the book is given in Section 1.7.

1.2 Definition of Crime Reporting

Throughout this thesis, as in other research on victims' decision-making, reporting crime to the police is defined as *notifying the police of a crime that took place*. In most cases, crime reporting takes place at a police station. However, it is also possible to notify the police by telephone and nowadays one can report minor crimes via the Internet in many (Western) countries. Of course, sometimes the police are already on the scene when a crime takes place.

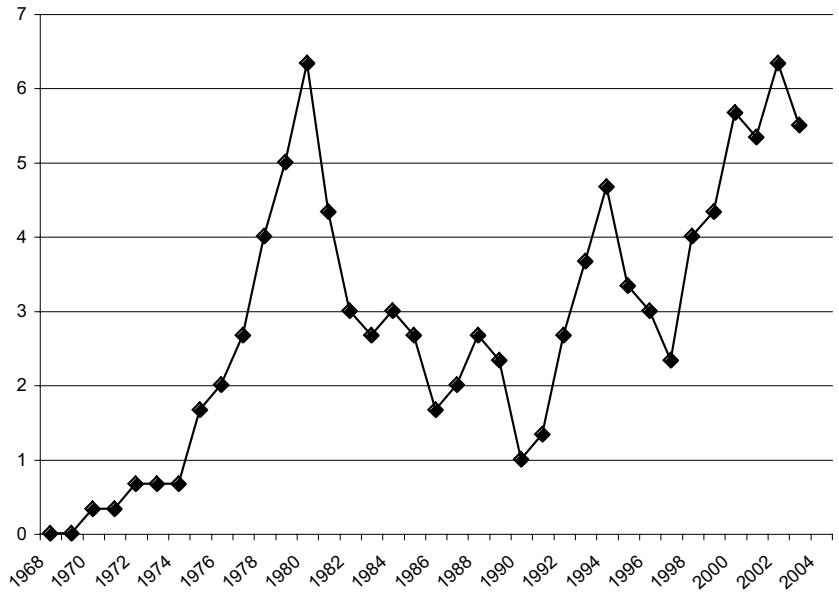
In the Netherlands, in everyday language people talk about reporting to the police (*aangifte doen*), regardless of whether an official report has been made by the police and signed by the person who reported (in most cases the victim or a witness), or whether the police have only been informed and no report has been signed. However, if no report has been signed, formally no *aangifte* but a *melding* (notification) has taken place. In the English language, no such distinction is made. Throughout this thesis the terms reporting to the police, notifying the police and contacting the police are used. This book is not about what the police do after they have been notified (e.g. whether they register the crime or not, or whether they take any action after the notification), but about whether they have been informed of the crime. Thus, the focus is on whether victims contact the police or not. For more information on the difference between contacting the police and making an official report in the Netherlands, see Wittebrood (2004).

Furthermore, this book is selective with regard to what crimes and victims are examined. First, it studies the reporting behavior of individuals. Crimes reported by institutions and organizations are not examined. Second, only crimes directed at persons and households are included; so-called 'victimless crimes' are excluded. Victimless crimes are crimes with no direct victim, or with a collective as the victim. Examples are (tax) fraud, the use of illegal intoxicants, drug dealing, illegal prostitution, driving while intoxicated, vandalism to public property, and crimes against the environment. Third, the focus is on violent and property crimes, and only those with a relatively high prevalence such as thefts and assaults. This restriction was made because these types of crime are covered by population surveys on victimization. Fourth, this book focuses on the reporting behavior of crime victims, and not on bystander reporting. This choice also had to be made due to data restrictions. In victimization surveys, respondents are first asked whether they have been the victim of a certain crime, and then whether they have reported their victimization to the police.

1.3 Existing Theories and Empirical Research

As will be shown in Chapter 2, the percentage of crimes reported to the police varies with regard to the type of crime and circumstances. Why is the reporting percentage higher for certain types of crime under certain circumstances than for other types of crime under other circumstances? Even though (law) sociologists and jurists have been discussing this classic question in victimological and criminological research for a long time, the first empirical studies on the determinants of victims' reporting behavior date from the early seventies when population studies regarding victimization became popular. Since then, a considerable number of studies has been published. This can be seen in Figure 1.1, in which all (over a 100) scientific articles, chapters, and books about reporting, written in English and published between 1968 and 2003, have been included.[1.2] One can see a first wave of publications around 1980.

Figure 1.1 Total number of English-written studies on the determinants of reporting behavior (three-yearly advancing mean)



source: Goudriaan, 2004.

[1.2] The aim of Figure 1.1 is to give an indication of the body of internationally accessible (hence: published in English) empirical research publications on victims' reporting behavior. A list of all publications is available from the author upon request (Goudriaan, 2004). The database is based mainly on publications in '*Criminal Justice Abstracts* 1968-2003' that refer to determinants of crime victims' reporting behavior. Due to the double meaning of the word 'report' it was not possible to compute a 'clean' list by using only keywords. Furthermore, the list only contains publications on reporting behavior of individual crime victims, and not on reporting by organizations.

These studies were mostly responses to, and tests of, the theoretical propositions of Black (1976), on which Section 1.3.3 will elaborate. In addition, the number of studies on the determinants of reporting seems to show a slight increase over the past fifteen years.

Three theoretical models have been used in these studies, henceforth known as the economic, the psychological, and the sociological model. This classification is based on the level of aggregation the theories are directed at and on the types of processes, or mechanisms, that are assumed relevant for reporting. The theories and the empirical findings within these three models are discussed in the sections below.

1.3.1 Economic model

Much of the empirical literature on crime reporting (implicitly) uses an economic model. It is assumed that the decision to (not) report a crime is based on a cost-benefit calculation by the victim determining whether it is worth the effort to contact the police (Skogan, 1976, 1984). The victim will not file a report with the police if the expected costs of reporting are higher than the expected benefits and vice versa. According to this model of decision-making, crimes resulting in little or no financial losses or physical injury will be reported less often, as reporting always brings transaction costs (it takes time), while the expected benefits of reporting are low: it does not seem probable that the police will take the case very seriously, let alone that they will put (much) effort into solving the case. If the police do anything at all, there will never be much benefit for the victim, as compensation of the (little) damage that has occurred is the maximum the victim can get out of it. Based on this model it can therefore be expected that the perceived seriousness of the crime will play an important role in victims' decision-making: reporting is only attractive above a certain degree of crime seriousness. The perceived seriousness will be strongly related to the amount of financial loss and/or physical injury. This is in accordance with existing empirical research (e.g. Bennett & Wiegand, 1994; Felson, Messner, Hoskin, & Deane, 2002; Fishman 1979; Gottfredson & Hindelang, 1979; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). This economic model is a micro-level explanation of crime reporting, as it focuses purely on characteristics of the crime and does not incorporate influences of the social environment.

It is important to note that this model differs from modern rational choice theory, as it focuses predominantly on factors directly related to the objective crime seriousness and on the seriousness of the crime as perceived by the victim. Modern rational choice theory would offer a much more extensive model, as other factors are also thought to be of importance in predicting human decision-making. The

economic model further assumes that victims are able to make rational decisions, while it remains a question whether people – especially people who are crime victims and might be in a state of stress and/or fear – are always capable of making rational decisions.

1.3.2 Psychological model

Another considerable part of the literature on crime reporting uses a (cognitive) psychological model. Researchers who use this model assume that additional factors – such as the social network of the victim – play a role in the decision-making process. They too state that victims make a cost-benefit calculation to determine what action to take, but also that victims are sometimes too emotional or fearful in the aftermath of a crime to be able to make rational decisions. Researchers who use this model were the first to acknowledge that victims have different behavioral options after a crime and that reporting the crime to the police is just one of those options. According to the model of decision-making for crime victims developed by Ruback, Greenberg, and Westcott (1984; but see Greenberg & Ruback, 1992 as well), there are three stages that victims go through after victimization. In the first stage, people label themselves as crime victims. They have noticed a suspicious event or have been involved in a situation that could be interpreted as a crime. Whether people label it as a crime or not depends on their own definition of a crime and the similarity between this definition and the incident. In the second stage, people determine the seriousness of the crime. This judgment is based on the perceived injustice of the incident and the perceived vulnerability to similar crimes in the future. In the third stage described by this model, victims decide whether to seek help from the police, to seek a private solution, to re-evaluate the situation, or to do nothing at all. This decision is based on stored knowledge regarding the different options. It is assumed that when deciding what to do, a victim's goal is to reduce the experienced distress.

From the psychological model, in analogy with the economic model, it is expected that serious crimes are reported to the police more often than less serious crimes. However, this effect is assumed to be indirect: it influences the affective reaction (fear, stress), which in turn influences the decision-making. Another important factor is whether or not a victim knows the offender. If this is the case, one might, for example, fear retribution by the offender if the crime were reported. This could decrease the chance that the victim will file a report. The victim's direct social environment is also important. If, for example, a victim's social network advises him or her not to report, he or she will be less inclined to turn to the police for help. Thus, the attitude of victims and of their social network toward reporting crimes to the police also influences decisions: when significant others believe that reporting is appropriate for the situation, victims will be more inclined to file a report with

the police. Victims' previous experiences with reporting – if there are any – are also important according to this theory. Thus, the psychological model focuses predominantly on the victim-level and effects of the direct social environment.

Unlike any other research on victimization, the empirical studies done using this psychological model also include experiments. In their book *After the crime; Victim decision making*, Greenberg and Ruback (1992) describe an experimental study on how the magnitude of a theft (worth $3 or $20) and the proximity of the thief affect the chance that a theft is reported to the police. They found that people who lost $20 were more inclined to call the police than people who lost $3, but only if the thief had disappeared. If the thief was still on the premises, the amount that had been stolen did not matter. They concluded that if the value of a theft is high, the motivation to report the crime incident is strong, regardless of the chances that the thief can be caught. On the other hand, a minor theft is reported less often if the thief has disappeared due to the lowered chance that the police can do anything about it. Other experimental studies described in the book by Greenberg and Ruback focus on the influence of emotions and of the social environment. The subjects' state of mind after discovering the crime and the advice of others were also found to influence reporting. In a recent study by Greenberg and Beach (2004) among victims of burglary and theft, it was found that the social process (consulting others to decide whether or not to notify the police) is a stronger predictor of reporting than the cognitive process (weighing the expected costs and benefits of reporting), while the latter is generally assumed to be the most important predictor.

Felson *et al.* (2002) studied the effects of motives (not) to report violence to the police. They used data from the American National Crime Victimization Survey (NCVS), in which respondents who say they have been a crime victim are not only asked whether they reported it or not, but also what their motives were to (not) do so. Among other things, they found that victims who report family violence more often do so to protect themselves against further victimization than victims of violence by an unknown offender. Victims of violence by their spouse who did not report it, on the other hand, did not use the motive 'fear of retaliation' more often than victims who decided not to report their violent victimization by someone other than their spouse.

1.3.3 Sociological model

The third model frequently used in studies on reporting behavior is a (macro-) sociological model. It assumes that the probability that a crime is reported to the police is a function of social structures in the society in which the victim and offender live (Black, 1976). This model differs strongly from the other two, as it is not interested in individual decision-making within social groups or societies,

but focuses predominantly on the influence of contextual variables on reporting percentages (Lessan & Sheley, 1992). It is a macro-level explanation for crime reporting and in general tries to explain reporting behavior at a higher level of aggregation.

A classic study using the sociological model is *The Behavior of Law* (Black, 1976), which some have referred to as the single most important contribution to the sociology of law (Gottfredson & Hindelang, 1979).[1.3] In his book, Black presents a general sociological theory about variation in the 'behavior of law', where law is defined as governmental social control. Examples of the behavior of law are: how the police treat victims, witnesses and offenders, or the conviction of an offender, but also victims reporting victimization to the police. According to Black, there are five social structural variables that predict variations in the behavior of law: social stratification (uneven distribution of the conditions of existence, such as food, access to land or water and money), morphology (e.g. the distribution of people in relation to each other, including their division of labor, integration and intimacy), culture (e.g. expressions of what is true or important, such as religion, adornments and folklore), organization (the corporate aspect, or the capacity for collective action), and social control (the normative aspect of social life, or the definition of deviant behavior and the response to it, such as prohibition, accusation, punishment and compensation). For example, Black proposes that in communities with a high degree of stratification, the law is used more often, and thus more crimes are reported to the police. Another assumption is that there is a negative association between the quantity of law (a form of formal social control) and other types of social control.

Researchers using the economic model ignore the social context in which crimes and victims are embedded, and focus predominantly on the influence that crime seriousness has on victims' decision-making. The sociological model has the opposite shortcoming: it focuses on the influence of social and cultural variables – mostly at an aggregated level – and does not recognize individual decision-making. Moreover, possible direct or intermediating effects of unique characteristics regarding the situation or the victim are not considered.

Several empirical studies on reporting crime have been carried out using this sociological model. Most of these studies have tried to test the theoretical ideas of Black. Probably the first to do so were Gottfredson and Hindelang (1979). They studied the effects of all five structural variables that Black considered important

[1.3] In spite of the criticism Black's work has received (e.g. Michaels, 1978, who claimed that Black's theory is circular) and in spite of Black's own attempt in 1979 to dampen the enthusiasm regarding the value of his work (Black, 1979), *The Behavior of Law* has been a great stimulus for research in the sociology of law over the last decades (see e.g. Horwitz, 2002, for a number of laudatory articles on the contribution of Black's work to sociology).

using data from the NCVS. Overall, they found only a weak confirmation of Black's theory. A year later, Braithwaite and Biles (1980) replicated the study by Gottfredson and Hindelang with data from an Australian victim survey and reached similar conclusions. Both studies found a strong relationship between crime seriousness and reporting. Gottfredson and Hindelang as well as Braithwaite and Biles only used bivariate analyses; they tested the effect of every independent variable separately. In more recent studies, other researchers have tested some of Black's propositions using multivariate models (e.g. Avakame, Fyfe, & McCoy, 1999; Warner, 1992). Again, the overall results were not compatible with most of the predictions of Black's theory on the behavior of law.

In summary, one can say that the economic model is a micro-level explanation of reporting crime, as it focuses on characteristics of the crime incident with most of the attention directed to crime seriousness. The psychological model is a meso-level explanation: it focuses predominantly on the characteristics of the victim, the situation and the direct social environment. Finally, the sociological model is a macro-level explanation as it focuses on the effects of the broader socio-cultural context. In earlier empirical studies, researchers have generally called upon one of these models to explain crime reporting. In doing so, they have focused on the effects of their own obvious independent variables.

1.4 Toward an Integrative Theoretical Model: A Multilevel Socio-Ecological Model

1.4.1 The socio-ecological model

So far, most research on crime victims' reporting behavior has been done using one of the three models discussed in the previous section. Consequently, researchers have generally focused on one level of aggregation at a time. However, various social scientists have emphasized the need to incorporate different levels of aggregation to better understand human behavior, including criminal behavior (e.g. Barker, 1968; Bursik & Grasmick, 1993; Hunter, 1985; Liska, 1990; Miethe & Meyer, 1994; Wunsch, 1995). It is assumed that decisions are not made in a vacuum, but rather are part of a dynamic interaction with the social environment in which decision-makers are embedded (e.g. Granovetter, 1985; Nee & Ingram, 1998). While this orientation to building transdisciplinary, multilevel models of decision-making is widely accepted in most research areas of social sciences (Pescosolido, 1992), it is still quite rare to do so when it comes to theories on decision-making by crime victims.

Ménard (2003) is one of the few authors who used such an integrated framework for her studies on crime victims' decision-making. Her 'social ecology framework' integrates the earlier theories on crime reporting behavior, and thus focuses on different types of decision-making processes and on multiple aggregation levels. Ménard notes that victims are nested within different social contexts (e.g. social networks, organizations, communities). An important theoretical work Ménard builds her social ecology framework on is an article by Pescosolido (1992) on help-seeking behavior. Pescosolido shifts the focus from the individual to the social network in which individuals are embedded. She writes: "Even when norms, networks, and situations are brought in as additional items on the individual's checklist, social forces remain either restricted to those perceived or acknowledged by the individual […]. The critical dynamic relationship among individuals and their networks and the larger structures that form and shape them are downplayed, even dismissed" (pp. 1102). Thus, according to Pescosolido, contextual influences extend beyond the consciousness of individuals. Therefore, Ménard argues: "…an understanding of [victims' reporting behavior] can be obtained only by taking into account the influence of the socio-cultural factors that compose the context" (pp. 107).

The socio-ecological model used in this book builds upon the framework developed by Ménard (2003). It focuses on the effects of factors that compose two related types of contextual effects, namely the context in which crimes take place and the context in which victims are embedded. The possible effects of these two types of context can be illustrated by an example in which the likelihood of reporting crimes in three different neighborhoods (*a*, *b*, and *c*) from two countries (*X* and *Y*) is discussed:

> People who live in neighborhood *a* in country *X* report less crimes to the police than people who live in neighborhood *b* in the same country, because there is no police station in neighborhood *a* and because people in this neighborhood have strong social ties with their neighbors and can therefore often rely on each other when they are in need of help. Neighborhood *b*, on the other hand, has a police station that is open 24 hours a day, and most people in this neighborhood do not even know their neighbors. People in neighborhood *a* in country *X* also report less crimes to the police than people in neighborhood *c* in country *Y*, even though the two neighborhoods happen to be very similar as are the characteristics of the crimes that take place in both neighborhoods. The lower probability of victims reporting crimes in country *X* than in country *Y* is caused by the fact that the police in country *X* are perceived as corrupt by most people, while they have a very good name in country *Y*. Furthermore, most people in country *Y* have access to the Internet and in this country it is possible to report (minor) crimes via the Internet, while in country *X* many people do not even have a telephone. Contacting the police therefore generally takes less effort in country *Y* than in country *X*.

> The contextual effects described above are effects of the context in which people live. Within neighborhood *a*, crimes take place at different locations. For example, some crimes take place within the local factory, while others take place in the park. The probability that a crime taking place inside the factory (a semi-public area) is reported to the police is lower than the probability that a similar crime in the park is reported, because in the factory people can turn to an alternative authority (e.g. their boss, a security guard) if they are unable to resolve the situation informally. If this official authority deals with the situation efficiently, there is no need to inform the police about what happened. In the park (a public area), there is no alternative authority. This effect of the type of location in which crimes take place is also present in neighborhood *b* in country *X* and even in neighborhood *c* in country *Y*. Therefore, these are effects of the context in which crimes take place.

A schematic overview of the socio-ecological model used in this book is given in Table 1.1. The rows in this table represent the 'levels' at which various factors can influence crime victims' reporting behavior. These levels are the crime incident, the victim, the context in which crimes take place (e.g. within an organization or in the private domain), and the meso- and macro-level context in which victims reside (e.g. victims' social network, their neighborhood, and the country they live in). Within these different levels, victims' decision-making can be assumed to be either the result of a cost-benefit calculation or a normative decision. These two mechanisms, or processes, are represented by the columns in Table 1.1. Thus, on one hand the socio-ecological model is characterized by processes that influence victims' reporting behavior, and on the other hand by 'levels' at which these processes exert their influence. (Note: Section 1.5 elaborates on the factors mentioned in the cells of Table 1.1.)

Regarding the different levels, the crime incident refers to the immediate crime scene and nothing other than that. Social contexts include any aspects of the location at which a crime incident occurs or in which a victim is embedded outside the immediate crime incident situation. For example, the value of a theft or the amount of force used by an offender is part of the crime incident. The level of social cohesion in a neighborhood, whether or not there is a corporate entity responsible for the area, the public in general has confidence in the police, or whether residents are willing to assist each other in maintaining order, are aspects of the social context. In the empirical studies described in this thesis, the focus is on three contexts that are assumed to be important in the literature: the location at which crime incidents take place and the neighborhood and country in which victims reside.[1.4] Many researchers

[1.4] Note that the contextual levels at which effects are empirically studied in this book are not all encompassing. For example, this thesis focuses on effects of the neighborhood (as well as the country) in which the victims live, while Ménard (2003) studied the effects of the county in which victims live. An important motivation for studying the effects of neighborhood context is that there were enough

have suggested that aspects of these contexts could influence reporting behavior (e.g. Anderson, 1999; Baumer, 2002; Black, 1976; Conklin, 1975; Laub, 1981; Ménard, 2003), but only a few have empirically studied the effects of factors constituting these contexts while taking crime and victim characteristics into account (see, however, Baumer, 2002; Ménard, 2003). In the different studies presented in this thesis, crime incident and victim characteristics are systematically used as control variables.

The two processes that are assumed to determine victims' decision to report are cost-benefit processes and normative processes. These processes are derived from the economic, psychological and sociological model, and are assumed to operate at different levels of aggregation. They are conceptually similar to the processes distinguished by Ménard (2003).

Cost-benefit calculations are made based on the expected expenditures and returns to the victim. This calculation is the central process in the economic model (Skogan, 1984) and it is assumed to be relevant in the psychological model as well (Greenberg & Ruback, 1992). As mentioned before, the economic model focuses predominantly on factors directly related to the objective crime seriousness and on the victim's perceived seriousness (see the discussion in Section 1.3.1). In the socio-ecological model, however, the cost-benefit calculation is not only assumed to be influenced by characteristics of the crime incident, but also by contextual-level factors. The level of informal social control in a neighborhood or community, for example, is such a factor. Ménard (2003) discusses extensively why and how social disorganization theory (Shaw & McKay, [1942] 1969) and the related social control theory (Hirschi, 1969; also known as social bonding theory) – both theories are directed at explaining crime at an aggregated level – can be used to explain crime victims' reporting behavior. She writes: "A central tenet of these […] theories is that crime or social violation is a manifestation of society's inability to maintain social order through formal and informal avenues. That is, social groups or societies regulate their members' behavior through a combination of formal and informal sanctions" (pp. 51). The classic social disorganization theory assumes that informal social control is an important mechanism for regulating conduct and mediating interpersonal disputes in a community (Baumer, 2002). Various researchers have suggested that informal social control is important for levels of crime reporting in communities (e.g. Baumer, 2002, Black, 1976; Conklin, 1975; Laub, 1981). Residents of communities with low levels of informal social control (e.g. people who live in central cities), could need more formal (police) control to maintain order

detailed data available from the Netherlands to actually make it possible to study neighborhood-level effects. In many countries, no such data are available. Ménard – who used data from a survey among college students and victimization data of 48 rape crisis centers to study reporting behavior of rape victims – would probably not have been able to include victims' neighborhood as a contextual level.

than residents of communities with strong informal social control. The latter can rely more on the support of their direct personal environment (Boggs, 1971; Laub, 1981).

Normative processes, in contrast, are not a direct result of the expected costs or benefits, but of norms that exist, for instance, in the victims' social network. These processes are thought to be of importance for victims' reporting behavior in the psychological model (at micro- and meso-level) and the sociological model (at macro-level). In the psychological model, it is assumed that people are often in a heightened state of arousal after victimization (e.g. they experience feelings of injustice and vulnerability, or fear), and that they will therefore often ask people around them for advice on what to do (e.g. whether they should notify the police or not). Norms existing within victims' direct social network will then influence their reporting behavior (see also Section 1.3.2). In the sociological model, normative processes are assumed relevant at higher levels of aggregation, for example at neighborhood and country level. Thus, existing norms within a society are assumed to influence the behavior of individuals belonging to that society (Black, 1976; see also Section 1.3.3). The socio-ecological model assumes normative processes to influence reporting at different levels of aggregation.[1.5]

Table 1.1 Socio-ecological model of reporting behavior by crime victims

Level	Process	
	Cost-benefit	*Normative*
Crime incident Victim		
Context in which crime incidents are embedded	- type of location - degree to which offender is known - offender 'part of' specific location - alternative to report to	- type of location - degree to which offender is known
Meso-level context in which victims are embedded e.g.: block, neighborhood, community	- confidence in police - social cohesion	- confidence in police - socioeconomic disadvantage
Macro-level context in which victims are embedded e.g.: county, region, state, country	- confidence in police - level of individualism	- confidence in police - level of individualism - conformity norm - institutionalization of insurance

[1.5] In this respect, the present model differs from the social ecology framework by Ménard (2003), as she assumed normative processes to be of influence at micro-level only.

Some factors might have an influence on crime victims' reporting behavior by triggering normative as well as cost-benefit processes. For instance, if victims know their offender they might decide not to report, because of fear of retribution by the offender (or decide to report because they are afraid that the crime will be repeated if they do not report). This would be a cost-benefit process. Victims who know their offender might also decide not to report because they believe it is not a case for the police, or because they feel it is something they should solve privately. This would be a normative process.

1.4.2 Tests of the socio-ecological model

Apart from Ménard's (2003) empirical work and one empirical study by Baumer (2002), no research on victims' reporting behavior has been done that can be regarded a test of the multilevel socio-ecological model. So far, these are the only empirical studies that test hypotheses that can be derived from the socio-ecological model on the effects of contextual variables, and that examine more than one level of aggregation simultaneously.

Ménard (2003) used a multilevel model to study the effects of different victim-level characteristics (e.g. victim's age, use of intoxicants and relationship to offender), county-level characteristics (gender inequality, structural disadvantage and degree of urbanization) and cross-level interactions on the reporting behavior of victims of sexual victimization. She found that factors regarding both the nature of the sexual assault (e.g. the victim-offender relationship) and the county in which victims reside (e.g. the structural disadvantage) affect their decision to contact the police. Thus, components from both levels independently contributed to the explanatory power of her model. She concludes: "Consistent with a social ecology framework, greater understanding of victims' decision-making came from the inclusion of both levels of influence, suggesting micro- and macro-theory integration is feasible" (pp. 151).

Baumer (2002) also used a multilevel approach in his study on the effects of the social composition of the neighborhood in which crimes take place on victims' reporting behavior. In his models he controlled for crime characteristics (e.g. crime seriousness) and victim characteristics. One of his findings was that the socioeconomic status of the neighborhood has a curvilinear relationship with the likelihood of reporting simple assaults. Living in a disadvantaged or affluent neighborhood decreases the likelihood that these crimes are reported to the police. He speculated that very affluent and very disadvantaged neighborhoods might generally be characterized by higher levels of social cohesion and social support, which reduces the need for the police when it concerns minor assaults.

It is worth noting that the empirical studies by Ménard and Baumer were not only sparked by theoretical discussions, but also by the development of more advanced

methods of data collection, computer technology, and methods of analysis over the past decades. The possibilities for advanced analyses on large data sets have increased enormously. Currently, analyses are possible in which one can simultaneously focus on characteristics of crime incidents, victims, and the social context.

1.5 Research Questions and Main Hypotheses: Using the Socio-Ecological Model to Study Contextual Effects on Crime Reporting

The general question addressed in this book is: *To what extent can crime victims' reporting behavior be explained by the context in which crimes and victims are nested, while controlling for effects of crime incident and victim characteristics?*
To answer this question, various hypotheses were derived from the literature on crime victims' reporting behavior in general, and from the socio-ecological model in particular. It should be noted that the list of hypotheses tested in this book is by no means exhaustive. Many other hypotheses could be derived and tested. The present hypotheses, however, are central to the theoretical literature regarding contextual effects on victims' reporting behavior. Moreover, they can be tested with available data.

The cells in Table 1.1 (see Section 1.4.1) give an overview of the factors that are hypothesized to influence victims' reporting behavior. As explained, the rows represent the different levels that are assumed to be important for reporting and the columns represent the two types of processes that are thought to play a role in victims' decision-making. For the sake of simplicity and for easy reference, only the specific factors of which the effects are studied in this thesis are included in Table 1.1.[1.6]

In Sections 1.5.1, 1.5.2 and 1.5.3, the three main research questions studied in the empirical chapters of this thesis are presented, as are the main hypotheses. These sections include only a brief summary; the hypotheses are treated at length in the empirical chapters. The three main research questions and the specific factors studied with the aim of answering these questions are also presented in the first three columns of Table 1.2 (see Section 1.7).

1.5.1 The context in which crimes take place

Different hypotheses are tested in this book to attempt to answer the following main question: *To what extent does the context in which crimes take place have an effect on crime victims' reporting behavior, controlled for effects of crime incident and victim characteristics?*

[1.6] A similar table in Chapter 6 (Table 6.1) includes additional factors that could be of importance for victims' reporting behavior.

The main factor that is assumed to be important in this respect is the type of location in which the crimes take place. In this regard, four types of crime locations are distinguished: (1) private locations, (2) semi-private locations, (3) semi-public locations, and (4) public locations. A private location is someone's home or other private property. A semi-private location is less private than the first category, but is only open to specific people (e.g. someone's work or school). Semi-public locations are open to everyone, but one has to obey the norms and regulations that exist in that specific location and sometimes one has to pay to be allowed in (e.g. cinemas, nightclubs, restaurants and public transport). Public locations are open to everyone, free to enter, and they are owned by the (local) government (e.g. streets, forests and beaches). Note that semi-private and semi-public locations are organizations, whereas private and public locations are not.

Even though the assumption that the location in which crimes take place influences victims' reporting behavior is not exactly new (e.g. Black, 1976: 91), effects of crime location have not received much attention in empirical research. It is generally assumed that the odds of reporting violent crimes that take place in the private domain are relatively low (e.g. Block, 1974, Gartner & Macmillan, 1995; Malsch & Smeenk, 2004). In addition, some studies indicate that reporting percentages are low for crimes taking place within schools (a semi-private location) (Finkelhor & Ormrod, 2001; Finkelhor & Wolak, 2003). Therefore, the first hypothesis tested is that victims will less often report to the police if a crime incident takes place in a (semi-)private location than when it takes place in a (semi-)public location. However, (partly) contradictory hypotheses will also be tested in this book.

Because the crime location is related to the victim-offender relationship – relatively many crimes within the (semi-)private domain are committed by known offenders (Felson *et al*., 2002; Garofalo, Siegel, & Laub, 1987) – effects of this factor will also be studied. The effect of the victim-offender relationship on victims' crime reporting behavior has received a lot of attention in empirical studies, but empirical evidence is mixed (e.g. Bachman, 1993, 1998; Baumer, Felson, & Messner, 2003; Felson, Messner, & Hoskin, 1999; Gartner & Macmillan, 1995; Kaukinen, 2002; Lizotte, 1985; Pino & Meier, 1999; Singer, 1988).[1.7] It will be argued that the contradictory findings might be caused by the fact that these studies do not consider the crime location and it will be hypothesized that these two factors interact. More specifically, it will be hypothesized that the effect of the victim-offender relationship on victims' reporting behavior is stronger for (violent) crimes taking place in the (semi-)private domain than in the (semi-)public domain, with crimes involving

[1.7] Because most victims do not see – let alone know – the offender involved in a property crime (e.g. burglary or theft), these studies focus on the reporting behavior of victims of violent crimes.

unknown offenders having an especially high probability of being reported if they take place in the (semi-)private domain. Furthermore, it will be hypothesized that (violence) victims report to the police less often especially if the crime takes place within an organization (a semi-private location) that both the victim *and* the offender are part of. These interaction effects have never before been studied.

1.5.2 The context in which victims live: neighborhood characteristics

The socio-ecological model predicts that factors related to the context of the neighborhood in which victims live will influence the crime reporting behavior of individual victims. Therefore, the second main research question addressed in this thesis is: *To what extent do factors constituting the context of the neighborhood in which victims live have an effect on their reporting behavior, controlled for effects of crime incident and victim characteristics?*

Regarding neighborhood effects on reporting, three factors are generally assumed to be important: (1) the social cohesion, (2) the confidence in police effectiveness, and (3) the socioeconomic disadvantage (e.g. Anderson, 1999; Baumer, 2002; Bennett & Wiegand, 1994; Conklin, 1975; Gottfredson & Hindelang, 1979; Laub, 1981; Rose & Clear, 1998). Therefore, effects of these factors at neighborhood-level are studied in this book in order to answer the second main research question. Even though these factors have previously been assumed to be of importance, the present study is the first to measure them individually (cf. Baumer, 2002) – and to examine their effects simultaneously in a multilevel analysis (cf. Bennett & Wiegand, 1994; Gottfredson & Hindelang, 1979).

Drawing on the existing literature, two contradictory hypotheses on the effects of social cohesion will be tested. It will also be tested whether lower confidence in the police or a greater socioeconomic disadvantage at neighborhood-level result in a reduced likelihood that victims who live in that neighborhood will report their victimization to the police. Two earlier studies have found a negative relationship between socioeconomic disadvantage and crime reporting, but as the mechanisms behind this relationship remain unclear, it will also be tested whether the relationship between socioeconomic disadvantage and reporting is indirect and takes place via (an) intermediary factor(s). The social cohesion and the confidence in police effectiveness in the neighborhood are two obvious intermediary factors. This has not been tested before.

1.5.3 The context in which victims live: country characteristics

The third main research question addressed in this book is: *To what extent do factors constituting the context of the country in which victims live have an effect on their reporting behavior, controlled for effects of crime incident and victim characteristics?*

Simple cross-national comparisons of reporting percentages using the International Crime Victims Survey (ICVS), showed relatively large differences in reporting percentages across countries (Bouten, Goudriaan, & Nieuwbeerta, 2002; see also Table 2.5). Skogan (1984) reviewed victimization surveys across nations and concluded that crime seriousness is the major determinant of reporting to the police, while country (and victim) characteristics have relatively little effect on reporting to the police. However, this review is suspect to some extent, as it is based on a comparison of country-level victimization surveys that unlike the ICVS did not employ uniform methodologies (Van Dijk, Mayhew, & Killias, 1990). Furthermore, in previous studies no country-level covariates were included that could help to understand why differences in reporting to the police occur across countries. As a result, it is unknown whether the country-level social context affects the decision to report and, if so, what aspects of the country-level social context influence reporting.

There is a wide variety of attributes of country-level context that might affect the decision to report crimes to the police. Among these characteristics, four aspects of country-level social context seem to be of great importance: the perceived competence of the police, the institutionalization of the insurance business, the norm of conformity, and the level of individualism. These factors can all be assumed to have a positive effect on victims' likelihood to report a crime. The present study will be the first to test for the effects of (these) country-level factors.

1.6 Data Sources and Analytic Strategy

To test the different hypotheses regarding the effects of contextual factors on victims' reporting behavior, information is required about crime incidents, victims, and the larger social context in which both are embedded. For this purpose, it would not be very useful to draw on police registration databases. As noted in Section 1.1, crimes that are not reported to the police by their victims normally do not come to the attention of the police. Luckily in the Netherlands, as in a number of other countries, there is a valuable alternative source of information: population surveys on crime victimization. In these surveys, citizens are asked whether they have been victims of one or more crimes in a certain period preceding the survey. If

their answer is affirmative, they are asked (among other things) whether they have reported the crime(s) to the police. In addition, various social and demographical characteristics of the respondents are known and generally (some) information is available on the context in which the crimes took place and on the context in which victims live. Often it is also possible to combine the information collected in such a survey with additional information (e.g. on neighborhoods and countries) from other sources. Therefore, these surveys are a very valuable source for studies regarding the determinants of victims' crime reporting decisions.[1.8]

1.6.1 Victimization surveys

The empirical studies in this book use data from three different victimization surveys: the Netherlands Survey on Criminality and Law Enforcement 1996 (*Nederlandse Survey Criminaliteit en Rechtshandhaving*; NSCR), the Police Population Monitor (*Politiemonitor Bevolking*; PPM) 1995-2001, and the International Crime Victims Survey (ICVS) 1992-2000.

The NSCR was carried out in 1996 by the Netherlands Institute for the Study of Crime and Law Enforcement (also abbreviated as NSCR, but to avoid confusion with the survey this abbreviation will not be used in this thesis). The data were collected using a multistage cluster sampling procedure to obtain a representative sample of the Dutch population aged 15 years and over (1,939 respondents), oversampling those between 15 and 30 years old (1,012 respondents), resulting in a total sample of 2,951 individuals. This survey contains more detailed information on (lifetime) victimization (and, for example, deviant behavior) than any other Dutch victimization survey. Using Computer Assisted Personal Interviewing (CAPI), respondents were questioned face-to-face in a private setting. Part of the questionnaire was filled out by the respondents themselves after completion of the interview. Because this survey – in contrast to the PPM and ICVS – contains information on the type of location in which crimes took place (e.g. at school, at work, in the victim's home), it is very suited to studying the effects of the context of the crime location on the decision of victims (not) to report. For more information on the NSCR, see Wittebrood, Michon, and Ter Voert (1997).

The PPM is a nation-wide Computer Assisted Telephone Interviewing (CATI) survey that has been conducted in the Netherlands every other year since 1993[1.9], with samples of 75,000 respondents (aged 15 years and over) on average. In includes standardized questions on victimization experiences and reporting behavior. Every

[1.8] For an overview of the history of victimization surveys in the Netherlands and for more information on the various surveys, see Eggen (2003).

[1.9] In 2003 it was decided to do the survey on an annual basis from then on.

wave contains at least 50,000 respondents, with a minimum of 1,000 within each of the 25 police regions. Because this survey is conducted on such a large scale, regional comparisons throughout the Netherlands can be made at a detailed level. In this thesis, the results from this survey are used to study the effects of the context of the neighborhood in which victims live on their reporting behavior. For more information on the PPM, see *Politiemonitor Bevolking* (2001).

The ICVS is the only fully standardized survey examining residents' (aged 16 and over) crime experiences in a large number of countries. Surveys were conducted in 1989, 1992, 1996, and 2000.[1.10] The ICVS includes data on more than 200,000 respondents in more than 60 countries in Western, Central and Eastern Europe, North and South America, Asia, Southern Africa, and Australia and New Zealand. The sample size is at least 1,000 per country for each wave. Because the survey is conducted in the same manner in many of these countries, it is suited to studying the effects of social context at a country level.[1.11] For more information on the ICVS, see Van Kesteren, Mayhew, and Nieuwbeerta (2000). For information on a number of comparative studies, see Nieuwbeerta (2002).[1.12]

Limitations of the victimization surveys

It has to be noted that victimization surveys have their limitations. They do not allow for generalizations across all types of crime and across the entire population. For example, some crimes cannot be adequately assessed due to their rare occurrence (e.g. carjacking or kidnapping). In addition, the surveys are usually limited to adolescents and adults; young children are not interviewed. However, more problematic than the above-mentioned (obvious) limitations of generalization are sampling problems, (selective) non-response, measurement problems, and problems of inference. These threats to the reliability and validity of the survey data have been the subject of debate since the emergence of the surveys (e.g. Biderman & Lynch, 1981; Cantor & Lynch, 2000; Schneider, 1981; Stoop, 2005).

The sampling procedure of a survey can systematically exclude specific groups of potential respondents. This problem of 'undercoverage' certainly applies to the PPM. Potential respondents of this CATI-survey are selected via the national register of telephone numbers held by KPN Telecom (Dutch Telecom Company). Consequently, people who do not have a (fixed) telephone are excluded from participation in the

[1.10] Recently a fifth wave of the ICVS has taken place. Data from this wave are not yet available.

[1.11] Fieldwork procedures are not identical in each country, however, as telephone interviews are conducted only in countries with a high telephone penetration; in other countries face-to-face interviews are held.

[1.12] The ICVS data and codebooks are available on www.unicri.it/icvs and www.icpsr.umich.edu.

survey. Furthermore, it excludes people whose telephone number is unlisted, as these are not included in the register. Although the exact figures are not known, it is estimated that by using this sampling procedure about 25 percent of all households are excluded and that this percentage is even higher in large cities (Schoen, Defize, & Bakker, 2000; Van Goor & Rispens, 2004). A methodological evaluation by Schoen, Defize, and Bakker (2000) shows that, when compared to the general Dutch population, the PPM features an overrepresentation of people with a higher level of education, people who are employed, people from single person households, native citizens and homeowners. Non-natives especially are underrepresented: while in 1999 about 12 percent of the Dutch citizens were non-natives, the PPM sample of that year only included three percent non-natives. Furthermore, the non-natives in the sample were not representative of the general population of non-natives (e.g. they were more highly educated). This is probably largely due to the sampling method used. Using Random Digit Dialing, as is done in the ICVS, can solve the problem of excluding unlisted numbers. However, the assumption that people with an unlisted number are reached as easily as listed people are and, once reached, can be interviewed just as well, is untenable (Van Goor & Rispens, 2004).

One of the major problems of every survey is non-response (Bruinsma, Van de Bunt, & Fiselier, 1990). If responses are not missing at random, but are related to any of the characteristics under study, this might introduce unequal measurement errors and therefore threaten the validity of the research findings. This might be the case in the ICVS, for example, where there are differing response rates across countries (Van Kesteren, Mayhew, & Nieuwbeerta, 2000). In the countries from which the ICVS data are used in this thesis, the average response rates varied from 44 percent for the American survey to 86 percent in Poland (the average response rates in all countries from which ICVS data are used in this book was 62%). Both undercoverage and non-response may lead to an underrepresentation of disadvantaged people and an overrepresentation of the middle class (Van Goor & Rispens, 2004). This limits the possibility to generalize the outcome of empirical studies based on population surveys. As this thesis focuses on the relationship between different variables and not on describing the crime victim population, it is assumed that this selectivity in itself will not seriously threaten the validity of the results. However, it is important to remember that the findings presented in this book might not be valid for the specific population groups that are underrepresented in the survey samples.

Responses can also be influenced by recall bias. If the numbers of victimizations that people recalled are plotted on a time-scale, most victimizations took place in a relatively short period before the interview (Biderman & Lynch, 1981). Scherpenzeel (1992) found that serious offenses are recalled rather well, even after a longer period. Thus, this recall bias seems to be more salient for less serious offenses. In a critique

on the ICVS, Bruinsma, Van de Bunt, and Fiselier (1990) noted that about half of the recalled victimization experiences in the recall period of five years took place in the last year before the interview. Especially in the NSCR, which asks questions about lifetime victimization, recall problems can be expected to cause substantial bias. Obviously, this is particularly problematic if one wants to estimate absolute reporting percentages or crime prevalence: reporting percentages are likely to be overestimated when a longer recall period is used, because more serious offenses are more often recalled and are also more often reported to the police. In addition, offenses that have been reported to the police are rehearsed and have consequences following the event and are therefore also remembered more frequently than offenses that have not been reported to the police (Biderman & Lynch, 1981). However, when testing a model of reporting behavior, it is less of a problem if crimes that happened longer ago are less likely to be recalled in the survey. Furthermore, Biderman and Lynch (1981) have shown that this type of recall bias is unrelated to other attributes of the crime.

Another problem of victimization surveys is a bias caused by the measurement design. Victimization is not randomly distributed over the population. In fact, someone who has been victimized generally has a higher chance of being victimized again (e.g. Farrell, Phillips, & Pease, 1995; Farrell, Tseloni, Wiersema, & Pease, 2001). Moreover, victim characteristics partly determine the probability that someone is repeatedly victimized. In general, victimization surveys only ask detailed follow-up questions (including whether the incident was reported to the police) about the most recent incident of a certain crime type within the reference period. This causes the probability that an incident is included in the survey data to be unequally distributed across respondents who are victimized. It is known that victim characteristics are not only related to the probability of victimization, but also to the probability of reporting to the police (see Chapter 2). Because the focus of this book is on contextual effects on reporting and not on effects of victim characteristics, this aspect of the measurement designs of the surveys is not expected to cause severe bias.

A final methodological problem mentioned here is that when researchers attempt to test propositions derived from causal theories, using data from a survey of a single point in time rather than a panel design, the designation of certain variables as either independent or dependent may be arbitrary and the direction of causality may be impossible to determine. For example, when studying the effects of attitudes on victimization, the victimization took place prior to the interview, but the attitude is measured during the interview. Therefore, the effects found might reflect that: the victimization might have influenced current attitudes (Schneider, 1981). This problem of causality, however, is less salient if focusing on contextual effects on reporting, especially when alternative data sources containing the contextual information are used.

For more information on the limitations of the use of survey data, see Cantor and Lynch (2000), Scherpenzeel (1992), Travis, Brown, Egger, Hogg, O'Toole, and Stubbs (1995), or Van Goor and Rispens (2004).

1.6.2 Vignette study

To overcome some of the problems encountered with victimization surveys – particularly recall bias and problems with causality – a vignette experiment among juvenile students is used in one of the studies described in this book. Vignettes are short descriptions of a social situation. Participants randomly receive one or more vignettes (the experimental conditions), are asked to imagine themselves in the situation that is described, and subsequently have to answer questions about their attitude or intended behavior in each situation. Consequently, differences in crime reporting between vignettes can be assumed to be caused by differences between the experimental conditions and not by individual characteristics not accounted for (as might happen when testing hypotheses with survey data).

In the vignette experiment carried out for this book, 508 students from seven different high schools participated. They were given a description of a violent incident and answered questions on their willingness to report to the police or to an employee of the organization they belong to (here: their school). The vignettes differed with regard to three factors: how well the offender is known, the location of the crime incident, and whether the offender is part of the same organization as the victim. In this manner, the effects of the institutional and relational social context on reporting could be studied.

A limitation of this vignette study is that it does not register real victim behavior. Instead, participants have to place themselves in a hypothetical situation and think about what they would do in such a situation. It is assumed that intentions are indications of the effort people are willing to make to carry out certain behavior (Fishbein & Ajzen, 1975).

In conclusion, both victimization surveys and vignette studies have their strengths and limitations – as does every research method. Using more than one research method to study one phenomenon is a form of methodological triangulation (e.g. Denzin, 1984; Patton; 1990), with as its principal goal minimizing bias and enhancing validity.

1.6.3 Analytic strategy

Since the survey data on victimization used in most chapters of this book (often combined with aggregated data from other sources) are nested, multilevel or hierarchical modeling is applied in these chapters to test the formulated hypotheses

(e.g. Goldstein, 1995; Snijders & Bosker, 1999). These models can be seen as generalizations of models for pooled time series and cross-sectional data. Hierarchical models have the advantage over traditional techniques (e.g. OLS-regression) of taking the nested structure of the data into account, so that measurement errors can be specified at each of the distinct aggregation levels. In addition, hierarchical models offer the advantage that in estimating the parameters they take into consideration the number of cases within a single level. In this particular case this means that, for example, in neighborhoods with relatively few respondents, data will have a smaller weight than in neighborhoods with a relatively large number of respondents.

The different models tested in this thesis all consist of two or three of the following aggregation levels: incident level, victim level, neighborhood level, or country level. The reader who wishes more extensive information on the specific models used in the analyses, is referred to Chapter 6, in which the estimated model is explained in detail. For more information about hierarchical modeling in general, see Goldstein (1995) or Snijders and Bosker (1999). In this thesis, all models are estimated using the software package MLwiN, which has been especially developed for these kinds of models (Rasbash, Steele, Browne, & Prosser, 2004).

1.7 Overview of the Book

This book addresses the question as to what extent the reporting decision made by crime victims can be explained by the context in which crimes and victims are nested. More specifically, it tests hypotheses based on a socio-ecological model of reporting to study the influence of the context of the location in which crimes take place, and of different factors composing the context of the neighborhood and the country that victims live in.

A schematic overview of the main research questions, explanatory variables, dependent variables and data sources used in the different chapters of this book is given in Table 1.2. Chapters 3 through 6 are directed at different contexts and test various hypotheses about the effects of these contexts on reporting while controlling for factors at the crime level and the individual level. It is important to note that these four chapters are written in the form of an article and can therefore be read independently.

Chapters 3 and 4 both test to what extent the context in which violent crimes take place influences victims' crime reporting behavior, net of the attributes of crimes and victims. The focus is on the type of location in which crimes take place and on the victim-offender relationship. In doing so, Chapter 3 focuses on the effects of normative as well as cost-benefit processes. In that chapter, use is made of data from a victimization survey and a distinction is made between private, semi-private,

semi-public, and public locations. Chapter 4 focuses on juvenile students' decision (not) to report violent crimes. It focuses on two types of locations only (semi-private vs. public locations). The hypotheses that are tested in that chapter overlap with those tested in Chapter 3, but in addition it is tested whether it makes a difference if the offender is 'part' of the same semi-private location as the victim or not. Moreover, in that chapter it is tested whether there is a relationship between reporting to the police and reporting to an alternative organization (this is assumed to be a cost-benefit process). To test the formulated hypotheses, data from an experimental vignette survey are used.

Chapters 5 and 6 are directed at the broader social context in which victims live. Both chapters use data from victimization surveys to test the formulated hypotheses. Chapter 5 studies aspects of the neighborhood context. It tests to what extent victims' decision-making is influenced by characteristics of the neighborhood in which people live if crime and victim characteristics are also taken into account. In doing so, the focus is mainly on cost-benefit processes. Chapter 6 attempts to explain differences in crime reporting between countries with country-level contextual factors that are mainly thought to play a role in normative processes.

Finally, Chapter 7 summarizes and discusses the findings of this thesis, deals with practical implications and provides suggestions for future research. Before discussing the empirical studies, a description of the empirical research on victims' reporting behavior in the Netherlands is presented in Chapter 2. An overview is given of the (scarce) empirical literature on victims' reporting behavior in the Netherlands and descriptive information on reporting percentages in the Netherlands is presented to show how these percentages vary in relation to characteristics of crimes, victims and contexts.

Table 1.2 Schematic overview of this book

Chapter	Main question	Explanatory variables	Dependent variables	Data	N
3	To what extent does the context in which incidents take place have an effect on reporting, controlled for attributes of crimes and victims?	• Type of location (private, semi-private, semi-public or public) • Degree to which offender is known	• Reporting violent crimes (Dichotomous)	• NSCR '96	1,301 crimes experienced by 809 victims in the Netherlands
4	To what extent does the context in which incidents take place have an effect on reporting, controlled for attributes of crimes and victims?	• Type of location (public or semi-private) • Alternative to the police to report to • Degree to which offender is known • Offender is (not) part of own organization	• Reporting willingness violent crimes (Interval)	• Vignette study '04	499 juvenile respondents from 16 Dutch school classes; randomly divided over experimental 10 conditions
5	To what extent does the context of the neighborhood in which victims live have an effect on reporting, controlled for attributes of crimes and victims?	• Social cohesion • Confidence in police • Socioeconomic disadvantage	• Reporting crimes (several types combined) (Dichotomous)	• PPM '95-'01 • Residential Environment Database • Residential Needs Survey	101,592 crimes (and victims) within 3,104 Dutch neighborhoods
6	To what extent does the context of the country in which victims live have an effect on reporting, controlled for attributes of crimes and victims?	• Perceived competence police • Institutionalization of insurance • Conformity norm • Level of individualism	• Reporting property crimes • Reporting violent crimes (Both dichotomous)	• ICVS '92-'00 • Insurance Statistics Yearbook '92-'99 • Hofstede's Individualism Index '80	58,545 crimes experienced by 33,132 victims within 16 Western countries

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2

REPORTING CRIME VICTIMIZATION TO THE POLICE IN THE NETHERLANDS

RESEARCH AND FINDINGS[2.1]

2.1 Introduction

In the subsequent chapters, the socio-ecological model of reporting will be used to derive various hypotheses regarding the effects of contextual characteristics on crime victims' reporting behavior. These hypotheses will be tested using different data sources and research methods. With the exception of Chapter 6, which describes a cross-national study, all empirical chapters are based on data from the Netherlands. Therefore, it is worthwhile to describe the empirical research on victims' reporting behavior in the Netherlands before turning to these empirical chapters. First, an overview is presented of the (scarce) empirical studies on victims' reporting behavior in the Netherlands. Then, descriptive information on reporting percentages in the Netherlands is given to show how these percentages differ depending on the types of crime, time, incident characteristics, victim characteristics, and geographical contexts. This descriptive information is based on (Dutch) population surveys on crime victimization that have been performed since 1980.

2.2 Dutch Research on Reporting to the Police

Given that victimization surveys have a long history in the Netherlands, that a lot of research on crime victimization has been done in the Netherlands, and that a theory on differential victimization risk developed by Steinmetz (1982) has even been called "the Dutch model" (Fattah, 2000), it is surprising that only a few researchers in the Netherlands have focused on victims' crime reporting behavior. Apart from some descriptive tables published in reports by, for example, Statistics Netherlands (*Centraal Bureau voor de Statistiek*; CBS), in the past decades (until 2003) only eight scientific articles, books and reports have been published that focus specifically

[2.1] This chapter is largely based on: Goudriaan, H., Nieuwbeerta, P., & Wittebrood, K. (2005). Overzicht van onderzoek naar determinanten van aangifte doen bij de politie [Overview of research on determinants of reporting to the police]. *Tijdschrift voor Veiligheid en Veiligheidszorg*, *4*(1), 27-48.

Table 2.1 Overview of Dutch empirical research on the determinants of reporting

Author	Source/sample	Method	Crimes	Variables	Findings
Buikhuisen (1975)	WODC surveys '74 (N=3,000)	crosstabs	several	crime: financial loss	seriousness ↑ = reporting ↑; reporting varies over time
Fiselier (1978)	survey '73 (N=5,000)	stepwise regression & discrimin.-analysis	several	crime: damage (property+vandalism); injury, harassment (violence); victim: confidence in police, insurance, prevention measures, repressive attitude, recognition influence social factors on development criminal behavior, age, educational level, previous victimization; context: degree of urbanization municipality	crime charact. most important; urban. ↓, conf. in police ↑, prev. measures ↑, age ↑, insurance ↑, recogn. infl. soc. fact. on developing crim. behavior ↑ = reporting ↑ (property); age ↑, urban. ↓ = reporting ↑ (vandalism); repr. att. ↑, prev. meas. ↑ = reporting ↑ (violence)
Van Dijk (1979)	WODC surveys '74-'79	crosstabs	several	context: willingness of police to register crime, prosecution policy	prosecution ↓, rejected cases ↑ = reporting ↓
Van Dijk et al. (1979)	WODC surveys '74-'79	stepwise regression	several	crime: extra lock/bolt, value stolen property (burglary); injury, time of day, use of weapon (threat); victim: lock doors/windows at night, age (burglary); context: size of municipality	decreasing trend (cause: pessimism tracing chances ↑; crime ↑)
Steinmetz (1979)	WODC surveys '74-'79	χ^2 for crosstabs	several	victim: gender	females report household crimes more often; differences % reported between crimes
Winkel et al. (1987)	experiment students (N=155)	t-tests	rape	victim: gender; context: information on reporting rape to police	information no influence
Kroes (1997)	police registration & PPM R'dam-Rijnmond '93-'95, policy pieces, interviews	qualitative	several	context (district level): % elderly, % non-natives, % low incomes, % singles, mobility, feelings of unsafety, incidence victimization	feelings of unsafety, % elderly, % non-natives% low incomes, % singles and/or mobility ↑ = absolute # reporting ↑
Goderie et al. (2003)	protocols, security plans, annual reports, interviews	qualitative	violence	crime: seriousness, feeling responsible for crime; victim: interests/wishes victim, perception policy and feedback of police; context: attitude others, policy institution/ organization	seriousness ↑, feeling responsible for crime ↓ = reporting ↑

on determinants of reporting crime – and that are at least partly about the Dutch situation. An overview of these empirical studies is given in Table 2.1.[2.2] A short description of these studies is presented below (in chronological order), including information on what theoretical model was used.

In 1973, Fiselier set up the first population survey on victimization in the Netherlands. Almost 5,000 respondents completed a written questionnaire; in addition, some of the respondents were interviewed half a year later. Fiselier (1978) not only tried to generate insight into the number of hidden crimes in the Netherlands, but also wanted to know what percentage of different types of crime is reported to the police and what factors contribute to the chance that a victim reports a crime to the police. He was the first person in the Netherlands to carry out empirical research into the determinants of reporting. He used a psychological theoretical model – a cognitive model of decision-making – that was quite similar to the model about which Ruback, Greenberg, and Westcott (1984) published six years later (see also Section 1.3.2).[2.3] Fiselier's model is not as elaborate as that of Ruback and his colleagues, although he also distinguishes between different behavioral options for a victim.

A few of Fiselier's findings are that reporting behavior is strongly related to crime seriousness and that crimes that take place in municipalities with a lower degree of urbanization are reported more often than crimes in municipalities with a higher degree of urbanization. He also found that people who take more preventive measures against victimization are more inclined to report victimization to the police.

Following the survey conducted by Fiselier, other victimization surveys were conducted in the Netherlands. Buikhuisen, as well as Van Dijk and Steinmetz paid attention to reporting behavior of crime victims in their analyses of the first of these surveys. Buikhuisen (1975; i.e. before Fiselier published his research) was the first to publish an empirical study that focused partly on the determinants of reporting behavior in the Netherlands. Based on data from the first victimization survey by the *Wetenschappelijk Onderzoek en Documentatiecentrum* (Research and

[2.2] Various government agencies, including the police themselves, have conducted empirical studies that have not been made public. Obviously, these are not included. Reports of population surveys on victimization (like the Police Population Monitor) are also excluded. Hogenhuis (1983) is not included, as this study was only conducted among victims who had reported a crime. The report by Eysink Smeets, Nijmeijer, and Van Goor (2003) is ignored as the focus is on experiences of citizens with reporting, on their opinion of the different reporting facilities, and on what an optimal package of reporting facilities would look like, and not on determinants of reporting. Finally, theoretical studies (like the one by Colle, 2001) are also excluded.

[2.3] As Fiselier published about his model only in Dutch, it is not probable that Ruback and his colleagues knew about Fiselier's work.

Documentation Centre of the Dutch Ministry of Justice; WODC) in cooperation with the *Nederlands Instituut voor de Publieke Opinie* (Dutch Institute for Public Opinion and Market Research; NIPO) in 1974, he came to the conclusion that reporting percentages differ strongly depending on the type of crime. According to Buikhuisen, this could be explained partly by differences in crime seriousness. He did not explicitly use a theoretical model, but because he focused primarily on crime characteristics in this descriptive study, his work fits in with the economic model.

Van Dijk (1979) also used the victimization surveys of the WODC to study to what extent police policy influences crime victims' reporting behavior. Among other things, he concluded that there is a relation between the percentage of reported crimes that result in prosecution and the percentage of crimes that are reported to the police. This macro-level study was computed using a sociological model of reporting. In a report on the same victimization surveys, also using a sociological model, Van Dijk and Steinmetz studied the influence of different factors on reporting. Their most important findings were that reporting percentages decreased between 1974 and 1979 and that reporting percentages were particularly low in cities with a high crime level (Van Dijk & Steinmetz, 1979). In the same year, Steinmetz (1979) wrote a paper on the reporting behavior of female victims. He found that women do not differ a great deal from men in their reporting behavior, but that they somewhat more often report household property crimes.

Eight years later a study on determinants of reporting was published by Winkel and Steenstra (1987). They used a psychological model in their experimental study among 155 students, in which they tested to what extent an information film about sexual violence can have a positive effect on the subjects' willingness to report rape to the police. The film turned out to have no significant effects.

Another ten years later a descriptive and explorative report fitting the sociological model was published by Kroes (1997) on the nature and scope of reports filed with the police in the *Rotterdam-Rijnmond* region and the factors that play a role in this. He found a positive relation between the absolute number of reports filed per 100 citizens in the various districts and the percentage of elderly people, non-natives, low incomes and singles, the mobility, and the degree to which feelings of unsafety exist in a district.

The last publication (Goderie, Janssen, Lünnemann, & Nieborg, 2003) is a report on the considerations of citizens to report violent incidents to the police. Among other things, the researchers conducted interviews with victims and other people who might report a crime. One of the findings in the study is that victims often find the importance for society a significant reason to report. Another noteworthy finding is that the social context in which the violence takes place influences reporting. For instance, the direct social network of the crime victim plays an important role in his

or her decision-making, but also the presence of certain policies can influence the decision-making. This is the case especially if the violence takes place in the semi-public area, such as violence against doctors or teachers. This report predominantly uses a psychological model, although attention is also given to the influence of the broader social context.

2.3 Reporting Victimization to the Police in the Netherlands

This section describes the reporting behavior of crime victims in the Netherlands. The data used for the descriptive analyses stem from three different sources: the population surveys on victimization of Statistics Netherlands (CBS) 1980-2004, the Police Population Monitor (*Politiemonitor Bevolking*; PPM) 1995-2001, and the International Crime Victims Survey (ICVS) 1992-2000. The CBS has been carrying out population surveys on crime victimization since 1980. Until 1992, this was done using the *Enquête Slachtoffers Misdrijven* (Survey Crime Victims; ESM), in which between 5,000 and 10,000 respondents were questioned. This was done yearly until 1985, and every other year between 1985 and 1992. Since 1992, the CBS has been carrying out a continuous population study on victimization under the name *Enquête Rechtsbescherming en Veiligheid* (Survey Legal Protection and Safety; ERV). Since 1997, this study is incorporated in the so-called *Permanent Onderzoek Leefsituatie* (Permanent Study Life Environment; POLS). The POLS has had 5,000 respondents each year until 1997; currently there are about 10,000 respondents per year. (See Section 1.6.1 for more information on the PPM and ICVS.)

In these surveys, citizens are questioned as to whether they were victims of one or more crimes in a certain period before the survey. If so, they are asked whether they reported the crime(s) to the police. Furthermore, different social and demographical characteristics of the respondents are known. Hereafter it will be discussed how reporting percentages differ with regard to types of crime, time, situational characteristics, victim characteristics, and geographical entities. Only factors for which previous research has found a relationship with reporting behavior are addressed.

2.3.1 Differences in reporting between crimes

The crime reporting percentage correlates strongly with the type of crime, as can be seen in Table 2.2. Car theft and burglary are the crimes with by far the highest reporting percentage: about nine out of ten of these incidents are reported. Violent crimes are reported substantially less than most property crimes. Sexual offenses especially, but also threats (which form the largest group among violent crimes), often go unreported.

Table 2.2 Percentage of crimes reported to the police in relation to the crime type

Type of crime	% Reported (POLS)	% Reported (PPM)[a]
Property	51	58
other theft	33	27
attempted burglary[b]	–	54
bicycle theft	39	60
robbery without violence[c]	60	69
robbery with violence[c,d]	60	81
theft from car interior	78	76
car theft	90	97
burglary	93	89
Violence	24	38
sexual assault[e]	7	–
threats	22	34
assault	43	64
Vandalism	24	27
vandalism (not to car)	24	22
vandalism to car/theft car exterior[f]	24	29
Total	35	43

[a] The most recent crime incident.

[b] Not asked in POLS.

[c] In POLS no distinction is made between non-violent and violent robbery.

[d] Also a violent crime.

[e] Not asked in PPM.

[f] Also a property crime.

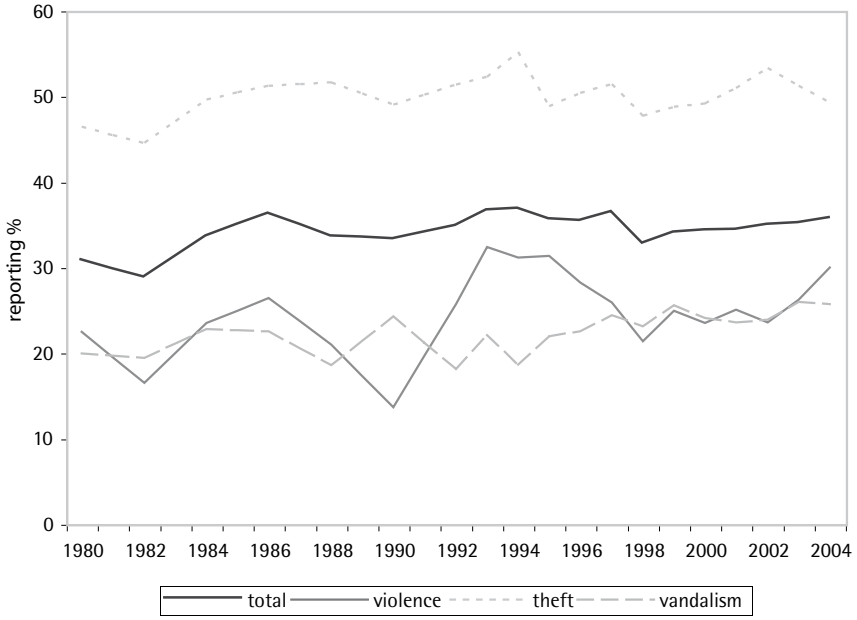
Source: PPM 1995-2001 and POLS 2000-2002

The two victimization surveys present somewhat different pictures of reporting percentages in the Netherlands. According to the PPM, about 43 percent of the crimes against citizens of age 15 and over were reported to the police in the mid-nineties, while according to the CBS surveys, this is around 36 percent. It is not surprising that the different surveys give different results. To begin with, respondents are not asked questions about exactly the same types of crime in the three surveys. In the PPM, for example, no questions are asked about sexual offenses, while this does happen in the CBS-survey. Sexual offenses are reported less often than most other types of crime. In the PPM, attempted burglaries are registered, while this does not happen in the CBS surveys. Attempted burglary has a reporting percentage above average and has quite a high incidence. Another possible cause of the differences in reporting percentages found is that the CBS uses face-to-face interviews in its surveys, while the PPM is performed by telephone. It is possible, for example, that

respondents take more time to think about an answer in a face-to-face interview than in a telephone interview and that they therefore remember more minor crimes, which are reported to the police less often (Scherpenzeel 1992). Therefore, it is not surprising that, taking together all crimes, the percentage of crimes reported to the police is found to be higher in the PPM than in the CBS surveys. (See Section 1.6.1 for more information on the methodology of the surveys used in this book.)

The overall percentage of crime reported to the police has been quite stable over the past decades. Figure 2.1 shows the percentages between 1980 and 2004 for property crimes, violent crimes and vandalism based on the CBS surveys. Overall, the reporting percentage varies between 29 and 37 percent. Within the category violent crimes the difference over the years is larger, but this might be due to the relatively low prevalence of crimes in this category. There seems to be a small increase in reporting over the years (from 31% to 36% in total), but, at face value, no systematic or strong trend can be observed.[2.4]

Figure 2.1 Percentage of crimes reported to the police between 1980 and 2004



Source: CBS surveys 1980-2004

[2.4] A similar figure based on the PPM 1995-2001 (not shown) results in much smoother lines. This is caused by the fact that there are only four waves (instead of 19 as in the CBS-surveys) and because the sample sizes per wave are much larger.

2.3.2 Differences in reporting between characteristics of crimes and victims

The seriousness of the crime is also of importance in predicting the reporting decision of crime victims. The influence of this aspect has been given much attention in empirical research. In all studies, a strong positive relation is found between the crime seriousness and the reporting percentage. Table 2.3 shows the reporting percentages for three categories of financial damage and for three categories of physical injury. The reporting percentages of property crimes as well as violent crimes and vandalism show quite a strong positive correlation with the amount of loss or injury due to the crime.

Table 2.3 Percentage of property crimes, violent crimes and vandalism reported in relation to financial loss or physical injury resulting from the crime

Loss/injury	Property[a]	Violence[b]	Vandalism[c]
Financial loss			
less than Dfl.100,-	28	-	13
between Dfl.100,- and Dfl.500,-	48	-	31
more than Dfl.500,-	77	-	56
Physical injury			
little to none (no medical treatment needed)	-	37	-
average (single treatment)	-	81	-
severe (hospitalization/multiple treatments)	-	80	-

[a] Including bicycle theft, car theft, theft from car interior, vandalism to car/theft car exterior, robbery without violence, robbery with violence, attempted burglary, burglary, and other thefts.

[b] Including robbery with violence, threats, and assaults.

[c] Including vandalism to car/theft car exterior and other vandalism.

Source: PPM 1995-2001

The reporting percentage is also related to certain characteristics of the victim (see Table 2.4), although this correlation is not as strong as that between crime reporting and crime characteristics. Overall, women are slightly more likely to contact the police than men, and the same goes for elderly people versus juveniles, people with less education versus people with a higher education, people who live in less urbanized areas versus people in more urbanized areas, and people with a positive attitude toward the police versus people with a negative attitude toward the police. For other victim characteristics, such as victims' ethnicity, daily activities, housing situation, household size, and previous victimization experiences, the relationship to reporting crime is less clear.

Table 2.4 Percentage of property crimes, violent crimes and vandalism reported in relation to victim characteristics

Victim characteristics	Property[a]	Violence[b]	Vandalism[c]
Gender			
male	46	34	26
female	48	48	27
Age			
15 – 29	45	34	25
30 – 44	45	41	25
45 – 59	50	45	28
60+	50	41	30
Ethnicity			
native	47	40	27
non-native	44	43	26
Level of education			
primary school	52	53	34
lower vocational/lower general secondary	49	46	29
int. voc./higher gen. sec./pre-university	47	39	26
higher voc. ed./univ.	45	35	24
Occupation			
paid job	46	38	26
jobless/unable to work	45	46	28
study	47	32	24
housekeeping	49	53	28
pension	49	37	30
else	47	44	27
Living situation			
tenant	46	41	27
home owner	48	39	26
Type of household			
more persons	48	41	27
one person	45	35	25
one parent family [with child(ren) < 15 years old]	45	57	21
Place of residence			
G4	44	37	23
G21	47	37	26
rest of the Netherlands	48	42	27
Victimization			
repeat victim in previous 12 months	47	41	27
once victim in previous 12 months	47	38	26
Attitude toward police			
negative	46	37	26
positive	49	44	27

[a] Including bicycle theft, car theft, theft from car interior, vandalism to car/theft car exterior, robbery without violence, robbery with violence, attempted burglary, burglary, and other thefts.

[b] Including robbery with violence, threats, and assaults.

[c] Including vandalism to car/theft car exterior and other vandalism.

Source: PPM 1995-2001

2.3.3 Differences in reporting between geographical entities

Substantial differences exist in reporting percentages between geographical entities (e.g. between neighborhoods, cities, and even countries). As an example of this geographical variation at the level of neighborhoods, the overall reporting percentages based on all crimes in the PPM of the various neighborhoods of the city of The Hague are given in Figure 2.2. The lighter the color of an area, the lower the reporting percentage in that neighborhood. The differences in reporting percentages are quite large. They vary from less than 25 percent to about 50 percent. Victims who live in the 'tail' on the south side of the town (*Wateringse Veld*) display the lowest reporting percentage (17%). At the other end of the town, near the sea, there are two other neighborhoods (*Visserhaven* in *Scheveningen* and *Duindorp*) where reporting percentages are very low (both 21%). In *Bezuidenhout-West* and *Bezuidenhout-Midden* over half of the residents report victimization to the police. Thus, the chance that a victim in *Bezuidenhout-West* reports to the police is more than twice as large as the chance that a victim in *Duindorp* reports to the police.

Figure 2.2 Percentage of crimes reported to the police by the victim in the various neighborhoods of the city of The Hague

Source: PPM 1995-2001

We now turn to the macro-level. From Table 2.5 it can be observed that crime reporting figures in Western industrialized countries differ considerably. In all countries mentioned in this table, except Portugal and the USA, the reporting percentage for property crimes according to the ICVS is considerably higher than the reporting percentage for violent crimes. Of the 16 countries included in the table, the reporting percentage for property crimes is lowest in Portugal and for violent crimes it is highest in the USA. In the Netherlands, reporting percentages are relatively high for both crime categories.

Table 2.5 Percentage of property crimes and violent crimes that is reported for 16 Western, industrialized countries (sorted according to ascending overall reporting percentage)

Country	Property[a]	Violence[b]
Portugal	38	38
Poland	40	36
Italy	41	35
Finland	52	29
Austria	54	27
Australia	54	43
Canada	55	40
Switzerland	57	25
France	57	38
USA	55	53
Sweden	63	37
Great Britain[c]	63	42
Belgium	64	38
Netherlands	62	48
New Zealand	64	41
Denmark	65	41
All countries[d]	56	39

[a] Including bicycle theft, theft of motorbike, car theft, theft from car in- or exterior, vandalism to car, attempted burglary, burglary, and other theft.

[b] Including robbery with violence, threats, and assaults.

[c] England, Scotland, and Wales.

[d] With the same weight attributed to all countries, even though sample sizes differ.

Source: Goudriaan, Lynch, and Nieuwbeerta, 2004

2.4 Conclusion

This chapter has given an overview of the empirical studies on victims' crime reporting behavior in the Netherlands. The Dutch research, as is the case for most research carried out in other parts of the world as well, mainly explains crime victims' reporting behavior on one specific level of aggregation at a time.

The bivariate tables and figures in Section 2.3 indicate that a crime victim's reporting behavior is strongly related to the type of crime and the seriousness of the crime, and, to a lesser extent, to the characteristics of the victim. Moreover, crime reporting seems to be related to the characteristics of the broader social context in which the crime and victim are embedded. These contextual characteristics are central to the next chapters in this book. Effects of various characteristics of neighborhoods and countries in which victims live are examined in Chapters 5 and 6. The next two chapters, however, focus on the effects of characteristics of the context in which crimes take place, namely the type of crime location and the victim-offender relationship.

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3

THE INFLUENCE OF INCIDENT LOCATION AND VICTIM-OFFENDER RELATIONSHIP ON VIOLENCE VICTIMS' REPORTING BEHAVIOR

3.1 Introduction

A common assumption in most research areas of social sciences is that individual behavior is not a process taking place in a vacuum, but that it is an individual-level process that dynamically interacts with the social environment in which actors are embedded (e.g. Granovetter, 1985; Nee & Ingram, 1998). In other words, individual behavior, or decision-making, is partly determined by the context in which individuals find themselves. This context can be, for example, a society, neighborhood, organization or social network. In criminology, as well as in victimology, this idea is becoming increasingly accepted. The body of criminological research on decision-making and behavior giving attention to both individual-level characteristics and aspects of the social environment is growing rapidly (e.g. Bellair, 1997; Bernasco & Nieuwbeerta, 2005; Sampson, Morenoff, & Gannon-Rowley, 2002; Sampson, Raudenbush, & Earls, 1997). The same is true for victimological research (e.g. Lee, 2000; Rountree, Land, & Miethe, 1994; Smith & Jarjoura, 1989; Van Wilsem, 2003; Wittebrood, 2000).

In the research area of crime victims' reporting behavior, relatively few studies have been published that focus simultaneously on the effects of individual-level factors and contextual-level factors. Most empirical studies on crime reporting behavior (implicitly) assume that victims use an economic cost-benefit calculation to decide whether they should report a crime or not. The crime seriousness especially – often measured as the financial and physical damage resulting from the crime – is found to determine the outcome of this calculation (e.g. Fishman, 1979; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). However, the focus in empirical research does seem to shift. For example, some studies show that, in addition to aspects of the crime incident, the victims' social network has a strong influence on their decision-making (e.g. Greenberg & Ruback, 1992). Others have found that the broader social context in which crimes take place and in which victims live is related to reporting behavior also (e.g. Baumer, 2002).

Recently, Ménard (2003) has developed a social ecology framework to explain reporting behavior. This framework integrates earlier theories on reporting, which generally focus on one type of decision-making process and on one aggregation level only. Ménard argues that victims are nested within different social contexts. Using her social ecology framework, Ménard (2003) has mainly focused on the effects of socio-cultural aspects of the county in which victims live (a macro-level context) on victims' labeling and reporting of crime, while controlling for crime and victim characteristics. However, her framework can also be used to study the effects of the social contexts in which crime incidents take place. In this regard, victims' reporting behavior is assumed to vary depending on the types of locations in which crimes take place and the victim-offender relationship (pp. 56-57).

The effect of the victim-offender relationship on victims' reporting behavior has received a lot of attention in empirical studies. Because most victims do not see – let alone know – the offender of a property crime, these studies focus on the reporting behavior of victims of violent crimes. Many of these studies indicate a lower willingness to report violent crimes in the case of known offenders (Block, 1974; Fisher, Daigle, Cullen, & Turner, 2003; Gartner & Macmillan, 1995; Hanson, Resnick, Saunders, Kilpatrick, & Best, 1999; Lizotte, 1985; Pino & Meier, 1999; Pollard, 1995; Singer, 1988). However, other studies conclude that there is no effect of the victim-offender relationship on reporting, or that crimes with known offenders are reported more often (Bachman, 1993, 1998; Baumer, Felson, & Messner, 2003; Felson, Messner, & Hoskin, 1999; Kaukinen, 2002; Skogan, 1984; see also Chapter 6). Thus, the results of these empirical studies are contradictory.

Even though the assumption that the location in which crimes take place influences victims' reporting behavior is not exactly new (e.g. Black, 1976: 91), effects of the crime location have received little attention in empirical research. Felson, Messner, Hoskin, and Deane (2002) found that victims are more likely to report a violent incident if it occurred inside their own home.[3.1] A study by Baumer (2004) on female victims of rape and non-sexual assault resulted in similar findings for non-sexual assaults, but found no difference between private and non-private crime incident

[3.1] They also found that people who where victimized inside their own house and those who where victimized elsewhere have different motivations for reporting or not reporting the crime to the police. People who had reported an act of violence that had taken place within their own house, more often said they had done so for reasons of self-protection than other victims. Those who had not reported their victimization to the police, less often said that they thought it was a trivial matter, and more often said that they were afraid that filing a report would result in reprisal by the offender. The latter is also consistent with findings in an earlier study by Singer (1988), who found that a substantially higher proportion of unreported victimizations at home (cf. outside the home) is not reported because of fear of reprisal.

locations for victims of rape. Finkelhor and Ormrod (2001), who studied factors contributing to the underreporting of crimes against juveniles, found that incidents taking place within schools are less often reported to the police than incidents taking place outside schools, even after controlling for crime and victim characteristics (e.g. crime seriousness and the victim's age). Studies focusing on juvenile victims also showed that crime incidents taking place within schools are more often reported to alternative authorities such as a school official (Finkelhor & Ormrod, 2001; Finkelhor & Wolak, 2003). These findings suggest that the organizational context of the school might offer resources that can be used as alternatives to the police for repairing and redressing the costs of victimization (Finkelhor & Ormrod, 1999, 2001; Fisher *et al.*, 2003; Garofalo, Siegel, & Laub, 1987).

It is important to note that both factors of the crime context that have been elaborated on here – victim-offender relationship and crime location – are related. Crimes within the private domain more often have known offenders (Felson *et al.*, 2002), as is the case with crimes within organizations of which victims are part (e.g. at work or at school; the semi-private domain) (Garofalo, Siegel, & Laub, 1987). Crimes that take place in the public domain or in semi-public locations like public transport, places of entertainment and shops, are more frequently committed by unknown offenders. Therefore, possible effects of both factors on reporting behavior should be studied simultaneously to disentangle the unique contributions of both factors. If only one of the two factors is studied, the victim-offender relationship for example, it remains unclear whether the effects that are found are merely caused by the victim-offender relationship, or whether they are partly the result of differences in crime location.

Another motivation for studying these two factors at the same time is that there might be an interaction effect on reporting behavior. An indication for such an interaction effect can be found in an empirical study by Gottfredson and Hindelang (1979), who used data from the American National Crime Survey (NCS) 1974-1976 to investigate the effects of different factors on the reporting of personal crimes in which contact with the offender had taken place. Among other things, they distinguished between unknown offenders and known offenders, and between different crime locations. The crosstab they made between knowing the offender and crime location showed that differences in reporting percentages with known and unknown offenders vary depending on the type of location. For example, the difference between the reporting of crimes with known and unknown offenders was high in offices/factories, lower at home, and very low for incidents that had taken place near home (31%, 11%, and 4% respectively, with reporting percentages consistently being higher for rimes with unknown offenders) (pp. 14, calculated from

Table 8).[3.2] This finding might suggest that in locations where most people know each other, victimization by an unknown intruder might be reported to the police more often than if the person is known, whereas this difference is smaller if someone is victimized in a public area. Apart from the study by Gottfredson and Hindelang, the interaction involving the victim-offender relationship and the crime location has not been empirically studied. This might be due partly to lack of data, because not all victimization surveys contain data on both of these characteristics of the crime context.

The present study uses a socio-ecological model to investigate the effects of the crime location and victim-offender relationship, as well as the interaction between these two contextual characteristics of crime incidents on the reporting behavior of victims of violent crimes, while controlling for crime seriousness and demographic victim characteristics. The aim of this study is to contribute to the development of the theory on reporting behavior. It uses data from the Netherlands Survey Crime and Law Enforcement (*Nederlandse Survey Criminaliteit en Rechtshandhaving*; NSCR), which was done in 1996 on a random sample of 1,939 respondents from the Dutch population above the age of 14 and a random sub sample of 1,012 respondents between ages 15 and 30. This survey is appropriate for the present purpose, because it not only contains information on crime and victim characteristics, and on who the offender is, but it also contains detailed information on the crime location.

3.2 Socio-Ecological Model of Reporting Behavior

Different social scientists emphasize the need to incorporate different levels of aggregation to gain a better understanding of human decision-making and behavior (e.g. Barker, 1968; Bursik & Grasmick, 1993; Hunter, 1985; Liska, 1990; Miethe & Meyer, 1994; Wunsch, 1995). This orientation to building transdisciplinary, multilevel models of decision-making is widely accepted in most research areas of the social sciences (Pescosolido, 1992), but, surprisingly, it is still quite rare in theories on decision-making by crime victims. Ménard (2003) is one of the few authors who used an integrated framework such as this for her studies on crime victims' decision-making. She developed a multilevel social ecology framework for the decision-making by victims of sexual crimes in which micro- and macro-level explanations are integrated. Her model takes into account factors that might directly influence the individual decision-making (e.g. crime seriousness), while the focus is

[3.2] Gottfredson and Hindelang (1979) did not compute significance tests, but because the samples of the NCS 1974-1976 included about 130,000 respondents twice a year, all differences in reporting percentages presented here can probably be assumed to differ significantly from each other. Exact frequencies have not been given in their tables. Instead, they published weighted counts to yield valid national estimates (pp. 5).

on the effects of socio-cultural factors that compose the context in which victims are embedded (e.g. the social disorganization of victims' neighborhood).

The socio-ecological model used in the present study builds upon the framework developed by Ménard (2003). Ménard made a distinction between the effects at the individual level and the effects of the context in which victims are embedded. The model used here first separates Ménard's individual level into an incident level and a victim level. Conceptually, it is assumed that some factors are relevant at the level of specific incidents (e.g. the amount of financial loss or physical harm), while other factors play a role at the victim level (e.g. knowing the offender or having a supportive network). Methodologically, this distinction fits the data commonly used to study reporting behavior better: population surveys on victimization ask people about their victimization experiences with different types of crime over a longer period. Consequently, many victims report multiple victimizations in these surveys. This results in incidents that are 'nested' within victims (cf. individuals within contexts).

Secondly, Ménard's framework addresses characteristics of the context in which victims live, but does not explicitly distinguish between different types of locations were crimes can take place. The socio-ecological model used in the present study does make a distinction between where victims live and where crime incidents take place. In other words, it is assumed that these types of crime locations might have characteristics that influence victims' reporting behavior relatively independent of where people live (see also Section 1.4).

3.3 Hypotheses

Taking the socio-ecological model for victims' reporting behavior as a point of departure, it is possible to derive multiple hypotheses on the effects of the context of the location in which crime incidents take place and the effects of the victim-offender relationship.

3.3.1 Location of the incident

The location in which a crime takes place is a contextual factor that has been assumed to influence victims' reporting behavior (e.g. Felson *et al.*, 2002). Using the socio-ecological model for reporting, in which it is assumed that victims' reporting behavior is influenced by the location in which crime incidents take place, this study follows the recent developments in this research area by further exploring the effects of the type of location on crime reporting behavior.

Several researchers have argued that informal social control is inversely related to formal (governmental) social control. This line of reasoning can be found mostly in studies on differences in reporting percentages between urban and rural areas in

the United States (Boggs, 1971; Laub, 1981). The residents of urban areas appear to feel more dependent on formal police control than residents of rural areas, as the latter can rely on the support of their direct personal environment more. In areas where informal social control is limited, residents are assumed to feel more of a need for formal social control mechanisms to help solve the problems they are confronted with. Therefore, victims in these kinds of areas are more likely to report their victimization to the police in order to get help in solving conflicts, preventing repeat victimization and punishing criminals (Black, 1976; Conklin, 1975; Gottfredson & Hindelang, 1979; Laub, 1981). Informal social control cannot be assumed to vary with regard to geographical areas only, but also depending on types of locations. Black (1976) noted that informal social control is stronger in private settings than in public settings. Therefore, people will be in need of formal social control more often in more public locations than in more private locations. Moreover, the public domain is pre-eminently the domain where governmental authorities regulate life and where the police enforce these regulations. With regard to reporting to the police, it follows that: *(H1) Victims of violent crimes will report their victimization more often if the crime took place in a (semi-)public location than when the crime took place in a (semi-)private location*.

It is also possible to derive a contradictory hypothesis regarding the effect of the crime location on reporting. In their model of decision-making by crime victims, Greenberg and Ruback (1992) argue that victims have different behavioral options after victimization. Calling the police is one option; seeking a private solution is another. One of these private solutions is 'moving away from the offender' (pp.197-198). The victim can 'move away from the offender' by avoiding the location where the crime has taken place. This might be an option if the crime took place in a public or semi-public location (e.g. in a park, cinema or restaurant). However, if the crime took place in a private or semi-private location (e.g. at home, work or school), the victim would have to change his or her daily routine significantly if he or she would want to avoid the crime location in the future.

A study by Felson *et al.* (2002) confirms this idea. They used a dichotomous variable to distinguish between incidents that took place at home and incidents that took place elsewhere and found that victims are more likely to report a violent incident if it occurred in their home. They also found that violent incidents inside someone's home are more often reported for reasons of self-protection than incidents outside the home. Victims of violence inside their own home who decide not to report are more likely to be influenced by fear of reprisal by the offender. In contrast, less often they give insignificance of the incident as a reason for their non-reporting. Possibly, this is because someone's home is pre-eminently a location where one desires to be safe. If people enter the public domain, where often many unknown people are

present, they may factor in that they will have less privacy and that unforeseen things can happen. It can be assumed that the psychological impact of victimization inside one's own home is greater than the impact of a similar victimization in the public domain. It might be perceived as a greater invasion of one's privacy. In support of this reasoning, Greenberg and Ruback (1992) found that victims have stronger feelings of injustice and anger when a crime takes place in a situation in which they thought they were safe. Furthermore, a study in Switzerland by Simonin and Killias (2003) showed that 67 percent of the violent incidents that took place in someone's own home are perceived as rather serious, as opposed to 52 percent of the violent incidents in other locations.

The above reasoning leads to the following contrasting hypothesis: *(H2) Victims of violent crimes will report their victimization more often if the crime took place in a (semi-)private location than when the crime took place in a (semi-)public location*.

Finally, a third hypothesis on the effect of the crime location can be derived. This hypothesis deals with the difference between organizational settings (semi-private and semi-public locations) and other locations. Different studies have shown that school children have the lowest reporting rates of any population, but only a few researchers have suggested that the organizational context of the school may partly account for this finding instead of it exclusively being due to the often more trivial nature of the events (Addington, Ruddy, Miller, & DeVoe, 2002; Garofalo, Siegel, & Laub, 1987). Even those studies that identify the importance of the school context in the decision to report crimes to the police have not tried to isolate the effects of the school location from the attributes of the incident, nor have they attempted to explain the variation in the effects of the school context. Exceptions in this regard are the studies on the reporting behavior of juveniles by Finkelhor and Ormrod (2001) and Finkelhor and Wolak (2003). In both studies, it was found that the reporting percentage is lower for incidents taking place at school than for incidents taking place elsewhere, even after allowing for characteristics of crimes, victims and offenders. Other semi-private or semi-public organizational contexts have not been studied at all with the aim of explaining victims' reporting behavior (Collins, Cox, & Langan, 1987; Lynch, 1987). However, organizational entities such as schools, work places, hospitals, clubs and commercial establishments are distinct types of social contexts that can offer both resources and norms that can be used as alternatives to the police for repairing and redressing the costs of victimization (Finkelhor & Ormrod, 1999; Fisher *et al*., 2003; Garofalo, Siegel, & Laub, 1987). These organizations have alternatives to the police to ensure order within and to respond to victimization (Black, 1976: 110; Finkelhor & Ormrod, 2001). People can turn to safety guards, bouncers, teachers, principals, supervisors, conductors, or bus drivers, for example. In these contexts, organizational policies may have a strong normative influence,

especially if policies are formal norms. Students, for example, may be required to report assaults to the teacher or principal, and workers may have the same obligation with respect to supervisors. The teacher or supervisor can be expected to, then, exert great influence on the decision to report the incident to the police.

Other than within the semi-private and semi-public domain (within organizations), the public and private domain generally do not offer those types of resources and norms that can be used as alternatives to the police for repairing and redressing the costs of victimization. This leads to the following hypothesis: *(H3) Victims of violent crimes will report their victimization more often if the crime took place in a private or public location than when the crime took place in a semi-private or semi-public location*.

3.3.2 Victim-offender relationship

It is often assumed that the victim-offender relationship influences the probability of a crime being reported to the police. Most authors propose that victimizations occurring within the context of familial, intimate or friendship relationships will not be reported to the police as frequently as those involving strangers (e.g. Black, 1976; Block, 1974; Gartner & Macmillan, 1995; Malsch & Smeenk, 2004; Smeenk & Malsch, 2005).

Recall from the previous section that several researchers have argued that informal social control is negatively related to formal social control. Informal social control is assumed to differ depending on geographical areas and types of crime locations, but it can also be assumed to vary as a function of victim-offender relationships. According to various authors (e.g. Black, 1976; Hunter 1985; Ménard, 2003) informal social control is more likely to be available to those who know each other. Formal social control, on the other hand, is most common where interaction, intimacy and integration are scarce. Strangers frequently use formal social control to solve their disputes, whereas people who know each other well are less likely to call the police regarding each other. This leads to the prediction that *(H4) Victims of violent crimes will report their victimization most often if they do not know the offender and least often when they know the offender well*.

3.3.3 Interaction between incident location and victim-offender relationship

The victim-offender relationship is related to the crime location. In comparison, crimes within the (semi-)private domain more often have known offenders, while crimes that take place in the (semi-)public domain, relatively speaking, are more often committed by unknown offenders (Felson *et al.*, 2002; Garofalo, Siegel, & Laub, 1987; Gottfredson & Hindelang, 1979; Simonin & Killias, 2003). Furthermore, empirical evidence regarding the effects of the victim-offender relationship on

victims' reporting behavior is mixed (e.g. Bachman, 1993, 1998; Baumer, Felson, & Messner, 2003; Gartner & Macmillan, 1995). These apparent inconsistencies may be resolved if differences in crime locations are taken into account. The present study attempts to disentangle the effects of both factors by including them simultaneously in a socio-ecological model of reporting.

Moreover, there are indications that crime location and victim-offender relationship have an interaction effect on reporting. Gottfredson and Hindelang (1979) found that differences in reporting percentages with known and unknown offenders fluctuate depending on the type of location. To be more precise, the difference in reporting percentages between crimes with known offenders and ones with unknown offenders is large for crime incidents that had taken place in (semi-)private locations and small for incidents in (semi-)public locations, with reporting percentages being highest for crimes with unknown offenders for both types of locations. Thus, it seems that in locations were most people know each other, an unknown intruder who victimizes someone might be reported to the police more often than a known offender, while the difference between reporting known and unknown offenders is smaller if someone is victimized in a (semi-) public area where people do not know each other. This could be caused by the fact that, in the case of an unknown offender in a (semi-)private location, victims do not have the option to 'move away from the offender' by avoiding the location where the crime has taken place (see Section 3.3.1). Furthermore, an unknown offender (cf. a known offender) who intrudes in a (semi-) private location (cf. a public or semi-public location) might cause a greater invasion of one's privacy. Such victimization might thus have a stronger psychological impact.

This leads to the following interaction hypothesis: *(H5) The effect of the victim-offender relationship on victims' reporting behavior is stronger for violent crimes taking place in the (semi-)private domain than those occurring in the (semi-)public domain, with crimes with unknown offenders having an especially high probability to be reported if they take place in the (semi-)private domain.* In other words: victims of violent crimes will report their victimization more often if they do not know the offender than when they do, but this effect is more prevalent for crimes taking place in the (semi-)private domain.

3.4 Data and Operationalization

3.4.1 The NSCR

The Netherlands Survey Crime and Law Enforcement (*Nederlandse Survey Criminaliteit en Rechtshandhaving*; NSCR) (Wittebrood, Michon, & Ter Voert, 1997) has been used in this study, as it is the only readily available data source in the

Netherlands with detailed information on where incidents took place. It also contains reasonably detailed information about the victim-offender relationship and about characteristics of crimes and victims.

The NSCR was conducted in 1996 by the Netherlands Institute for the Study of Crime and Law Enforcement (*Nederlands Studiecentrum Criminaliteit en Rechtshandhaving*) on a random sample of 1,939 respondents from the Dutch population above the age of 14 and a random sub sample of 1,012 respondents between ages 15 and 30. Respondents were interviewed using the CAPI method (Computer Assisted Personal Interviewing). Among other things, they were asked about their victimization experiences during their entire life[3.3] with three types of violent crime: sexual offenses, assaults and threats.

From the total sample of 2,951 respondents, 1,187 (40%) told the interviewer that they had experienced one or more of these violent crimes at least once in their lifetime. All of these victims were asked detailed questions about every crime incident. If the most recent incident of a particular type of crime took place in 1995 or 1996, these questions were asked during the interview. However, to restrict the costs of the survey and to prevent the interview from getting too lengthy, victims were asked to fill out a questionnaire after the interview for all other victimizations they had ever experienced and send it in by mail. This was the case for 1,041 victims; 686 of them (66%) returned one or more of these self-administered questionnaires.[3.4] The resulting

[3.3] The use of a life-long reference period has probably resulted in an underestimate of victimization rates and an overestimate of the proportion of crimes reported to the police. Memory decays with time and the longer the reference period, the less complete the recollection of crime incidents. Because crimes reported to the police are rehearsed and have consequences in the aftermath of the incident, they will be remembered more frequently than crimes that have not been reported to the police. Biderman and Lynch (1981) have shown, however, that this type of recency bias is not correlated with other attributes of the crime. They compared characteristics of crimes that happened in the last month of the reference period for the National Crime Survey with those that happened in the first month of the reference period. The distributions of these crime characteristics were similar except for reporting to the police. The percentage of crimes reported to the police in the first month was significantly higher than in the last month. As the present study does not attempt to estimate reporting percentages, this phenomenon is unlikely to affect the analyses presented here.

[3.4] A comparison between people who did and did not return the questionnaires showed that the non-respondents from the sample of people above the age of 14 did less often have a partner ($p < .001$), were more often following a full-time education, and on average had a lower level of completed education (both $p < .01$) (Wittebrood, Michon, & Ter Voert, 1997). Furthermore, non-respondents had been victimized somewhat more often in 1995 than those who did return the questionnaire. The non-respondents from the sub sample of people between ages 15 and 30 only differed from the respondents in that they had a lower level of completed education ($p < .01$). No differences were found between respondents and non-respondents with regard to gender, age, daily activities (other than full-time education), urbanicity, or offending behavior. The researchers conclude that, although there seems to

sample contained 864 victims of 1,462 violent crimes (with an overrepresentation of crimes that took place in 1995 and 1996). Unfortunately, however, due to item non-response on the self-administered questionnaire, for 118 of these crimes it was unknown whether the police were informed or not. Furthermore, regarding 43 sexual offenses, the victim told the interviewer that he or she did not want to talk about this subject at all. These 161 crime incidents (11%) were excluded from all analyses. The final sample therefore contained 809 victims of 1,301 violent crimes. Of these victims, 309 had experienced one or more sexual offenses, 341 had experienced at least one assault, and 376 had experienced one or more threats. In total, 530 victims had experienced one violent crime, the other 279 victims had experienced two or more incidents.

3.4.2 Reporting victimization to the police

Respondents were asked about their victimization experiences with three types of violent crimes. All respondents who said they had been victimized were asked a number of follow-up questions about what happened, per individual incident – including whether the police were informed about the crime (0 = no, 1 = yes). The response to this dichotomous question serves as the dependent variable of this study. The reporting percentage per crime type along with the frequency distribution of the different crime types is given in Table 3.1. On average, 25 percent of the crimes were reported to the police. It can be seen that threats have the highest frequency in the sample (38% of all crime incidents involved threats). The reporting percentages are related to the type of violent crimes committed, with sexual offenses being the least reported and assaults the most (16% and 31%, respectively).

Table 3.1 Reporting percentage and frequency per type of violence in data file

Type of crime	% Reported	n
sexual offense	16	402
assault	31	406
threat	28	493
Total	25	1301

3.4.3 Contextual variables

Using the NSCR, four types of *crime locations* can be distinguished. These location types are: (1) the private domain, (2) the semi-private domain, (3) the semi-public

be some selective non-response in the written part of the survey, overall the two samples resulted in a reasonable reflection of the Dutch population. As the present study is focused on the relationship between different variables and not on describing the Dutch crime victim population, it is assumed that this selectivity will not bias the results.

domain, and (4) the public domain. A minor additional location category includes all locations that do not fit any one of the above-mentioned categories. A private location (ad 1) can be the victim's home, other private property (e.g. the victim's yard or private garage) or someone else's home. A semi-private location (ad 2) is a location that is less private than locations of the first category, but is only open to specific people. In this study, the victim's work place and school are defined as the semi-private domain. Semi-public locations (ad 3) are open to everyone, but only under certain conditions. One has to obey the norms and regulations that exist in that specific location, and sometimes one has to pay to be allowed in. Examples are places of entertainment (e.g. cinemas, casinos, nightclubs), the food service industry (e.g. restaurants, bars), and public transport (e.g. stations, airports, or inside trains, busses or subways). Stores, shopping malls, gas stations, guarded parking lots and sports centers are also examples of the semi-public domain. Public locations (ad 4) are locations that are open to everyone and free to enter. Everyone has the right to enter these locations. Moreover, they are not owned by a person or an organization, but by the (local) government. Examples of public locations are streets, squares, forests, parks and beaches. Note that semi-private and semi-public locations are organizations, while private and public locations are not. By making a distinction between these four types of locations, it is possible to test the formulated hypotheses regarding the effect of the location in which crimes take place. The four categories differ on a private-public dimension and they also distinguish between organizational settings and other types of locations.

Regarding the *victim-offender relationship*, a distinction needs to be made between unknown and (well) known offenders in order to test the hypothesis. In the NSCR, victims were first asked whether they saw the offender(s) and whether they knew the offender(s) by face, by name, or not at all. In 27 crime incidents (2%), the victim did not see the offender. For the analyses, these 27 observations were also classified as 'offender unknown'. If victims knew (at least one of) the offender(s) by name, they were asked whether that person was their (ex-)spouse,[3.5] a relative, a friend or an acquaintance, or someone else they knew by name. Only the answers to the first question, i.e. whether victims knew the offender, have been used for the multivariate analyses (0 = unknown/not seen, 1 = known by face, 2 = known by name).

Frequency distributions of these contextual variables are given per crime type in Appendix 3.A.

[3.5] Unfortunately, the NSCR does not make a distinction between offenders who were spouses and offenders who were ex-spouses at the time of the crime incident.

3.4.4 Control variables

When studying the effects of contextual variables on victims' reporting behavior, it is important to control for effects of crime and victim characteristics that are relevant for the decision to report. As shown in Table 3.1, reporting percentages differ depending on the three crime types. Therefore, two dummies for the type of crime have been included in the multivariate models, one for sexual offenses and one for assaults. Threats are used as the reference category because this crime type displays the highest reporting frequency in the data. When testing the hypotheses, it is also important to control for crime seriousness, because it is an important predictor of reporting (Fishman, 1979; Gottfredson & Hindelang, 1979; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977) and it might be related to the victim-offender relationship or incident locations (Laub, 1981). The item on whether the victim had been injured during the crime (0 = no, 1 = yes, but no medical treatment needed, 2 = yes, one or more medical treatments needed) is used as an indication of crime seriousness. By nature, threats do not result in injuries and this question was therefore only asked for sexual offenses and assaults.

Demographic victim and household related characteristics that have been shown in prior studies to influence the reporting behavior of victims of violence are also included in the multivariate models as control variables. These characteristics are: victims' gender (0 = female, 1 = male), their age at the time of the crime, whether they were born in the Netherlands (0 = no, 1 = yes), their educational level (low, average, high), the size of their household (1, 2, > 2), and the degree of urbanization of their place of residence (0 = low or average, 1 = high). Finally, to check for possible effects of this, a dummy is included that indicates whether the information on the crime incident was given in the interview, or whether it stems from the written questionnaire.

Frequency distributions of the control variables per crime type are given in Appendix 3.A.

3.5 Method of Analysis

Multilevel modeling (Goldstein, 1995; Snijders and Bosker, 1999) is used for the multivariate analyses in this study. One advantage of multilevel modeling as opposed to traditional techniques such as OLS regression is that it takes into account the layered (nested) structure of the data. In this study, there are two levels: the crime level and the victim level. Measurement errors are specified separately at each of the two levels. This procedure takes into account the possibility that the probability that crimes are reported is more similar within individuals than between individuals.

Since the dependent variable – whether or not a crime is reported – is a dichotomy, and the assumption is made that the distribution of measurement errors at the level of the crime is binomial, logistic multilevel models are estimated with the variance parameter at the level of the crime set at a value of one. The parameters are estimated using MLwiN 2.0 (Rasbash, Steele, Browne, & Prosser, 2004). For an extensive explanation of the models used here, see Chapter 6. For more information about hierarchical modeling in general, see Goldstein (1995) or Snijders and Bosker (1999).

3.6 Results

3.6.1 Descriptive results

Before turning to the multivariate analyses with which the hypotheses are tested, bivariate differences in reporting percentages depending on the crime location and victim-offender relationship are explored. Table 3.2 presents the percentages of sexual offenses, assaults and threats reported to the police for the four types of crime locations. The number of observations on which each percentage is based is given in Appendix 3.A. The differences between the types of locations are relatively large and have a similar pattern within each crime type. For every crime type, the reporting percentage is found to be lowest for crimes taking place in the semi-public and semi-private domain, thus within organizations, while they are highest for crimes taking place in the private or public domain. For example, for sexual offenses only three percent of the incidents that took place in the semi-public domain were reported to the police, while 23 percent of those taking place in the public domain were reported. These differences point in the direction of Hypothesis 3, which states that victims of violent crimes will report their victimization more often if the crime took place in a private or public location than when it occurred in a semi-private or a semi-public location. Multivariate analyses (see Section 3.6.2) are necessary to find out whether these effects are significant after controlling for the effects of other characteristics.

Table 3.2 Reporting percentage per type of violence and location category

Type of location[a]	Type of violence			
	Sexual offense	Assault	Threat	Total
private	20	40	36	30
semi-private	13	30	22	22
semi-public	3	26	21	17
public	23	31	30	29

[a] Category ‘unclear’ is excluded.

To explore the differences in reporting depending on the victim-offender relationship, Table 3.3 shows the reporting percentages per type of crime for incidents in which the offender is unknown, known by face or known by name. Crime incidents with offenders that are known by name are further divided into crime incidents with offenders who are (ex-)spouses, relatives, friends or acquaintances, or other familiar people. Again, the number of observations on which each percentage is based can be found in Appendix 3.A. For every crime type, the percentage of crimes reported is somewhat higher for incidents with unknown offenders than it is for incidents with offenders that are known by face or name. Regarding incidents with offenders that are known by name, the type of relationship the victim had with the offender at the time of the incident seems to make a considerable difference in victims' reporting behavior.[3.6] For example, only five percent of the sexual offenses in which the offender was a friend or acquaintance were reported, while 54 percent of these crimes committed by the (ex-)spouse of the victim were reported to the police. All violent crimes with offenders who are known by name have the highest probability of being reported to the police if the crime incident is committed by the victim's (ex-) spouse: about half of these crimes were reported to the police.[3.7]

Table 3.3 Reporting percentage per type of violence and victim-offender relationship

Offender	Type of violence			
	Sexual offense	Assault	Threat	Total
unknown	18	33	29	27
known by face	15	28	27	24
known by name	13	30	28	24
(ex-)spouse	54	54	48	52
relative	13	18	5	13
friend/acquaintance	5	21	25	13
other	18	33	31	28

Before turning to Table 3.4b, which explores the interaction between the location category and the degree to which the offender is known, please see Table 3.4a, in

[3.6] Note that the frequencies on which these percentages are based are quite small, which means that the standard errors of the reporting percentages are relatively large. As can be seen in Appendix 3.A, the number of incidents per cell ranges from 13 for sexual offences committed by the victims' (ex-) spouse, to 79 for sexual offenses committed by a friend or acquaintance. However, a calculation of the likelihood ratio (an alternative for Pearson's Chi-square if sample sizes are small) showed that the correlation between reporting and the type of victim-offender relationship is significant for each type of crime (all p's < .05).

[3.7] This finding might partly be caused by a lower likelihood that victims of domestic violence mention their unreported victimization experiences in victimization surveys than victims of violence with other offenders (Gartner & Macmillan, 1995).

which the number of observations per cell is given, with the relative frequency within each type of crime and location shown between brackets. Within the private and semi-private domain, most acts of violence seem to be committed by offenders who are known by name (in the present data 69% and 56% of the incidents in these two types of locations, respectively), while the group of unknown offenders is smallest (14% and 17%). In the other two location categories – semi-public and public locations – the frequency pattern is almost the reverse: most incidents are committed by unknown offenders (63% and 66%), while the frequencies for offenders known by face and those known by name are much lower (all between 16% and 19%). This frequency pattern is not surprising because people generally know others who they encounter in a private area or at their work by name, while this often is not the case in other organizations and certainly not in the public domain (e.g. Felson *et al*., 2002; Garofalo, Siegel, & Laub, 1987; Gottfredson & Hindelang, 1979).

From Table 3.4b – which shows the percentage of crimes reported to the police in relation to the victim's level of recognition of the offender for each type of location – it can be seen that the percentages of reported crimes show quite a consistent pattern. For sexual offenses and assaults, if committed in a private location or in their own organization, victims report their victimizations most often when the offender is unknown (43% and 64%, respectively) and least often when the offender is known by name (14% and 32%). This is in line with Hypothesis 3. Threats in (semi-)private areas are also reported most often if the offender is unknown (64%), but for threats committed by someone who is known by face or by name the probability of reporting is about the same (31% and 32%). Violent crimes committed in other organizations (the semi-public domain) are most often reported to the police if they are committed by someone whom the victim knows by name (6% for sexual offenses, 33% for assaults and 30% for threats) and least often when they are committed by someone they only know by face (0%, 14% and 15%, respectively). This contradicts Hypothesis 3. For violence taking place in the public domain, the pattern is less clear. Sexual offenses committed in the public domain show the same pattern as crimes committed in the public domain, but for assaults and threats the pattern deviates.

Furthermore, the findings in Table 3.4b seem to be in accordance with Hypothesis 5, which states that the effect of the victim-offender relationship on victims' reporting behavior is stronger for violent crimes taking place in the (semi-)private domain than those committed in the (semi-)public domain, with crimes involving unknown offenders having an especially high probability of being reported if they take place in the (semi-)private domain. Differences in reporting percentages between the three levels of recognition of the offender are clearly largest in the private domain. Here, the percentage of sexual offenses with offenders known by name that are reported to the police is 14, while in the case of unknown offenders this is 43. This is three

times as high and a difference of 29 percent. For assaults and threats, the difference is over 30 percent, even. For violence committed in a semi-private location, the differences are somewhat smaller, but there is still an overall difference of 22 percent between offenders who are known by name (16%) and unknown offenders (38%). The differences in reporting percentages between the three levels of recognition of the offender in semi-public and public locations are smaller (11% and 7% overall, respectively). These findings are also similar to the findings by Gottfredson and Hindelang (1979).

Table 3.4a Frequencies per type of violence, location category, and victim-offender relationship

Location[a]	Offender	Type of violence (relative %)							
		Sexual offense		*Assault*		*Threat*		*Total*	
private	unknown	14	(13)	11	(15)	11	(14)	36	(14)
	known by face	21	(20)	9	(12)	13	(17)	43	(17)
	known by name	71	(67)	53	(73)	53	(69)	177	(69)
semi-private	unknown	5	(9)	9	(18)	23	(21)	37	(17)
	known by face	9	(16)	18	(36)	29	(27)	56	(26)
	known by name	42	(75)	23	(46)	55	(51)	120	(56)
semi-public	unknown	58	(65)	54	(68)	66	(58)	178	(63)
	known by face	13	(15)	14	(18)	27	(24)	54	(19)
	known by name	18	(20)	12	(15)	20	(18)	50	(18)
public	unknown	97	(80)	110	(62)	96	(60)	303	(66)
	known by face	12	(10)	29	(16)	34	(21)	75	(16)
	known by name	12	(10)	39	(22)	29	(18)	80	(17)

[a] Category 'unclear' is excluded.

Table 3.4b Reporting percentage per type of violence, location category, and victim-offender relationship

Location[a]	Offender	Type of violence			
		Sexual offense	*Assault*	*Threat*	*Total*
private	unknown	43	64	64	56
	known by face	24	56[b]	31	33
	known by name	14	32	32	25
semi-private	unknown	20[b]	44[b]	39	38
	known by face	22[b]	28	21	23
	known by name	10	26	16	16
semi-public	unknown	3	28	21	17
	known by face	0	14	15	11
	known by name	6	33	30	22
public	unknown	24	33	25	27
	known by face	17	24	38	29
	known by name	25	33	38	34

[a] Category 'unclear' is excluded.

[b] Percentage based on less than 10 observations.

3.6.2 Multilevel model

Finally, multivariate analyses are applied to the data to test what the effects of the contextual variables are, while controlling for possible influences of other variables. The results from the multilevel model including the control variables, contextual variables and two interaction variables – to test for the hypothesized interaction between crime location and victim-offender relationship – is given in Table 3.5.[3.8] These interaction variables are dichotomous: the first has a value of one if the violence took place in the (semi-)public domain *and* the offender is known by face, the second is one if the violence took place in the (semi-)public domain *and* the offender is known by name. In all other categories, the values are zero. Several of the control variables have an effect on victims' likelihood to report their victimization to the police.[3.9]

Table 3.5 shows that victims report violent crimes more often if these take place in the private domain, the semi-private domain or the public domain, than when these occur in the semi-public domain (the reference category). This finding means that Hypothesis 1, which states that victims of violent crimes will report their victimization more often if the crime has taken place in a (semi-)public location than when the crime has taken place in a (semi-)private location, needs to be rejected. Hypothesis 2 is the inverse of Hypothesis 1: victims of violent crimes will report to the police *less* often if the violence has taken place in a public or semi-public location than when it has occurred in a private or semi-private location. To properly test this hypothesis, an additional analysis was done without distinguishing between the four types of locations, but with one dummy variable indicating whether the location was (semi-)private (0) or (semi-)public (1) instead. The parameter for this dummy was negative and significant (*one-tailed* $p < .01$) (the direction and significance of other parameters did not alter), which means that Hypothesis 2 is confirmed. Hypothesis

[3.8] Cases with missing data regarding one of the variables used in the multilevel analyses have been excluded. For 59 cases there was no information on the victim's age, for 18 additional cases the information on the crime location was missing, and for four additional cases there was no information on the victim's injury resulting from the crime. This resulted in a file describing 1,220 crime incidents that happened to 779 victims.

[3.9] The estimated parameter for the control variable 'interviewed (instead of self-reported)' is not significant, thus no effect is found of the method of data collection. Victims of sexual offenses are less likely to report their victimization than victims of threats (the reference category). No difference is found between victims' likelihood to report assaults or threats. Victims who were injured and had to undergo at least one medical treatment, turned to the police more often than those who were not injured. Female victims are more likely to report than males, older victims more likely than younger victims, and victims with a low educational level more likely than victims with a high educational level. No effects are found of victims' country of birth (the Netherlands versus abroad), their household size, and the level of urbanization of their place of residence.

3 states that victims of violence report their victimization more often if the crime took place in a private or public location than when it took place in a semi-private or a semi-public location. Again, an additional analysis was computed to properly test this hypothesis. In this additional analysis, the three dummies for the four types of locations were excluded, and one dummy was included instead which indicated whether the location was private or public (0), or semi-private or semi-public (1). The parameter for this dummy was negative and significant (*one-tailed p* < .001), which means that Hypothesis 3 is also accepted. Thus, the likelihood that victims will report their victimization to the police is higher if the crime took place at someone's home or on the street than when it occurred within an organization.

Regarding the effects of the victim-offender relationship, the estimated parameters 'offender known by face' and 'offender known by name' are both negative (with the reference category being 'offender unknown') and significant (*one-tailed p*'s < .05 and < .001, respectively).[3.10] It was hypothesized that victims of violent crimes will report their victimization most often if they do not know the offender and least often when they know the offender well (H4). The results confirm the first part of this hypothesis, but to test whether the likelihood of reporting is indeed smallest if the victim knows the offender well (cf. knows the offender by face), an additional analysis had to be performed. In this additional analysis, the same model was tested, but with 'offender known by name' as the reference category. The results showed no significant difference between knowing the offender by face or by name. Thus, even though the estimated parameters in Table 3.5 are significant and in the hypothesized direction, Hypothesis 4 is only partly confirmed.

Hypothesis 5 states that the effect of the victim-offender relationship on victims' reporting behavior is stronger for violent crimes taking place in the (semi-)private domain than for those occurring in the (semi-)public domain, with crimes involving unknown offenders having an especially high probability of being reported if they take place in the (semi-)private domain. To test this proposition, the two interaction variables were included in the model. The estimated parameters for the first interaction variable – which distinguishes between violence taking place in the (semi-)public domain with an offender who is known by face and all other categories – is not significant. This means that there is no additional effect on reporting for incidents taking place in (semi-)public locations if the offenders are known by face. The second interaction variable distinguishes between violence taking place in

[3.10] A model without allowing for interaction between crime location and degree of recognition of the offender has also been tested. In this model no significant effect was found for the degree of recognition of the offender, while the different crime locations had similar parameters as those presented in Table 3.5.

the (semi-)public domain with an offender who is known by name and all other categories. This variable does have a significant positive effect on the likelihood that victims report to the police (*one-tailed* $p < .001$). This means that, after including the control variables and the other contextual variables in the model, there is an additional positive effect on reporting for incidents taking place in (semi-)public locations if the offenders are known by name.

Table 3.5 Effect parameters of contextual and control variables on the chance that violent crimes are reported to the police ($N_{crimes} = 1220$; $N_{victims} = 779$)

Variable	Coeff. (S.E.)
Contextual variables	
Location category	
private (ref. = semi-public)	1.46 (.39)***
semi-private	1.02 (.38)**
public	.69 (.22)***
unclear	.60 (.38)+
Victim-offender relationship	
known by face (ref. = unknown)	-.65 (.39)+
known by name	-1.03 (.35)***
Interaction location - offender	
offender known by face * (semi-)public	.46 (.47)
offender known by name * (semi-)public	1.14 (.42)**
Control variables	
Crime characteristics	
interviewed (instead of self-reported)	.08 (.18)
sexual offense (ref. = threats)	-.95 (.22)***
assault	-.08 (.22)
injury, no medical treatment needed (ref. = no injury)	.23 (.25)
injury, one or more medical treatments needed	2.21 (.38)***
Victim characteristics	
male	-.39 (.19)*
age at time of incident[a]	.02 (.01)**
born in the Netherlands	-.34 (.41)
educational level low (ref. = high)	.36 (.21)*
educational level average	.23 (.20)
household size = 1 (ref. = > 2)	.07 (.23)
household size = 2	-.00 (.19)
degree of urbanization place of residence = high	-.05 (.17)
Intercept	-1.14 (.50)*
Variance at victim level	.92 (.23)***

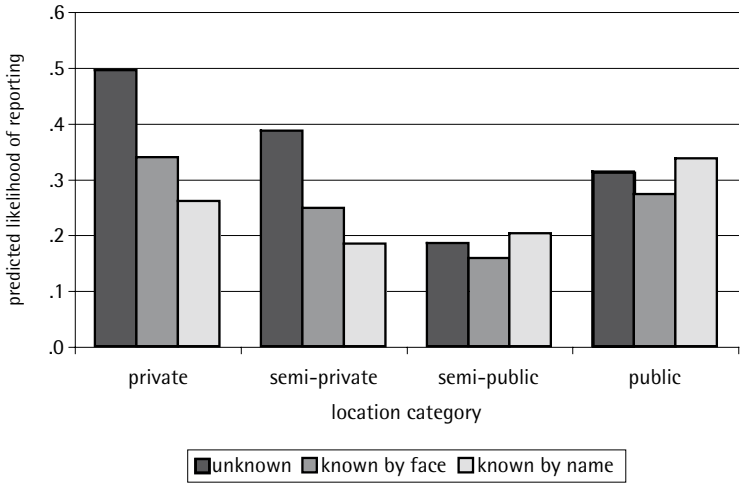
+ = $p < .10$, * = $p < .05$, ** = $p < .01$, *** = $p < .001$ (two-tailed).

[a] Scores are centered on the entire sample.

Figure 3.1 illustrates the positive interaction between the type of location being (semi-)public and the level of recognition of the offender being knowing the offender

by name. The figure is based on the parameters presented in Table 3.5. To make a graphic representation of the findings in the multilevel model, it is necessary to choose a 'reference case'. The bars in Figure 3.1 represent the estimated likelihood of reporting the incident to the police for a female victim of a threat (thus, she has not been injured) who was born in the Netherlands, has a high educational level, lives with two or more other people in one household in a town with a low degree of urbanization. She filled in the written questionnaire to answer questions on this specific incident. Furthermore, her age at the time of the incident matched the average age in the sample.[3.11] The figure shows that the predicted likelihood of reporting incidents in private and semi-private locations is highest for violence with an unknown offender and lowest for threats with an offender who is known by name, but that this is not the case for violence in semi-public and public locations. In the latter two types of locations, the differences in the predicted likelihood of reporting depending on the levels of recognition of the offender are much smaller. Also, they are highest for acts of violence committed by offenders who are known by name and lowest for offenders who are known by face.

Figure 3.1 Predicted likelihood of reporting per location category and level of recognition of the offender[a]



[a] This is the predicted likelihood of reporting (based on the model in Table 3.5) for a female threat victim, who was born in the Netherlands, has a high educational level, lives with two or more other people in one household, in a town with a low degree of urbanization. Her age at the time of the threat matched the average in the sample and she filled in the written questionnaire to answer questions on this specific incident.

[3.11] Note that if another 'reference case' would have been chosen for Figure 3.1 – for example a similar person being the victim of a sexual offense with no injury – the pattern in the figure would have been similar; only the absolute predicted probabilities of reporting would have differed.

3.7 Discussion

This study examined whether the likelihood of police notification by victims of violence is affected by the context of the location in which the crime took place and by the victim-offender relationship. Previous research provided mixed evidence as to whether victims are less likely to report their victimization to the police if they know the offender than when the offender is an unknown person. The present study suggests that these mixed findings are not surprising because most of these previous studies did not include information on the type of crime location (e.g. Bachman, 1993; Baumer, 2002; Felson, Messner, & Hoskin, 1999; Gartner & Macmillan, 1995; Pino & Meier, 1999). Studies that did include information on the crime location generally only included one variable indicating whether the crime took place in a private location or elsewhere (Bachman, 1998; Baumer, Felson, & Messner, 2003; Felson *et al.*, 2002), or at school or elsewhere (Finkelhor & Ormrod, 2001) (for an exception, see Gottfredson & Hindelang, 1979). Furthermore, none of these previous studies suggested an interaction between the two variables. The present study does not only show significant effects of the type of location in which the crime took place, but also found this factor to be strongly correlated to the effect of the victim-offender relationship.

It was found that victims' likelihood of reporting violent victimizations to the police is lower for incidents taking place in the (semi-)public domain than for incidents taking place in the (semi-)private domain. This finding suggests that victims experience stronger feelings of injustice and anger if crimes take place in the (semi-)private domain, because their desire to be safe is greater in these locations than it is in (semi-)public locations. They do not have the possibility to avoid the location to protect themselves against repeat victimization. It was also found that the likelihood of reporting is lower for incidents taking place within the semi-private or semi-public domain than for incidents occurring at private or public locations. Without controlling for interaction between crime location and victim-offender relationship, no effect was found for the latter variable. However, after including an interaction term in the analysis model for incidents in the (semi-)public domain with (vaguely or well) known offenders, it was found that within (semi-)private locations violent crimes with unknown offenders are reported more often than violent crimes with known offenders, while this is not the case in (semi-)public locations. The difference in the likelihood of reporting violent crimes with known and unknown offenders was found to be smaller for incidents taking place in (semi-)public locations than for incidents taking place in (semi-)private locations. These findings are consistent with the findings in an earlier study by Gottfredson and Hindelang (1979).[3.12]

[3.12] It is worth noting that Gottfredson and Hindelang (1979) did not control for the type of crime and for effects of demographic victim characteristics and did not compute significant tests. Furthermore,

The findings in this study imply that future studies examining the effect of the victim-offender relationship should begin with taking the type of crime location into account and vice versa. Moreover, researchers should allow for interaction between the two variables in their models of reporting to be able to disentangle the effects of both variables.

In general, the results of the present study confirm that it is important to consider contextual factors when attempting to explain reporting behavior, instead of focusing exclusively on factors related to the crime seriousness and on demographic victim characteristics. Furthermore, contextual factors previously studied concerned the context in which victims live, while the present study suggests that the context in which crimes take place might be equally important for victims' reporting behavior. The social ecology framework of reporting developed by Ménard (2003) is an attractive framework for the study of victims' reporting behavior, but it should be extended as to also take into consideration the context in which crimes take place (as is done in the present study).

A future study could go a step further than this one by distinguishing between different types of victim-offender relationships in more detail. Table 3.3 shows big differences in reporting percentages between violent incidents committed by (ex-) spouses, relatives, friends or acquaintances, and other familiar people. Therefore, it would be useful for our understanding of the interaction between crime location and victim-offender relationship to distinguish between these different types of victim-offender relationships. This could be especially useful for increasing our knowledge of the reporting behavior of victims of domestic violence. It was not possible to make such a distinction in the present study, because the sample size was not large enough to obtain stable results from multivariate analyses.

Finally, it has to be noted that data sources used for the study of victims' reporting behavior often do not include information on the exact incident location. The largest population survey on victimization in the Netherlands, for example, includes quite detailed information on where victims live, but does not ask these victims about where they were victimized, other than whether the crime incident happened in their own neighborhood, town or somewhere else. Fortunately, there are readily available surveys that do include the necessary information on crime locations, e.g. the National Crime Victimization Survey (NCVS) in the United States.

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because the aim of their study was to test different propositions made by Black (1976), they did not pay much attention to the interaction between the type of location and the victim-offender relationship found in Table 8 (pp.14).

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Appendix 3.A

Frequency distribution of contextual and control variables per type of crime

	Sexual offense	*Assaults*	*Threats*	*Total*	*(% of total)*[a]
Contextual variables					
Location category					
private	106	73	77	256	(20)
semi-private	56	50	107	213	(17)
semi-public	89	80	113	282	(22)
public	121	178	159	458	(36)
unclear	23	14	26	63	(5)
Victim-offender relationship					
offender unknown[b]	186	193	217	596	(46)
offender known by face	60	78	112	250	(19)
offender known by name	156	135	164	455	(35)
(ex-)spouse	13	24	23	60	(13)
relative	16	30	21	67	(15)
friend/acquaintance	79	24	40	143	(32)
other familiar person	46	53	78	177	(40)
Control variables					
Victim injured					
no	359	170	493	1022	(79)
yes, but no medical treatment needed	28	184	n/a	212	(16)
yes, medical treatments needed	12	48	n/a	60	(5)
Educational level victim					
low	116	117	143	376	(29)
average	136	156	184	476	(37)
high	150	133	166	449	(35)
Household size victim					
1	83	75	87	245	(19)
2	128	111	141	380	(29)
>2	191	220	265	676	(52)
Urb. grade victim's place of resid. = high	185	180	207	572	(44)
Gender victim = male	39	259	302	600	(46)
Victim born in the Netherlands	382	391	480	1253	(96)
Age victim at time of incident	[c]	[d]	[e]	[f]	
Total	402	406	493	1301	(100)

[a] Missing values excluded pairwise.

[b] Including 27 cases where the offender got away unseen.

[c] Mean age at time of sexual offense: 20 years old (SD = 9.8).

[d] Mean age at time of assault: 21 years old (SD = 10.8).

[e] Mean age at time of threat: 25 years old (SD = 12.1).

[f] Mean age at time of violent crime: 22 years old (SD = 11.2).

4

CONTEXTUAL DETERMINANTS OF JUVENILES' WILLINGNESS TO REPORT CRIMES

A VIGNETTE EXPERIMENT[4.1]

4.1 Introduction

In many empirical studies on reporting behavior, it is (implicitly) assumed that the decision (not) to report is based on an economic cost-benefit calculation by the victim. Crime seriousness especially – measured as the financial and physical damage imposed on the victim as a result of the crime – determines the outcome of this calculation (e.g. Fishman, 1979; Gottfredson & Hindelang, 1979; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). Even though it is assumed more and more often in the social sciences that the social context in which people find themselves and in which events take place influence human behavior (Baumer, 2002), there are relatively few studies in which the influence of these factors on victims' reporting behavior has been investigated. Over the last several years, however, the focus in empirical research seems to have shifted. Some studies show, for instance, that the immediate social surroundings of the victim can have a strong influence on decision-making (e.g. Greenberg & Ruback, 1992), and also factors constituting the broader social context (such as the neighborhood) in which victims are embedded are thought to influence reporting behavior by victims (e.g. Baumer, 2002; Ménard, 2003).

In addition to the social context in which victims are embedded, aspects of the context in which crime incidents are embedded have been assumed to influence crime victims' decision-making (e.g. Black, 1976). In this regard, the location in which a crime takes place is a contextual factor considered to be of importance (see also Chapter 3). A distinction is made between public locations (such as a public road) and private locations, but there are many locations that are considered to be semi-private or semi-public (organizations such as schools, shops, offices, hospitals,

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sports clubs, and factories). Until now, empirical research has focused primarily on victims' willingness to report crimes that took place in the public and private domain (think of domestic violence), but surprisingly little is known about the reporting of crimes that occurred in semi-private and semi-public locations. An aspect of the crime location considered to be of importance is the presence of alternative authorities to report the crime to. For, in case of victimization in the semi-private (and, to a lesser extent, the semi-public) domain, often the possibility exists to report to an alternative authority within the organization. In empirical research, however, almost no attention has been given to this aspect to date (see, however, Finkelhor & Ormrod, 1999; Fisher, Daigle, Cullen, & Turner, 2003; Garofalo, Siegel, & Laub, 1987).

The degree to which victim and offender know each other is a related factor that is also considered to influence crime victims' reporting behavior. However, empirical research has yielded contradictory findings in this regard. From some studies it can be concluded that victims report less often if they know the offender (e.g. Gartner & Macmillan, 1995; Lizotte, 1985; Pino & Meier, 1999; Pollard, 1995; Ruback, 1993), others find that cases with an unknown offender are reported less often (Felson, Messner, & Hoskin, 1999; see also Chapter 6) and some studies find no relationship at all (Bachman, 1993, 1998). Thus, a lot still remains unclear about the effects of this factor on victims' reporting behavior.

This study focuses on the influence of these factors on juveniles' willingness to report if they have become victim of a violent crime. The choice to focus on violent crimes and juvenile victims is based on a number of considerations. First, juveniles spend a considerable amount of their time at school (a semi-private area) where they become the victim of violent crimes relatively often (Addington, Ruddy, Miller, & DeVoe, 2002; Finkelhor & Ormrod, 2001; Harland, Van der Laan, Smeenk, & Weerman, 2005; Van Wonderen, 2004). Second, juveniles have a greater chance of being victimized than adults, especially when it concerns violent crimes (Finkelhor, 1997). Thirteen percent of Dutch teenagers between 15 and 18 years old become victims of a violent crime, while the mean percentage of victimization for the entire population over age 15 is about six percent (*Politiemonitor Bevolking*, 2001). Third, violent crimes are less often reported to the police than property crimes, and reporting percentages are even lower if the victim is a juvenile. For instance, according to the Police Population Monitor (*Politiemonitor Bevolking*; PPM) in the Netherlands, the overall percentage of the assaults and threats reported to the police between 1995 and 2001 was 38 (see Table 2.2), while in the same period 58 percent of the property crimes were reported. People between 15 and 21 years old reported 32 percent of the assaults and threats they were the victim of, while those over the age of 21 reported 39 percent of these violent victimizations. Many studies from

other countries have found even larger differences between reporting percentages by juveniles and adults. For instance, Finkelhor & Ormrod (2001) found that in the United States in the mid-nineties 48 percent of the acts of violence committed against adults and 28 percent of the acts of violence against juveniles were reported to the police. Hence, knowledge about juveniles' intention to report crimes that take place in the public domain and within schools (a specific semi-private organization) could lead to a better understanding of the reporting behavior of crime victims in general.

The aim of this Chapter is to study the influence of three contextual factors considered to be of importance for the decision to notify the police or an employee of the organization one belongs to (here: the school). These factors are: the location of the crime incident, the extent to which victim and offender know each other, and whether or not the offender is part of the same organization as the victim.

Empirical studies on victims' decision-making – and on criminal victimization in general – are usually based on population surveys. Reliance on a single research methodology, however, is unwise, as every method is likely to have inherent flaws that may bias the research. Victim decision-making is a complex phenomenon and using multiple methods to study similar hypotheses (cf. Chapter 3) can yield many useful insights (e.g. Denzin, 1978; Greenberg & Ruback, 1992). Therefore, a vignette experiment (N = 499) is used in the present study. This experimental approach makes it possible to isolate and control specific independent variables and is thus ideal for testing causal hypotheses.

4.2 Theories on reporting

Three classic theoretical models in studies on crime victims' reporting behavior can be distinguished. First, in empirical literature, often an economic model is used. In this model it is assumed that the decision to report a crime to the police is based on a cost-benefit calculation by the victim to determine whether it is worth the effort (Skogan, 1984). According to this model, incidents that result in little or no material and physical damage are reported to the police less often, as doing so always involves transaction costs (it takes time), while the expected benefits are low or even absent. This reasoning is supported by empirical research: serious crimes have a much greater likelihood of being reported to the police than less serious offences (Bennett & Wiegand, 1994; Felson, Messner, Hoskin, & Deane, 2002; Fishman, 1979; Gottfredson & Hindelang, 1979; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). This model provides a fairly limited view, as factors not related to the seriousness of the offence are usually

ignored.[4.2] Second, there are researchers who take a psychological model as a starting point (e.g. Greenberg & Ruback, 1992; Ruback, Greenberg, & Westcott, 1984). This model assumes that other factors – including the immediate social network of the victim – also play a part in the decision-making. These researchers suppose that victims not only make a cost-benefit calculation to decide what to do, but that they also sometimes are too emotional or too afraid to make a rational decision. Furthermore, they assume that there are different behavioral options after victimization. Reporting to the police is one option, trying to find a private solution is another. The third model used is a (macro-)sociological model, which states that the probability of an incident being reported to the police is determined by the social structures in the society in which both victim and offender live (e.g. Black, 1976). For example, it is assumed that reporting to the police (asking for formal social control) is negatively related to other forms of social control. This sociological explanation differs strongly from the previous two models as it focuses on the influence of contextual variables (e.g. Lessan & Sheley, 1992) and studies reporting behavior mostly at an aggregated level.

Because the present study focuses on the effects of the context in which crimes take place while controlling for factors related to crime seriousness and demographic victim characteristics, the theoretical starting point for this study is a socio-ecological model that combines the three classical models into one model that takes into account both individual and contextual level factors (Ménard, 2003; see also Baumer, 2002). For an extensive explanation of this socio-ecological model, see Section 1.4.

4.3 Hypotheses

In this Chapter, the effects of three factors related to the context in which a crime takes place are studied that are thought to affect (juvenile) victims' reporting behavior: (1) the location in which the crime takes place (public or semi-private), (2) the extent to which victim and offender know each other, and (3) whether the offender is part of the same organization as the victim. Hereafter, hypotheses regarding the effects of these characteristics on both the probability of notifying the police and the probability of reporting the incident to an employee of the organization will be formulated.

[4.2] This model differs strongly from modern rational choice theory. Factors other than those related to the seriousness of offences are hardly examined in the economic model described here, while in modern rational choice theory other factors (such as the interaction between the person concerned and third parties) are considered to be also of interest in predicting human behavior.

4.3.1 Location of the incident

The probability that victims report a violent crime can be assumed to be dependent on the location in which the incident takes place. Here, it is important whether the location is in the public, semi-public, semi-private, or private domain. A private location is someone's home or other private property. A semi-private location is less private than the first category, but is only open to specific people (e.g. someone's work or school). Semi-public locations are open to everyone, but one has to obey the norms and regulations that exist in that specific location and sometimes one has to pay to be allowed in (e.g. cinemas, nightclubs, restaurants and public transport). Public locations are open to everyone, free to enter, and they are owned by the (local) government (e.g. streets, forests and beaches). A great deal of research has been conducted on the willingness to report violent crimes taking place in the private domain (e.g. Block, 1974; Gartner & Macmillan, 1995; Malsch & Smeenk, 2004). These studies have shown that victims' willingness to report violence taking place in the private domain is relatively low. For acts of violence occurring in the semi-private and semi-public domain, the situation is not as clear.

In the semi-private domain, including schools, universities and other organizations or companies, formal rules and regulations often exist that describe what to do if a crime takes place. A formal control mechanism exists through which those who commit crimes can be punished and others (belonging to the organization) can be protected (Finkelhor & Ormrod, 2001). Thus, if people become crime victims within their own organization, it can be attractive to report this to an employee of this organization. If victims believe that the organization they belong to is capable of protecting them against future crimes and/or punishing the offender, they might be less likely to report the crime to the police (also). On the other hand, in the case of a comparable violent crime taking place in a public space, absence of an alternative formal authority that can punish the offender and/or protect the victim may increase the odds of an incident being reported to the police. In those instances, the police are often the only formal organization one can turn to. That is why, as far as location of the incident is concerned, the following hypotheses on the reporting behavior of victims of violence are formulated: *(H1a) victims of a violent crime report this to the police more often if the incident takes place in the public domain than if it takes place within an organization they belong to (the semi-private domain)*; and *(H1b) victims of a violent crime report this to the organization they are part of more often if the incident takes place within the organization than if it takes place in the public domain*.

4.3.2 Knowing the offender

Often, it is assumed that the relationship between the offender and victim influences the probability of a violent crime being reported to the police or to an alternative authority, but, as mentioned in the introduction, empirical findings regarding this are contradictory (Felson, Messner, & Hoskin, 1999).

Several authors have argued that informal social control is inversely related to formal social control exerted by the police (e.g. Black, 1976; Boggs, 1971; Conklin, 1975; Gottfredson & Hindelang, 1979; Laub, 1981). Informal social control is assumed to vary depending on the degree to which the victim and offender know each other (e.g. Black, 1976; Hunter, 1985; Ménard, 2003). According to these researchers, informal social control is more likely to be available to those who know each other. Formal social control, namely police intervention, on the other hand, is most common where interaction, intimacy and integration are scarce. Strangers frequently use formal social control to solve their disputes, whereas people who know one another are less likely to call the police on each other.

Furthermore, it has been found that victims have different considerations that can play a role in their decision-making (Felson *et al*., 2002). Two of these considerations are strongly related to how well the victim knows the offender: fear of retribution by the offender and the perception that the incident is a private matter and should therefore be solved privately. The first is a cost-benefit consideration: if the victim knows the offender well, the chance that the victim fears retribution by the offender after reporting the incident to the police or an alternative authority will be higher than if the offender is unknown (Bachman, 1993; Felson, Messner, & Hoskin, 1999; Felson *et al*., 2002; Gottfredson & Gottfredson, 1988; Singer, 1988). The second is a normative consideration: in case of a known offender the probability that the victim decides that it is a private matter and the situation should be resolved privately is higher than when the offender is unknown (Felson *et al*., 2002). These considerations would have a negative effect on victims' willingness to report crimes if they know the offender (well).

The above reasoning leads to the following hypothesis: *(H2a) victims of a violent crime report their victimization to the police most often if they do not know the offender and least often when they know the offender well*; and *(H2b) victims of a violent crime also report their victimization to an employee of their organization most often if they do not know the offender and least often when they know the offender well*.

4.3.3 Offender is part of the same organization

The formal control mechanism within an organization with which offenders can be punished and victims can be protected functions best if not only the victim, but also

the offender is part of this organization. After all, if the offender does not belong to the organization, it often has less means to punish him or her. At most, it can deny access to the offender, thereby protecting the victim when he or she finds him- or herself within the walls of the organization. One could expect, therefore, that it is more profitable to report to an employee of the organization if the offender also belongs to the organization than if the offender comes from outside the organization. In this last case, contacting the police would be more useful. Therefore, the following hypotheses are formulated: *(H3a) victims of a violent crime report this to the police less often if the offender is part of the same organization they belong to than when the offender comes from outside the organization*; and *(H3b) victims of a violent crime report to an employee of their own organization more often if the offender is also part of this organization than when this is not the case*.

4.3.4 Interaction between offender and location

It is assumed that victims will be more likely to perceive that the organization is capable of protecting them and punishing the offender if the violence takes place within the organization or if the offender belongs to the same organization. It seems obvious that the expectation of the victims that the organization can protect them or punish the offender is especially high if the crime both takes place within the organization *and* the offender is part of this organization. Contacting the police could then be assumed to be less attractive. This leads to the following hypotheses: *(H4a) victims of a violent crime report this to the police less often especially if the crime takes place within the organization they are part of and if the offender is part of the same organization also*; and *(H4b) victims of a violent crime report this to an employee of the organization more frequently especially if the incident takes place within the organization and the offender is part of the same organization*.

4.3.5 Availability of an alternative authority

As stated above, within many organizations (the semi-private domain) there is some sort of formal control mechanism to maintain order. If victims and offenders are part of the same organization, offenders can be punished and victims can be protected against future victimization (Finkelhor & Ormrod, 2001). Such organizations can therefore provide an alternative for the police. In situations in which victims will expect more benefits from reporting a crime to an employee of the organization (that is, if the crime takes place within the organization and/or the offender is also part of this organization), reporting to the police seems to be less useful. In situations in which reporting to the police seems to be more useful, one might expect less benefit from reporting the incident to an employee of the organization. Therefore

the following is hypothesized: *(H5) in situations in which victims of violent crimes report these more often to an employee of the organization they belong to, they will be less inclined to report them to the police*.

4.4 Method

4.4.1 Design

The present study employs an experimental design. Experimental approaches are ideal for testing causal hypotheses, because they permit the manipulation and control of specific variables (the experimental variables), while other variables are kept constant. Because it is hardly possible in practice to make participants actually believe they are victims of a crime without jeopardizing their emotional well-being and violating ethical norms,[4.3] it was decided here to use a vignette study. Vignettes are short descriptions of a social situation. Participants were asked to imagine themselves in one of these scenarios and then answer questions regarding their intended behavior.

To test the aforementioned hypotheses, the three characteristics of the context in which crimes take place that are assumed to affect the victims' decision-making were systematically manipulated in the vignettes. These three factors are: the type of location in which the crime incident takes place (on the street vs. at school), the degree of familiarity with the offender (unknown, known by face, known by name), and whether the offender is part of the same organization as the victim (schoolmate vs. no schoolmate). This resulted in a 2 x 3 x 2 between-subjects factorial design. However, in vignettes with an unknown offender, the variable on whether the offender is part of the same organization is excluded, because then obviously the participant could not know whether the offender was someone from school or not. Therefore, there are ten and not twelve experimental conditions. Participants were randomly assigned to one of these conditions.

[4.3] See Greenberg and Ruback (1992) for some successful real-behavior experiments on crime victims' decision-making, but also to find information about a lawsuit filed against them and their employers by one of the participants.

4.4.2 Participants and procedure

Data were collected among 511 students from seven (high) schools in the Netherlands. All participants were in the 3rd, 4th or 5th grade of *VMBO* (lower vocational education), *HAVO* (higher general secondary education) or *VWO*/*Gymnasium* (pre-university education/high school). Most of them were between ages 14 and 17. During class the teacher asked the students to anonymously participate in a study on their situation, both in school and at home, and the way in which they would deal with violence. All students agreed to participate in the study. Afterwards, the answers of twelve participants had to be excluded due to too many missing values on the relevant items in the questionnaire. The resulting sample contained 499 participants.[4.4] It was expected that this sample size would result in sufficient power.[4.5]

[4.4] Two remarks on the data collection need to be made here. First, participants were not randomly selected from the total population of Dutch (high) school students, which makes it possible that the findings in this study are not representative for (Dutch) students in general. However, contacting seven (high) schools directly did result in an excellent response percentage: all contacted schools cooperated and response within the participating classes was 100% (not considering students not present in the classroom during the experiment). Second, the study was not conducted in a laboratory setting. Students completed the questionnaire during class in a classroom. Instructions were given by the teacher usually, but in a few instances they were given by a researcher. It is possible that these factors influenced the answers given by participants.

[4.5] Power is the probability of the null hypothesis in a study being rejected – that is, a significant result being obtained – if the null hypothesis within the population is indeed incorrect and therefore should be rejected. A precise power analysis could not be done beforehand, because the Standard Deviation (SD) of the dependent variables (intention to report to the police and to an employee of the organization) within the population was not known. The sample size was chosen in such a way that the power equaled .87 in the case of a difference of .5 (= 5%) in mean intention to report of two populations (e.g. students with a description of a violent incident taking place at school versus students with a description of a violent incident taking place on the street; H1a and H1b) and an SD of 2. Then, testing Hypothesis 4a and 4b, a sample of 100 participants (those who received a vignette describing an incident taking place at school in which the offender is a fellow student) was compared to a sample of 400 participants. If SD's within these groups would both be 1.8 and the difference in intention to report at least .5, the power would equal .8. There is no standard for the power needed, but often .8 is taken as the lower limit. Hence, the sample is large enough to detect a difference of .5 in mean intention to report if the SD is not too large. For more information on power analysis, see Cohen (1988).

4.4.3 Vignette and questionnaire

Participants were asked to read the following scenario of a violent incident:

> Carefully read the following instructions. Please try to place yourself in the situation described below. After reading the scenario, you will be asked what you would do if you were in this situation.
>
> We want to stress that we are asking for your opinion and that there are no "right" or "wrong" answers.
>
> *Try to imagine yourself in the following situation:*
>
> It is break time at school and you are walking in the schoolyard. [*Or: It is the middle of the day and you are walking in the street.*]
>
> Suddenly someone your age walks towards you, gives you a hard slap in your face, and then runs away without having said a word. It is unclear to you why you were hit and you didn't see it coming. You now feel a stinging pain near your eye.
>
> The person who hit you is a schoolmate. [Or: *The person who hit you is not a schoolmate.*][4.6]
>
> You know this person well. You have often talked with this person and know the person's name and address. [Or: You know this person by sight. You have not spoken with this person before and do not know the person's name and address.] [Or: You do not know this person. You have not spoken with this person before and do not know the person's name and address.]
>
> You are left with a black eye and your face hurts, but you don't need to see a doctor.

The location is the schoolyard (within the organization) or the street (public area), the participant knows the offender well, by sight, or not at all, and the offender is someone from school (belonging to the same organization) or not (not belonging to the same organization). Other factors that could be relevant to the decision to report (such as seriousness of the incident) are kept constant. After reading the vignette, participants answered two questions regarding their willingness to report: 'Would you report this to the police?' and 'Would you tell a school employee (e.g. teacher, dean, trusted representative, principal) what has happened?'.[4.7] Answers were given on a ten-point scale in which 1 means 'definitely not' and 10 means 'yes, definitely'.

[4.6] If the offender is unknown (condition three of the third variable) this variable has been excluded.

[4.7] Participants were also asked whether they would tell their parents and friends or classmates what happened. In the present study the answers to this question have not been taken into consideration. Almost everyone had a strong inclination to tell what happened to parents and friends or classmates, regardless of the vignette they had read.

In addition, *all* participants were asked to imagine that they would decide *not to report* the incident to the police. They then had to score their agreement with six motivations they could have not to report (on a ten-point scale, in which 1 means 'completely disagree' and 10 means 'completely agree'). These motivations were: 'I solve these situations myself', 'not worth it', 'no use; the police couldn't do anything', 'no use, the police wouldn't find it important', 'I have little confidence in the police', and 'I would be afraid of more problems with the offender'. Also, all participants were asked to imagine that they would decide *to report* the incident to the police, whereupon they had to score (on a similar ten-point scale) their agreement with six possible motivations to report the incident to the police: 'to prevent this from happening to me again', 'to prevent the offender from doing the same to someone else', 'the offender must be caught', 'for more police surveillance', 'it's my duty, it ought to be done', and 'to be cared for and helped'. In previous (retrospective) research on victimization, these twelve considerations have all been found to be important motivations for the decision (not) to report violent crimes (*Politiemonitor Bevolking*, 2001). The approach used here is unique, because in previous research only the victims who did report were asked for their motivations for doing so and only those who did not report were asked for their reasons not to.

Finally, some control questions were asked. Participants were asked questions about the realism of the vignette ('I can imagine something like this happening in real life' and 'It was easy for me to place myself in the described situation') and about the seriousness of the incident ('I would find it very serious if something like this happened to me'). In this way, it was possible to test whether there were any differences between the perceived realism and seriousness over the ten vignettes. Participants indicated the extent to which they agreed with these statements on a ten-point scale (1 = completely disagree, 10 = completely agree). Finally, they were asked if they had ever experienced a similar incident in real life and if they knew somebody who had experienced something similar (0 = no, 1 = yes).

A limitation of vignette studies is that participants have to place themselves in the situation described and think about what they would do in such a situation. What is measured are intentions, instead of actual behavior. Actual behavior could, for example, be influenced by advice given by the victim's social network. It is not possible to take such effects into account in a vignette study. It is assumed that intentions are indications of the effort people are willing to put into carrying out behavior (e.g. Fishbein & Ajzen, 1975). The reader is referred to Alexander and Becker (1978), Rossi and Nock (1982), or Sniderman and Grob (1996) for further information on the use of vignettes in survey research.

With the vignette study carried out here, previous research on criminology in general is joined (Feldman-Summers & Linder, 1976; De Keijser, 2001; De Keijser & Van Koppen, 2004; Smith, Keating, Hester, & Mitchell, 1976) as well as specific research on the willingness to report (Greenberg, Ruback, & Westcott, 1982; Skelton & Buckhart, 1980).

4.4.4 Randomization and manipulation checks

All vignette conditions had a sample size of between 47 and 51 participants. It is important that the individual characteristics of the participants are independent of the conditions. If this requirement is not met, it may be impossible to distinguish between experimental effects and individual effects. Likelihood ratio statistics were calculated for education, school and gender of the participants. In this regard no significant differences between participants were found for the various vignette conditions. There also was no age difference between participants for the ten conditions ($F < 1$). In addition, likelihood ratio statistics were calculated to test whether there was a difference for the various conditions with regard to the percentage of participants who had ever experienced a similar incident in real life and those who knew somebody who had experienced something similar. Again, no significant differences between the participants were found for different experimental conditions. Thus, characteristics of the participants did not vary for different experimental conditions.

Furthermore, it was tested whether the perceived seriousness of the violent incident ('I would find it very serious if something like this happened to me') and the perceived realism of the scenario ('I can imagine something like this happening in real life' and 'It was easy for me to place myself in the situation described') differed depending on the vignette conditions. This was not the case ($F < 1$ in all three cases).

4.5 Results

4.5.1 Reasons for (not) reporting to the police

Before testing the hypotheses, let us turn to the extent to which the participants agreed with the different reasons provided for (not) reporting to the police. All participants were asked to imagine the decision not to report the incident to the police *and* the decision to report the incident to the police.[4.8] Mean scores for each vignette are presented in Table 4.1.

[4.8] Participants were not asked for their level of agreement with motivations (not) to contact a school employee.

Table 4.1 Mean agreement of participants with reasons (not) to report the violent incident to the police (1 = definitely not, 10 = definitely) per experimental condition

Location	School					Street					
Relationship with offender	schoolmate		no schoolmate			schoolmate		no schoolmate			
	well known	vaguely known	well known	vaguely known	unknown	well known	vaguely known	well known	vaguely known	unknown	Total
Reasons not to report											
I solve these situations myself	7.4	6.4	7.2	6.7	6.9	6.6	6.8	7.4	6.1	6.7	6.8
No use; police couldn't do anything	6.5	6.7	6.4	6.8	6.7	5.9	6.3	6.6	7.5	7.8	6.7
Not worth it	6.6	5.5	5.9	6.0	6.2	5.7	5.5	6.3	6.4	6.3	6.0
Police would find it unimportant	5.9	5.9	6.1	6.0	5.9	5.8	6.0	6.2	6.5	6.0	6.0
Little confidence in the police	4.8	4.1	5.2	4.9	5.0	5.2	4.9	4.9	5.2	5.3	4.9
Afraid for more problems with off.	4.3	4.0	5.0	3.3	3.1	3.8	4.1	4.1	4.8	3.7	4.0
Reasons to report											
Prevent off. doing this to s.o. else	6.9	7.7	7.9	7.1	7.6	7.5	7.6	7.1	7.7	7.2	7.4
Offender must be caught	6.8	7.5	7.1	8.0	7.7	7.0	7.5	6.3	7.4	8.1	7.3
Prevent this happening to me again	6.5	6.9	7.1	6.4	6.5	6.4	6.0	5.6	6.4	5.9	6.4
For more police surveillance	5.0	6.0	5.5	6.0	5.5	5.1	5.1	5.6	5.5	5.7	5.5
It's my duty/it ought to be done	4.7	4.8	4.8	5.3	5.6	4.9	4.8	5.0	4.7	5.1	5.0
To be cared for and helped	3.3	4.8	4.2	4.0	4.0	4.0	4.0	3.7	4.2	3.3	3.9

On average, the two reasons for not reporting that the participants agreed with most are 'I solve these situations myself' and 'it wouldn't help; the police wouldn't be able to do anything'. They agreed least with 'fear of more problems with the offender' as a reason not to report. The degree to which the participants agreed with a reason not to report seems to be connected to the relationship between the victim and the offender. On average, participants who read a vignette stating that the offender was well known, indicated a higher level of agreement with the motivation 'I solve these situations myself' and 'I would be afraid of more problems with the offender' than those who read a vignette with an unknown or vaguely known offender. These reasons bear a strong resemblance to the considerations that were assumed to be of influence when Hypothesis 2a (victims report to the police least often if the offender is well known) was formulated.

The two motivations for reporting that the participants agreed with most are 'to prevent the offender from doing this to someone else' and 'the offender should be caught'. They agreed least with 'to be supported and helped'. On average, the extent to which participants agreed with the reason 'the offender should be caught' as a motivation for reporting is higher for those who read a vignette in which the offender was unknown than for those with a vignette that described an offender who was known by sight. Students who read a vignette in which the location was the school usually agreed more with 'to prevent this from happening to me again' than those who had to imagine the incident happening to them on the street.

4.5.2 Reporting to the police and to the own organization

Participants were asked if in the situation described, they would report their victimization to the police and to an employee of their school. Descriptive results for each vignette condition are given in Appendix 4.A.[4.9] A three-way analysis of variance (ANOVA) was performed for each of the two dependent variables (willingness to report to the police and to a school employee). Table 4.2 shows the results of these two analyses.

[4.9] SD's of the intention to report to the police and to an employee of the organization are higher than assumed in the power analysis before the sample was selected (see footnote 4.4): in the entire sample these were 2.50 and 2.97 on average, respectively. Unfortunately, with the present sample size, this makes the probability to detect a difference of at least .5 in mean score of the dependent variable in the population smaller than was calculated beforehand. In comparing two samples of 250 participants (as with H1a, H1b, H3a, H3b, and H5) on average the power is about .65. In testing Hypothesis 4a and 4b (comparing a sample of 100 with a sample of 400 participants) the mean power is .5.

Table 4.2 Analyses of Variance on the willingness to report to the police and to an employee of the organization

	Location			Offender				Offender		
	school	street	F	unknown	vaguely known	well known	F	no schoolmate	schoolmate	F
Police	4.0	4.3	4.6 *	4.1	4.5	3.9	2.9 *	4.1	4.2	.1
Employee	6.5	4.7	42.3 ***	5.4	5.9	5.4	1.2	5.3	6.0	7.5 **

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (one-tailed).

Reporting to the police

Regarding participants' willingness to report the act of violence to the police, it is found that the willingness to report violence victimization to the police is higher for incidents taking place in the public domain (the street) than for incidents taking place inside an organization that the victim is part of (the semi-private domain, here: the school) ($F(1,493) = 4.6$, one-tailed $p < .05$). This is consistent with Hypothesis 1a.

A significant main effect is also found for the degree to which the offender is known ($F(2,493) = 2.9$, one-tailed $p < .05$). A Games-Howell *post hoc* test revealed that the willingness to contact the police is significantly lower for violence committed by a well known offender than for violence committed by a vaguely known offender (one-tailed $p < .05$), which is in agreement with Hypothesis 2a (willingness to report to the police is lower for violence committed by a well known offender). However, Hypothesis 2a also stated that victims will be most inclined to report violent crimes to the police if the offender is unknown, which is not the case. Therefore, Hypothesis 2a is not confirmed.

Hypothesis 3a, which states that violence committed by an offender from the same organization (here: a schoolmate) will have a smaller likelihood of being reported to the police than violence committed by an offender who is not part of the same organization is not confirmed, as no main effect is found for this factor.

To test for the hypothesized interaction between the crime location and whether the offender is a schoolmate or not, an interaction between these two factors was also included in the analysis (not presented in the table). This interaction effect turned out to be significant ($F(1,493) = 5.3$, one-tailed $p < .05$). This indicates that the effect of the location is different for violence committed by offenders who are part of the organization and for offenders who are not. Specifically, the willingness to report to the police does not differ for violence on the street or inside the school if the offender is no schoolmate (both 4.1), while the willingness to report violence that happens on the street is higher than for violence that happens at school if the offender is a schoolmate (respectively 4.7 and 3.7). This interaction is also shown in the left graph of Figure 4.1. This figure is based on the estimated marginal means in the ANOVA-model (thus controlled for main effects of all three factors). Hypothesis 4a, which

states that violence would be less likely to be reported to the police especially if the incident took place inside the organization *and* the offender is part of the organization, is thus confirmed.

Reporting to an employee of the organization

Participants' willingness to report the violence to an employee of the organization is higher for incidents taking place within the organization (the school) than for incidents taking place in the public domain (the street) ($F(1,493) = 42.3$, one-tailed $p < .001$). This is a confirmation of Hypothesis 1b.

Participants' willingness to report the violence to an employee of the organization is not significantly influenced by the degree to which the offender is known ($F(2,493) = 1.2$, n.s.). Therefore, Hypothesis 2b is not confirmed.

Hypothesis 3b, which states that violence committed by an offender from the same organization (here: a schoolmate) will have a greater likelihood of being reported to an employee of the organization than violence committed by an offender who is not part of the same organization, is confirmed ($F(1,493) = 7.5$, one-tailed $p < .01$).

It was also hypothesized that the willingness to report to an employee of the organization will be especially high if the incident takes place within the organization *and* the offender is part of the organization (H4b). The interaction effect between location and whether the offender is part of the organization or not, which has also been included in the ANOVA, turned out to be significant ($F(1,493) = 5.3$, one-tailed $p < .05$). Thus, the effect of the location is different for acts of violence committed by offenders who are part of the organization and offenders who are not. A graphic representation of this interaction effect is given in the graph on the right in Figure 4.1. The overall likelihood of reporting the violence to a school employee is higher if it takes place inside the school and, in that case, it hardly makes a difference whether the offender is a schoolmate or not. If it takes place on the street, the willingness to contact a school employee is lower, but this is the case especially if the offender is no schoolmate. However, since the willingness to report to a school employee is not especially high when the incident takes place within the organization and the offender is part of the organization, Hypothesis 4b is not confirmed.

Figure 4.1 Predicted willingness to report the violent incident to the police (left) and to an employee (right) for different locations and depending on whether the offender is part of the same organization or not

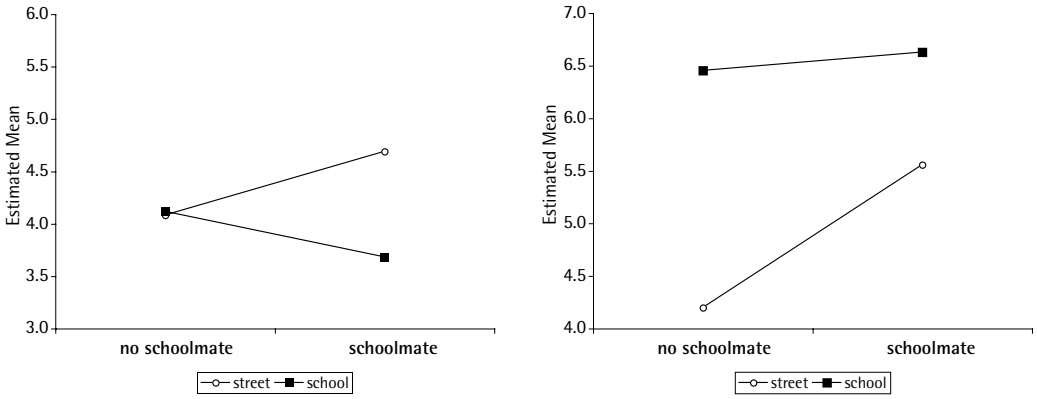
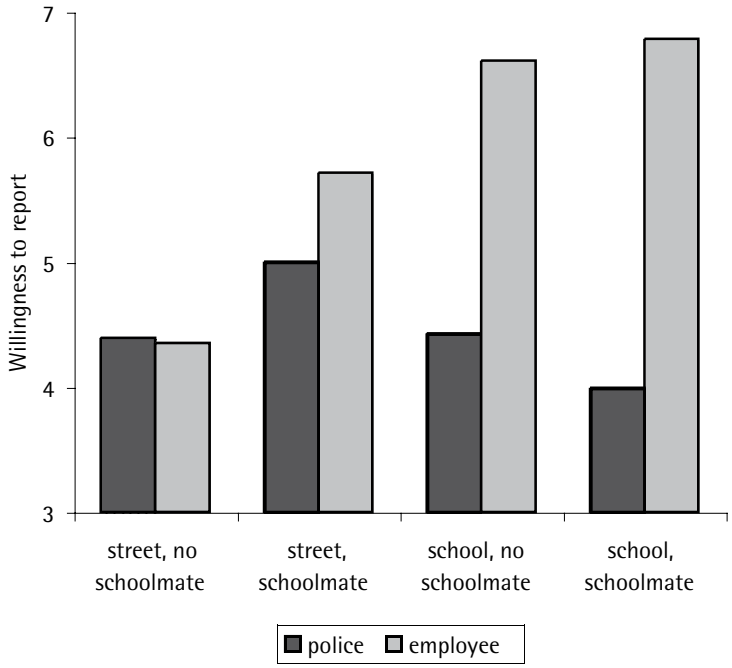


Figure 4.2 is a combined bar chart of the effects of the location and whether the offender is part of the same organization on participants' willingness to report the incident to the police and to an employee. The intentions are the estimated values, based on the two ANOVA models, of the willingness to report for someone who received a vignette with a vaguely known offender.

This figure also tests Hypothesis 5, which assumes that in situations in which victims are more inclined to report their victimization to an employee of the organization (hence, if the incident takes place within the organization and/or the offender as well as the victim are part of the organization), they would be less inclined to report to the police. A higher willingness to report to the police for the four experimental conditions concerned would have to be connected with a lower willingness to report to an employee. In Figure 4.2 the bars with the predicted values for 'reporting to an employee' ascend, while the bars with the predicted values for 'reporting to the police' do not consistently descend (Spearman's rank correlation is -1.4; n = 4). Hence, Hypothesis 5 is not confirmed.[4.10]

[4.10] The general relationship between the intention to report to the police and the intention to report to an employee in fact was found to be of an opposite nature: participants with a higher intention to contact the police have, overall, also a higher intention to contact an employee (Pearson's r = .25, two-tailed p < .001; N = 499).

Figure 4.2 Predicted willingness to report the violent incident to the police and to an employee for different locations and depending on whether the offender is part of the same organization or not[a]



[a] This is the predicted willingness of a participant who received a vignette describing the offender as being vaguely known.

4.6 Discussion

It can be concluded that factors constituting the context in which crimes take place influence a victim's decision to report. Therefore, it is important to include such contextual factors in theoretical models explaining reporting behavior. This study focused on three contextual factors that were supposed to influence juveniles' decision to report violent crimes: the location of the incident (the public domain or within an organization, that is, the semi-private domain), the degree to which the victim and offender know each other, and whether or not the offender is part of the same organization as the victim. Both the willingness to report to the police and the willingness to report to an employee of the organization one is part of (here: the school) was studied. The hypotheses and the corresponding results are given in Table 4.3. A number of these findings will be discussed here.

Table 4.3 Summary of the hypotheses and results of the analyses

#	Hypotheses on willingness to report to police	Confirmed?
H1a	↑ if location street (cf. location organization)	yes
H2a	↑ if offender unknown and ↓ if offender well known	no
H3a	↑ if offender is not part of organization (cf. is part of organization)	no
H4a	↓ if location organization & offender organization	yes
	Hypotheses on willingness to report to employee	
H1b	↑ if location organization (cf. location street)	yes
H2b	↑ if offender unknown and ↓ if offender well known	no
H3b	↑ if offender is part of organization (cf. is not part of organization)	yes
H4b	↑ if location organization & offender organization	no
	Interaction hypothesis	
H5	report police ↑ if report employee ↓	no

The main effect found regarding the location of the incident on reporting to the police (H1a) is consistent with studies based on population victimization surveys (Finkelhor & Ormrod, 2001; Garofalo, Siegel, & Laub, 1987). These studies also found a lower reporting percentage for violent incidents inside schools than for incidents on the street.

No main effect on reporting to the police was found for whether the offender is part of the same organization as the victim. However, this factor did turn out to interact with the crime location. If the offender is part of the same organization and the violence also takes place within that organization, participants generally have a very low willingness to report the incident to the police. If the same incident, with the same offender, takes place in the public domain, however, the willingness to contact the police is higher than for similar incidents with offenders who are not part of the same organization. This finding suggests that people weigh the perceived probability that the offender can be caught in a cost-benefit calculation to decide whether to report to the police (or an employee) or not. The findings shown in Table 4.1, in which the participants' agreement with different motivations for reporting and not reporting is given per experimental condition, also point in this direction. Those who received a vignette describing the act of violence taking place in the public domain, agreed more strongly with 'no use; the police could not do anything' as a motivation not to report if the offender was no schoolmate (6.6 for well known offenders and 7.5 for vaguely known offenders) or was unknown (7.8) than if the offender was a schoolmate (5.9 for well known schoolmates and 6.3 for vaguely known schoolmates).

It was hypothesized that in situations in which victims are more inclined to report their victimization to an employee of the organization (hence, if the incident takes place within the organization and/or the offender as well as the victim are part of the organization), they would be less inclined to report to the police (H5).

However, no such effect was found. The general relationship between the willingness to report to the police and the willingness to report to an employee turned out to be the opposite: participants with a higher willingness to contact the police had, overall, a higher willingness to contact an employee also. This finding suggests that people's willingness to contact others after being victimized might partly be an internal trait: some people might be more inclined to contact authorities in general, while others are less likely to contact authorities.

Almost all studies on crime victims and their willingness to report are based on victimization surveys. These questionnaires are retrospective and, as such, dependent on participants' (selective) memories. Furthermore, assuming causality between variables is problematic. With this vignette experiment it was possible to manipulate specific variables and subsequently test the effects. But, because it is difficult to determine the degree to which specific findings depend on the research method used, it would be useful to test the same hypotheses using other data – such as victim questionnaires. If this yields similar results, these results can be expected to be valid and not a consequence of the method used (Campbell & Fiske, 1959).

It is important to study the reporting decision by victims in the semi-private domain within other formal organizations (e.g. companies or associations) also, to improve insight into the effects of the location. This can be done by conducting vignette experiments, but also by using data from (existing) victimization surveys – the survey obviously has to contain information on the location of the crime and the relation between the victim and offender.[4.11]

In this study, the objective seriousness of the crime was kept constant and the participants' perceived seriousness was found to be unrelated to the experimental condition they were in. As seriousness is a strong predictor of reporting behavior, it would be interesting to also manipulate the objective seriousness of the incidents in a comparable vignette experiment, to improve the understanding of the effects of the objective and perceived seriousness of the crime.

[4.11] In the PPM, the necessary information on the crime location is not available; however, the surveys by Statistics Netherlands (*Centraal Bureau voor de Statistiek*; CBS) asked for this information.

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Appendix 4.A

Willingness (range: 1 – 10) to report the violent incident to the police and to an employee of the organization per experimental condition

			Report to police		Report to employee	
Location	Relationship with offender		Mean	(S.D.)	Mean	(S.D.)
school	offender schoolmate	well known	3.2	(1.8)	6.0	(2.9)
		vaguely known	4.2	(2.5)	7.2	(2.9)
	offender no schoolmate	well known	4.1	(2.2)	6.3	(2.9)
		vaguely known	4.3	(2.6)	6.4	(2.7)
	offender unknown		4.0	(2.6)	6.7	(2.8)
street	offender schoolmate	well known	4.5	(2.4)	5.5	(2.8)
		vaguely known	4.9	(3.0)	5.5	(3.1)
	offender no schoolmate	well known	3.7	(2.6)	4.1	(2.4)
		vaguely known	4.4	(2.4)	4.4	(2.6)
	offender unknown		4.2	(2.6)	4.2	(2.9)

5

NEIGHBORHOOD CHARACTERISTICS AND REPORTING VICTIMIZATION

EFFECTS OF SOCIAL COHESION, CONFIDENCE IN POLICE EFFECTIVENESS, AND SOCIOECONOMIC DISADVANTAGE[5.1]

5.1 Introduction

Every year approximately 25 percent of the people in the Western world are crime victims and about one in five of them are victimized more than once (Van Kesteren, Mayhew, & Nieuwbeerta, 2000). Many of these crimes are never reported to the police. For example, in the Netherlands in 2002 only a little more than a third of the crimes were reported to the police by or on behalf of the victims (Eggen, 2003). Since the bulk of information on crime reaches the police via victims and witnesses (Bennett & Wiegand, 1994; Greenberg, Ruback, & Westcott, 1982), this means that a lot of information remains concealed from the police and courts.

Even though victim reports are the most important source of information for the police on where crimes are committed and where police efforts are needed (Greenberg & Ruback, 1992; Hindelang & Gottfredson, 1976; Mayhew, 1993; Warner, 1992), the fact that many crimes are not reported to the police is not, by definition, a problem. Victims apparently do not always feel a need to report a crime. Some crimes, for instance, are not very serious and victims do not feel they require any further police or court efforts.

The decision not to report a crime can have important consequences for victims nonetheless, because they deny themselves the opportunity to turn to the criminal justice system (Van der Vijver, 1993). The police will not know about the crime and

[5.1] A slightly different version of this Chapter has been published as: Goudriaan, H., Wittebrood, K., & Nieuwbeerta, P. (2005). Neighbourhood characteristics and reporting crime: Effects of social cohesion, confidence in police effectiveness, and socio-economic disadvantage. *British Journal of Criminology, Advance Access,* November, 18, 2005, 10.1093/bjc/azi096. An earlier version has been published as: Goudriaan, H., Wittebrood, K., & Nieuwbeerta, P. (2004). Buurtkenmerken en aangiftegedrag van slachtoffers van criminaliteit: De effecten van sociaal-economische achterstand, informele sociale controle en vertrouwen in de effectiviteit van de politie [Neighborhood characteristics and reporting behavior of crime victims: The effects of socioeconomic disadvantage, informal social control, and confidence in police effectiveness]. *Mens & Maatschappij, 79*(3), 287-314.

will not have the information needed to find the offender, and they will therefore also not be able to prevent it from happening in the future. In addition, victims who do not report do not have access to certain facilities because no crime has been reported. Insurance companies, for example, generally demand a copy of the police report before they will pay out to the victim.

The decision of victims to not report a crime can also have consequences for society as a whole. For example, if victims' reporting behavior depends in part on their position in society, this tends to reveal a certain extent of social inequality in the access to public facilities. From a social viewpoint, this is undesirable. Neighborhood differences in willingness to report crimes would make efficient police efforts problematic (Baumer, 2002), because these make it all the more difficult for them to know where to focus their limited time and attention best.[5.2]

Dozens of studies have been published on the relationship between neighborhood characteristics and delinquent behavior (Sampson, Morenoff, & Gannon-Rowley, 2002). Surprisingly, only a handful of studies have been conducted regarding the influence of neighborhood characteristics on victims' reporting behavior. Research done on the determinants of the reporting decision indicates that it is often assumed that victims calculate the costs and benefits and that the most important factors in their calculations are related to the nature of the specific crime. Most studies concentrate on the effects of the perceived severity and financial damages, physical injury and psychological harm caused by the crime (Van Dijk & Steinmetz, 1980; Fiselier, 1978; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). Only a few studies focus on characteristics of the victims themselves or the neighborhood they live in (Baumer, 2002). Moreover, the studies that do examine the effects of neighborhood characteristics predominantly focus on one type of characteristic, i.e. neighborhood socioeconomic disadvantage, and hardly pay any attention to other neighborhood characteristics that can be assumed to be relevant, e.g. the degree of social cohesion in the neighborhood.

[5.2] In academic studies on the geographic distribution of crime, neighborhood differences in willingness to report crimes can also be problematic because these studies often use police registration figures. The neighborhood differences observed in reported crime are assumed to represent actual differences in the nature and extent of crime. Thus, the studies work from the assumption that the willingness to report crimes does not systematically differ from one neighborhood to the next. Especially if the willingness to report crimes is related to neighborhood characteristics that are linked to the crime rate such as socioeconomic disadvantage, the use of police registrations can distort the research results (see also Warner & Pierce, 1993). For example, if a stronger socioeconomic disadvantage is linked to a higher crime rate and a lower reporting percentage, the differences in the crime levels in various neighborhoods will be underestimated. Research into the determinants of reporting conduct offers a tool for assessing the extent of this distortion.

The lack of interest in neighborhood characteristics in research on crime reporting is striking, especially since, in recent decades, the social sciences have devoted so much attention to the influence of the features of the environment. In various criminological studies, the effects of the degree of social cohesion or informal social control and the socioeconomic status of a neighborhood on victimization and the fear of crime have been examined. These studies measure the dependent variable at the individual level and the explanatory variables include individual features as well as aggregated measures of neighborhood characteristics (Sampson, Morenoff, & Gannon-Rowley, 2002). This type of contextual analysis has been conducted in various countries, especially in the United States (e.g. Lee, 2000; Lee & Earnest, 2003; Rountree & Land, 1996; Rountree, Land, & Miethe, 1994; Sampson, Raudenbush, & Earls, 1997; Smith & Jarjoura, 1989). In recent years, multilevel studies of this kind have also been conducted in the field of victimization research in the Netherlands (e.g. Wittebrood, 2000; Maas-de Waal & Wittebrood, 2002; Van Wilsem, 2003). Up to now, Baumer (2002) has been the only researcher in this multilevel tradition to investigate the influence of neighborhood characteristics on the reporting behavior of crime victims. However, he only examined the effects of the neighborhoods' socioeconomic disadvantage.

The aim of this study is to increase the knowledge of victims' reporting behavior by examining the role of neighborhood context. Elaborating on theories regarding the influence of such factors as social cohesion in a neighborhood (Sampson, Raudenbush, & Earls, 1997) and social stratification (Anderson, 1999; Black, 1976) on individual behavior, it will first be examined whether the level of social cohesion as well as the confidence in police effectiveness and the socioeconomic disadvantage in neighborhoods affect the odds that victims will report crimes to the police. Second, it will be examined to what extent the effect of neighborhood socioeconomic disadvantage on the probability that victims report crimes to the police – as found by Baumer (2002) – is mediated by neighborhood social cohesion and confidence in police effectiveness.

These research questions are answered using data from multiple sources. Information on more than 100,000 victims and incidents stems from the nation-wide Dutch victimization questionnaire Police Population Monitor (*Politiemonitor Bevolking*; PPM), which has been performed biannually since 1993. Respondents are asked about their experiences with different types of crime and their reporting behavior. For the purpose of the present study these data are of unique value, since precise information on the addresses and neighborhoods in which the victims live is available, which could be combined with adequate information on distinct characteristics for each neighborhood. Following the example of Raudenbush and Sampson (1999) and using data from large-scale surveys, ecometric analyses have

been conducted to give each neighborhood a score on the degree of social cohesion and confidence in police effectiveness. For the socioeconomic disadvantage, an index based on official data was used. As far as is known, no other databases in the Netherlands, other European countries or the United States contain all this information.

As a result, the present study is the first to measure three neighborhood characteristics separately that are considered theoretically relevant – social cohesion, confidence in police effectiveness, and socioeconomic disadvantage (cf. Baumer, 2002) – and the first to examine their simultaneous effects in a multilevel analysis (cf. Bennett & Wiegand, 1994; Gottfredson & Hindelang, 1979). Moreover, this study not only tests hypotheses regarding the effects of neighborhood characteristics on reporting violent crimes, as is typically done, but also assesses their effects on reporting other types of crime. Therefore, this is a more general test of the theories on the effects of the degree of social cohesion, confidence in police effectiveness, and socioeconomic disadvantage.

5.2 The Decision to (Not) Report a Crime

In theories concerning the decision-making process of victims on whether or not to report a crime to the police, a victim's decision is often assumed to be rational: the lower the costs of reporting a crime and the higher the anticipated results, the more likely victims are to report a crime to the police (Skogan, 1984; Gottfredson & Gottfredson, 1988; Felson, Messner, Hoskin, & Deane, 2002). However, this notion should not be applied too strictly. It is not unusual for a decision like this to be made rather impulsively, and a wide range of emotions can affect it. As a point of departure, though, it can be assumed that victims consider the costs and benefits when making a decision (Felson *et al*., 2002).

The nature and severity of crimes play a central role in cost-benefit theories when explaining the willingness of victims to report to the police. In addition to devoting attention to more precise crime features, recent literature on reporting also focuses on the role of the social environment in victims' decision whether or not to report the crime. Ruback and Greenberg, for example, pay attention to the important role of family and other social relations and networks (Ruback, Greenberg, & Westcott, 1984; Greenberg & Ruback, 1992). In stressful situations especially, like the one crime victims are in, victims tend to listen to the advice and opinions of the people around them (Greenberg & Ruback, 1992). Furthermore, interest has grown recently in the social and economic characteristics of the neighborhood people live in.

5.3 Influence of Neighborhood Characteristics on Reporting

As far as is known, eight empirical studies have been published up to now that examine the effects of neighborhood characteristics on crime reporting (Avakame, Fyfe, & McCoy, 1999; Baumer, 2002; Bennett & Wiegand, 1994; Fishman, 1979; Gottfredson & Hindelang, 1979; Laub, 1981; Ruback & Ménard, 2001; Warner, 1992). Most of these studies analyze data from national or local victim questionnaires from the United States. Bennett and Wiegand (1994) conducted their study among victims in Belize City – the largest city in Belize, a developing nation in Central America. The study by Fishman (1979) is based on a victim questionnaire in the Israeli city of Haifa.

Three neighborhood characteristics play a central role in these studies on reporting: (1) the social cohesion, (2) the confidence in police effectiveness, and (3) the socioeconomic disadvantage. Neighborhood socioeconomic disadvantage has received the most attention in earlier studies. This is most likely due to the fact that these studies did not use victimization data with direct and reliable measures for social cohesion or confidence in police effectiveness. Also, they didn't use distinct data on these neighborhood characteristics that could be combined with victimization data (cf. Baumer, 2002). Nevertheless, based on current theories on reporting, all three characteristics can be assumed to have important and distinct effects on victims' reporting decision.

5.3.1 Social cohesion

The idea that social cohesion has an important effect on victims' reporting behavior is mainly based on the classic social disorganization model (Shaw & McKay, [1942] 1969), which assumes that strong informal social control in neighborhoods is a significant mechanism for regulating conduct and mediating interpersonal disputes (Baumer, 2002). Social cohesion in neighborhoods has been proven to be an important context for the realization of informal social control (Morenoff, Sampson, & Raudenbush, 2001; Sampson, Raudenbush, & Earls, 1997; Silver & Miller, 2004). Various authors have suggested that informal social control, and thus social cohesion also, have an effect on levels of crime reporting in neighborhoods (e.g. Baumer, 2002; Black, 1976; Conklin, 1975; Gottfredson & Hindelang, 1979), but this assumption has never been properly tested.

Two lines of thought on the nature of the relationship between social cohesion and reporting have appeared in the literature, resulting in two contradictory hypotheses. First, in neighborhoods with limited social cohesion, there is also less of the kind of informal organization that could enforce the public order in a neighborhood, such as collective (informal) social control (Vélez, 2001), social capital (Sampson, Morenoff,

& Earls, 1999) or collective efficacy (Sampson Raudenbush, & Earls, 1997). Some have argued that this results in difficulties securing an adequate share of various public services, such as formal police protection (Baumer, 2002). Therefore, it is often thought that the less social cohesion there is in a neighborhood, the harder it is for residents to have access to institutions of formal control such as the police (Rose & Clear, 1998). This results in the first hypothesis: (H1) *the less social cohesion in a neighborhood, the lower the probability that crime victims who live there report their victimization to the police* (cf. Baumer, 2002; Rose & Clear, 1998).

It is also possible, though, to derive a contradictory hypothesis regarding the effect of social cohesion in a neighborhood on the individual reporting decision, i.e. that less social cohesion leads to more reporting. This line of thought is not uncommon in studies on differences in reporting percentages between urban and rural areas in the United States. The residents of urban areas appear to feel more dependent on formal police control than the residents of rural areas, who can rely more on the support of their direct personal environment (Boggs, 1971; Laub, 1981). In towns and neighborhoods where social cohesion is limited, residents are believed to feel more of a need for formal social control mechanisms to help solve the problems they are confronted with. According to this line of thinking, residents in these kinds of neighborhoods are more apt to ask the police for help in solving conflicts, preventing repeat victimization and punishing criminals (Black, 1976; Conklin, 1975; Gottfredson & Hindelang, 1979; Laub, 1981). It can therefore be hypothesized also that (H2) *the less social cohesion in a neighborhood, the higher the probability that crime victims who live there report their victimization*.

Hardly any empirical research has been conducted in which the influence of social cohesion in neighborhoods on reporting crime has been tested directly. Four of the six studies that examine this relationship use an extremely rough measure of social cohesion, namely the urbanization grade of the victim's place of residence or the town where the crime was committed (Avakame, Fyfe, & McCoy, 1999; Gottfredson & Hindelang, 1979; Laub, 1981; Ruback & Ménard, 2001). These studies work from the assumption that there is a higher probability that victims will report crimes in more urbanized regions than in less urbanized ones because there is less social cohesion in more urbanized regions. Only Laub (1981) found a significant effect. The study by Bennett and Wiegand (1994) included a direct measure of social cohesion, but the researchers did not observe any significant correlation between cohesion and reporting. Finally, the nationwide study by Baumer (2002) in the United States, which is the most advanced in a methodological sense, only included a single indicator that is supposed to be a measure of social cohesion as well as socioeconomic disadvantage. This makes it impossible to disentangle the effects of these two factors.

5.3.2 Confidence in police effectiveness

Another neighborhood characteristic assumed to affect the probability of victims reporting crimes to the police is the confidence of a neighborhood in police effectiveness (e.g. Baumer, 2002; Bennett & Wiegand, 1994). As is the case with the influence of social cohesion, this assumption has never been properly tested.

Many have suggested that victims will put less value on the benefits of reporting crimes if they have low confidence in police effectiveness (Anderson, 1999; Baumer, 2002; Hagan & Albonetti, 1982; Sherman, 1993). The estimated benefits of reporting to the police are assumed to depend on the victims' individual judgment of the police to a large extent. In the event of doubt or in stress situations, however, victims will allow their decision to partially depend on the judgment of their social environment (Greenberg & Ruback, 1992; Ruback, Greenberg, & Westcott, 1984). The estimated benefits of reporting crimes to the police can therefore generally be assumed to be lower (and the costs to be higher) for residents of neighborhoods with a lower confidence in police effectiveness than for similar residents of neighborhoods with a more positive perception of the police. The resulting hypothesis, thus, is that (H3) *the less confidence people in a neighborhood have in police effectiveness, the lower the probability that crime victims who live there report to the police* (cf. Conklin, 1975).

Of the eight studies regarding the effects of neighborhood characteristics on crime reporting, the study by Bennett and Wiegand (1994) is the only one in which this assumption was empirically tested. In this study, no significant effect of the confidence in police effectiveness in the neighborhood was found. Bennett and Wiegand, however, did find a positive relationship between reporting and victims' attitudes toward the police at victim level.

5.3.3 Socioeconomic disadvantage – direct effect

A third neighborhood characteristic that can be assumed to affect the odds of reporting is the degree of socioeconomic disadvantage. This idea is not exactly new (e.g. Rousseau, 1762) and has often been empirically tested. Three decades ago, Black summarized the prevailing ideas in *The Behavior of Law* (1976), which has since become a classic. He formulated a general sociological theory on the extent to which the use of the law varies in different social contexts such as neighborhoods. Black's theory is extremely comprehensive. By the use of the law, he not only means reporting a crime to the police, but also asking for formal help from the police and how the police themselves deal with victims, witnesses or suspects, and the various aspects of a court trial. One of Black's most important propositions is that a neighborhood's socioeconomic disadvantage affects the extent to which use is made of the law. The

lower the socioeconomic status of a neighborhood, the less use its residents make of the law in solving their problems and the more frequently they deal with them themselves. This is known as the stratification hypothesis (for an extensive review of this theory and how it can be tested, see Gottfredson & Hindelang, 1979). With respect to reporting, this hypothesis states that (H4) *the greater the socioeconomic disadvantage in a neighborhood, the lower the probability that crime victims who live there report to the police*.

In line with Black's stratification hypothesis, Baumer (2002) also works from the assumption that the extent of the socioeconomic disadvantage in a neighborhood affects the probability that its residents will report victimization to the police. However, based on the results of an extensive ethnographic study by Anderson (1999) on daily life in the inner city of Philadelphia, he assumes that this relationship is especially strong in extremely socioeconomic disadvantaged neighborhoods.

Up until now, there has been little convincing empirical support for this stratification hypothesis. Three of the five studies examining the relationship between neighborhood socioeconomic disadvantage and reporting did not find any significant relationship (Bennett & Wiegand, 1994; Gottfredson & Hindelang, 1979; Warner, 1992). The two other studies (Baumer, 2002; Fishman, 1979) have produced weak correlations. In Haifa, Israel, Fishman (1979) noted a small effect of neighborhood socioeconomic disadvantage on reporting of various types of offenses. In his study, he compared the reporting behavior of victims from five 'good' and five 'bad' neighborhoods. The effect he found, however, was an indirect effect that came about via the severity of the crime and the victims' attitude to the police. Baumer (2002) noted a direct negative relationship between a neighborhood's socioeconomic disadvantage and the reporting behavior of victims of simple assaults, but only in cases of extreme disadvantage, as he had presumed.

5.3.4 Socioeconomic disadvantage – indirect effect

It is unclear what mechanisms are responsible for the relationship between socioeconomic disadvantage and reporting as found by Baumer (2002) and Fishman (1979). It is unlikely that victims from socioeconomic disadvantaged neighborhoods lack the necessary money to report a crime, since reporting is free of charge. Other possible explanations are suggested in the literature. What they all amount to is that the relationship between socioeconomic disadvantage and reporting is indirect and runs via an intermediary factor. The social cohesion and the confidence in police effectiveness in the neighborhood are two obvious intermediary factors (Baumer, 2002; Rose & Clear, 1998). Their role as a mediator has not been tested before.

It seems plausible that there is a negative relationship between neighborhood socioeconomic disadvantage and neighborhood social cohesion or social organization.

The limited material and political recourses of residents of disadvantaged neighborhoods are assumed to lead to an incapacity for social organization. This is the classic proposition on which the social disorganization theory has been based (Shaw & McKay, [1942] 1969; for a more recent survey, see Bursik & Grasmick, 1993) and which has been confirmed in recent research. Residents of neighborhoods with extreme socioeconomic disadvantage have less social contact with each other (Bellair, 1997; Morenoff, Sampson, & Raudenbush, 2001; Sampson, Raudenbush, & Earls, 1997) and participate less in local organizations (Sampson & Groves, 1989). Therefore, part of the hypothesized effect of neighborhood socioeconomic disadvantage on the probability that crime victims report to the police might be explained by differences in social cohesion in these neighborhoods.

The same might be the case with the confidence in police effectiveness. According to a study by Sampson and Bartusch (1998), neighborhoods of concentrated disadvantage display elevated levels of legal cynicism, dissatisfaction with the police, and tolerance of deviance unaccounted for by socio-demographic composition and crime rate differences. These findings are in accordance with general theories on anomie, strain, and subcultures of crime, and with the work of Anderson (1999) and Baumer (2002). Due to the high degree of poverty and unemployment and limited labor market opportunities, residents of socioeconomic disadvantaged neighborhoods, youths and immigrants especially, are considered to be alienated from the general norms of society. In neighborhoods of this kind, specific norms and codes of conduct emerge. Anderson (1999) refers to them as 'codes of the street'. One of the things these codes tell people is how to deal with and respond to crime. In extremely socioeconomic disadvantaged neighborhoods particularly, residents are expected to be personally responsible for their own safety and the safety of their property. In these kinds of neighborhoods, it would be weak or even cowardly to go to the police and expect them to help solve any problems (Anderson, 1999; Baumer, 2002). This kind of subculture with a negative attitude towards the police might be reinforced by the fact that the residents of socioeconomic disadvantaged neighborhoods are more likely to work under the table, deal drugs or engage in other criminal activities. After all, they have less access to legitimate economic options. This might also keep them from contacting the police if they themselves become crime victims, since they do not want the authorities to find out about their own activities (Anderson, 1999; Skogan, 1984). This subculture keeps people who do not engage in criminal activities but who live in disadvantaged neighborhoods from calling the police, knowing it might get other neighborhood residents into trouble (Sparks, Genn, & Dodd, 1977; Wright & Decker, 1997). The residents of disadvantaged neighborhoods can be expected, thus, to have less confidence in police effectiveness.

The above reasoning results in the following hypothesis: (H5) *if the effects of socioeconomic disadvantage, social cohesion and confidence in police effectiveness are examined simultaneously, the net effect of the disadvantage is smaller than if only the disadvantage is examined.*

If hypothesis 2, which states that a weaker social cohesion in a neighborhood results in a higher probability that crime victims report to the police, has any truth to it, this could help explain the fact that in empirical studies only a weak correlation is often found between the socioeconomic disadvantage of neighborhoods and the willingness of victims to report crimes. If the weakness of the social cohesion and social economic disadvantage have opposite effects on the willingness to report crimes, while they are positively related to each other – there is often weaker social cohesion in socioeconomic disadvantaged neighborhoods as compared to neighborhoods with a higher socioeconomic status – the two effects might partially compensate for each other. This would be a reason, thus, to include these two neighborhood characteristics simultaneously in an analysis. This has never been done.

As mentioned in the introduction, this study is the first to separately measure the effects of the three neighborhood characteristics that are considered to be theoretically relevant – social cohesion, confidence in police effectiveness, and socioeconomic disadvantage – (cf. Baumer, 2002) and the first to examine their simultaneous effects in a multilevel analysis (cf. Bennett & Wiegand, 1994; Gottfredson & Hindelang, 1979). Moreover, this study not only tests hypotheses regarding the effects of neighborhood characteristics on the reporting of violent crimes (as is often done), but it also assesses their effects on reporting other types of crime.

5.4 Data

Various data sources have been used in this study to make it possible to test the hypotheses. First, the Police Population Monitor (PPM), a nation-wide CATI (Computer Assisted Telephone Interviewing) survey in The Netherlands has been used. This survey has been conducted every other year since 1993, with samples of 75,000 respondents on average. It is commissioned by the Ministry of Home Affairs and the Ministry of Justice. Households from which respondents are drawn are selected by randomly picking telephone numbers (within police regions) from the national telephone listings. The person within the household who is the first to celebrate his or her (at least 16th) birthday is selected as respondent. If that person is not at home, he or she is interviewed at a different time.[5.3]

[5.3] The average response rate between 1993 and 2001 was 58 percent. This is relatively high for a Dutch survey – the Netherlands is internationally notorious for its low response rates (Stoop, 2005). In the

The PPM is the largest questionnaire-survey on a subject related to public safety and crime in the Netherlands and also one of the largest in Europe. Because the survey is conducted on such a large scale, regional comparisons can be made throughout the Netherlands at a detailed level (i.e. neighborhoods). For this study, the 1995, 1997, 1999 and 2001 data files have been merged into one file with 110,950 victims.[5.4] The results from these different years have been combined to get data regarding more victims per neighborhood. In the Netherlands, overall there are no temporal trends in reporting over these years (see Section 2.3.1).

In the survey, respondents are asked about their experiences with twelve types of crime in the preceding twelve months: bicycle theft, car theft, theft of items from a car, damage to a car, non-violent robbery, violent robbery, attempted burglary, burglary, other theft, other damage, threats, and assaults. If respondents say they were victimized more than once in the previous year, they are asked additional questions about the most recent incident only, including whether or not they have reported the crime to the police. Consequently, the data file used for the present study includes one crime incident per victim, even if the victim was victimized multiple times. The survey also includes social and demographic information on the respondents.

The PPM data include the four-digit zip codes of the respondents' home addresses so that the neighborhood they live in is known. There are 3,990 zip code areas in the Netherlands.[5.5] Even though these geographical units have been designed primarily as administrative units by the postal services and they might not always be the optimum way to indicate neighborhoods (e.g. some zip code areas cover an urban as well as a rural area), they are the best available nation-wide classification of neighborhoods in the Netherlands (Knol, 1998) and they have been used successfully in studies examining neighborhood effects (e.g. Bernasco & Nieuwbeerta, 2005; Van Wilsem, 2003; Wittebrood, 2000; 2004). The average population size within the zip codes is 4,907 and the average number of households is 2,104.

For data regarding the neighborhoods where respondents live, the Residential Environment Database (*Woonmilieudatabase*) and the Residential Needs Survey (*Woningbehoefteonderzoek*) (VROM, 2003) are used as supplementary sources. The Residential Environment Database is a compilation of official data on neighborhoods

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data collection procedures for the PPM, a lot of effort has been made to increase these rates. Studies on the reliability and validity of this monitor have found no indication that selection mechanisms in non-response are present (*Politiemonitor Bevolking*, 2001).

[5.4] In total, there were 317,954 respondents, of which 35 percent had been victimized at least once in their own town or city (the population of interest) in the previous twelve months.

[5.5] This refers to the situation in 2001. The areas that the zip codes encompass do not change over time, but due to the development of new suburbs, 60 new zip codes were introduced between 1995 and 2001.

from various agencies such as Statistics Netherlands, the Geo-Market Profile, various municipalities and provinces and various ministries. The Residential Needs Survey is a survey conducted every four years among a representative sample of the population on their residential situation and desires. The neighborhood data from these sources are linked to the PPM data using the four-digit zip codes.

The analyses are conducted only on crime victims and neighborhoods with data on all the necessary variables. This means that 8.4 percent of the cases had to be excluded, which resulted in a file with 101,592 victims and the same number of crimes in 3,104 neighborhoods.[5.6]

5.5 Operationalization

5.5.1 Reporting victimization

The response to the question about whether (1) or not (0) the crime was reported to the police serves as the dependent variable in this study.[5.7] In this study, only respondents who were crime victims in the town where they live are considered, since neighborhood characteristics are assumed to influence incidents that occur in the victim's own environment in particular. Table 5.1 shows that 43 percent of the victimizations were reported to the police.

5.5.2 Crime characteristics

To adequately examine the extent to which differences in reporting percentages correlate with neighborhood characteristics, it is necessary to take the types and severity of the crimes into account. First, a distinction is made between the twelve

[5.6] 27 Victims (.02%) had to be excluded because their zip code was unknown, 2,271 victims (2.0%) were excluded because the score on the dependent variable was missing, 4,633 victims (4.2%) were excluded because there was no information on the seriousness of the incident, 554 victims (.5%) were excluded due to missing data on victim characteristics, and 1,873 victims (1.7%) who lived in 307 different neighborhoods were excluded because there was no information on their neighborhood. Most of the neighborhoods or zip code areas that could not be included in the analyses are located in rural or industrial regions.

[5.7] The crime was either reported to the police by the victims themselves – as is the case in 77.4 percent of the cases that are known by the police –, by someone else (19.9%), or the police were on the scene or discovered the crime themselves (2.8%). If someone else reported the crime to the police, it was usually a family member who reported a crime that took place in the home (such as burglary). To test for the possible effects of this, the analyses were also done on a file in which crimes discovered independently by the police were excluded (N = 100,359) and a file in which crimes reported by someone other than the victim were also excluded (N = 91,496). These two extra analyses yielded very similar results.

Table 5.1 Descriptives of dependent and control variables (N = 101,592)

Variable	%	Variable	%
Reporting	43	Crime Characteristics	
		Type of crime	
Victim Characteristics		bicycle theft	18
Age	[a]	car theft	1
Male	48	theft from car	6
Low education level	33	car vandalism	29
Employed > 15 hrs/week	55	robbery with violence	0
Jobless or unable to work	4	robbery without violence	4
Non-native	3	attempted burglary	7
Household type		burglary	4
multiple adults	80	other theft	11
single person	18	other vandalism	13
single parent (child(ren)<15)	2	threat	6
		assault	1
		Financial loss[b]	
		< Dfl.100	53
		Dfl.100 – fl.499	23
		≥ Dfl.500	24
		Physical injury	
		none or little	99
		average	0
		severe	0

[a] The mean age is 41.85 years, the S.D. is 15.62, the minimum is 15, and the maximum is 98.

[b] Dfl.100 = €45.38 (on October 17, 2005 this equaled $54.53).

types of crimes the respondents are asked about. Over 90 percent of the crimes are property crimes (see Table 5.1). In the analyses, all these types are included along with dummies to control for the type of crime.[5.8] The dummy for car theft, for example, is 1 if the crime is a car theft and 0 if it is another type of crime. Bicycle theft is the reference category.

In addition to the type of crime, information on the financial loss and physical injury to the victims is used. The financial loss categories are: less than Dfl.100 (reference category), Dfl.100 to Dfl.499 and Dfl.500 or more.[5.9] Dummies are included in the analyses for the last two categories. Victims of threats and assaults are not asked about financial losses, since these crimes do not often lead to financial damages. Therefore, the financial loss for these crimes is set at less than Dfl.100.

[5.8] The analyses have also been conducted separately for property crimes and violent crimes. The sample was too small to conduct meaningful analyses regarding violent crimes, and the results found for property crimes hardly deviate from those found for all the types of crimes collectively. This is why it was decided to address all twelve types of crimes together.

[5.9] Dfl.100 = €45.38 (on October 17, 2005 this equaled $54.53).

As to the extent of physical injury, three categories are also distinguished: no injury to slight injury not requiring medical treatment (reference category), medium-level injury requiring one-time medical treatment, and severe injury that required or still requires hospitalization or medical treatment more than once. Respondents are only asked about physical injury in instances of violent crimes (violent robberies, threats, and assaults). It is assumed that property crimes do not involve physical injury.

Table 5.1 shows that more than half (53%) of the crimes result in only slight financial damages (less than Dfl.100). For approximately one in four crimes, the damages amount to more than Dfl.500. Physical injury is less common, and only .5 percent of the crimes resulted in substantial physical injury. This is largely because the majority of the offenses are property crimes and they are assumed not to involve physical injury.

5.5.3 Victim characteristics

In the analyses, a number of victim characteristics that have been proven in previous studies to have an effect on the probability that victims report crimes are included also: gender (0 = female, 1 = male), age (in years), family composition (with multi-person households as reference category and dummies for the categories one-person households and single parents with one or more children under the age of fifteen), educational level (0 = middle-level vocational school or five or six-year high school or college/university, 1 = elementary school/lower level vocational school or four-year high school), employment status (a dummy for unemployment and a dummy for a minimum of fifteen hours of paid employment a week), and ethnic background (0 = native Dutch and 1 = non-Western immigrants). The non-Dutch respondents of Western descent (239 Belgians, 429 Germans and 183 British people) are categorized as native Dutch.

Table 5.1 shows the distribution of the victim characteristics, which is largely in agreement with data from previous studies on victims in the Netherlands (Wittebrood, 1997) and other countries (Van Kesteren, Mayhew, & Nieuwbeerta, 2000). The percentage of non-Western immigrants, men and youngsters is lower than would be expected, based on prior research. This is caused, presumably, by the slightly selective sampling method of the PPM. Men, youngsters and non-Western immigrants are less likely to be respondents (*Politiemonitor Bevolking*, 2001). This is probably because it is more difficult to reach them using the telephone listings of the largest telephone company, and for some non-Western immigrants it is due to their inadequate mastery of Dutch. No weighing factors have been used in Table 5.1 to correct for this, since it is not relevant for the multivariate analyses.

5.5.4 Neighborhood characteristics

Five hypotheses regarding the effects of three neighborhood characteristics on the probability of crime victims reporting crimes have been formulated. The characteristics pertain to the neighborhood's social cohesion, confidence in police effectiveness, and socioeconomic disadvantage. Several methods and data sources are used to measure the neighborhood characteristics.

Data from the 2002 Residential Needs Survey are used to measure the degree of *social cohesion*. In this survey, respondents are asked to indicate the extent to which they agree with the following statements: (a) I feel an attachment to this neighborhood, (b) I feel at home in this neighborhood, (c) I have a lot of contact with the people who live next door, (d) I have a lot of contact with other neighborhood residents, (e) I feel partially responsible for making the neighborhood a pleasant place to live, (f) people are nice to each other in this neighborhood, (g) I live in a pleasant neighborhood that has a sense of solidarity, (h) people in this neighborhood hardly know each other, and (i) I'm satisfied with the composition of the population in this neighborhood.

Following the example of Raudenbush and Sampson (1999), an ecometric analysis has been conducted to give each neighborhood in the file a score on social cohesion (see also Van Wilsem, 2003). The aim of this type of analysis is to measure a characteristic of ecological units, in this case neighborhoods, on the basis of survey data and to aggregate the data according to responses to multiple items given by various respondents within each ecological unit. It is assumed that the internal consistency of an area-level scale not only depends on the correlation between the items, the number of items and their extent of difficulty, as with an individual-level scale, but also on the agreement between the respondents within the area and the size of the sample for each area. In practice, scale values for the neighborhoods can be calculated by means of a multilevel analysis with three levels: items, respondents and neighborhoods. The predicted values on the neighborhood level are the new scale values then. The constructed measure of social cohesion has a reliability (Cronbach's alpha) of .80. The scale is centered on the entire sample (the average is zero) and has a minimum value in the data of -.56 and a maximum value of .49 (see Table 5.2).

To measure the neighborhood residents' *confidence in police effectiveness*, survey questions from the PPM are used. Each respondent is asked to assess the extent to which he agrees or disagrees with the following twelve statements on the functioning, conduct and availability of the police: (a) the police protect the people of this neighborhood, (b) the police have good contact with the residents of this neighborhood, (c) the police respond to problems in this neighborhood, (d) the police have an efficient approach here, (e) the police in this neighborhood are doing their best, (f) the police are not tough enough here (g) the police don't intervene here,

(h) you don't see the police here often enough (i) they don't get out of their patrol cars here often enough, (j) they aren't easy to approach here, (k) the police in this neighborhood don't have enough time for all kinds of problems, and (l) they don't come quickly when you call them. To construct a score for each neighborhood on the confidence in police effectiveness, again an ecometric analysis has been conducted that is comparable to the one for the extent of social cohesion. The reliability of the scale is .83. In the data, the scale is centered on the entire sample (the average is zero) and has a minimum of -.33 and a maximum of .48 (see Table 5.2).

The neighborhoods' *socioeconomic disadvantage* is measured using four indicators from the 1998 Residential Environment Database: (a) the percentage of households with an income under Dfl.14,000, (b) the percentage of households headed by an unemployed person, (c) the percentage of households whose head receives a benefit from the Welfare Department, and (d) the percentage of one-parent families with minor children. To determine a socioeconomic disadvantage score for each neighborhood, the scores on the four indicators are added up and weighed for their factor load.[5.10] The resulting scale scores are centered on the entire sample and divided by ten, so that the minimum in the data is -2.77 (no socioeconomic disadvantage) and the maximum is 5.40 (extreme socioeconomic disadvantage) (see Table 5.2).

Table 5.2 Descriptives of neighborhood characteristics (centered at individual-level means) (N = 101,592)

	Mean	SD	Minimum	Maximum
Socioeconomic disadvantage[a]	0	1.44	-2.77	5.40
Social cohesion	0	.18	-.56	.49
Confidence in police	0	.09	-.33	.48
Percentage non-natives[a]	0	1.26	-1.31	6.69
Mobility[a]	0	.52	-1.22	2.27

[a] Centered and divided by ten.

In addition to the three neighborhood characteristics the hypotheses are formulated on, two more neighborhood characteristics were included in the analyses as control variables, i.e. ethnic heterogeneity and mobility.[5.11] The aim of including these characteristics as control variables was to get a better picture of the influence of the neighborhood characteristics on which the hypotheses have been formulated. The percentage of non-Western immigrants is used as an indicator of the ethnic

[5.10] The factor loads are .76, .83, .86, and .79, respectively (Cronbach's alpha = .76).

[5.11] The analyses have also been conducted with measures for crime prevalence and a dummy for large cities. However, no significant relation with reporting was found. Therefore, they are not included in the final models.

heterogeneity in a neighborhood.[5.12] In the present data, this percentage varies from zero (30% of all the neighborhoods in the Netherlands) to 80 percent. On average, 13.1 percent of the neighborhood residents are non-Western immigrants. For the analyses, the scores are centered and divided by ten, so that the minimum is -1.31 and the maximum 6.69 (see Table 5.2). The mobility in a neighborhood is defined by the percentage of the total population who moved into that neighborhood within a year. Moves within the neighborhood are not taken into account. In the data, the scores range from 0 to 34.9 percent and the average is 12.2 percent. Again, the scores are centered and divided by ten so that the minimum is -1.22 and the maximum 2.27 (see Table 5.2). The data for both characteristics stem from the 1998 Residential Environment Data Base.

5.6 Analysis Method

Multilevel or hierarchical regression models are used to test the hypotheses (Goldstein, 1995; Snijders & Bosker, 1999). In contrast to traditional techniques, such as OLS regression, multilevel models take into account the layered (nested) structure of the data. In this study, two levels are distinguished: the level of the incident (and the victim), and the level of the neighborhood where the victim lives. Measurement errors are specified at each of the two levels separately. This method takes into account the possibility that individuals within neighborhoods might be more alike (e.g. might have more similar attitudes toward the police) than individuals from different neighborhoods. Another advantage of multilevel modeling is that in estimating the parameters, the number of individuals in a neighborhood is taken into consideration. Neighborhoods with numerous victims figure more prominently in the assessment than neighborhoods with only a few victims.

Since the dependent variable – whether or not a crime is reported – is a dichotomy, and the assumption is made that the distribution of the measurement errors at the level of the crime and the victim is binomial, logistic multilevel models are estimated with the first level variance parameter set at a fixed value of one. The parameters are estimated using MLwiN (Rasbash, Steele, Browne, & Prosser, 2004).

[5.12] Van Wilsem (2003) used a similar measure for ethnic heterogeneity in his study on neighborhood dynamics and criminal victimization.

5.7 Results

Before turning to the multivariate analyses, the percentage of crimes reported per type of crime is given in Table 5.3. Overall, 43 percent of the crimes are reported to the police. As can be seen in the table, the percentage of reported crimes largely depends on the type of crime. The highest reporting percentage pertains to car theft: 97 percent of car theft victims report the crime to the police. Most victims of burglary and robbery with violence (over 80%) also report these crimes to the police. (Car) Vandalism and 'other' theft are least often reported: less than three out of ten of these crimes are reported to the police.

Table 5.3 Percentage of crimes reported to the police per type of crime

Type of Crime	% Reported
Other vandalism	21.6
Other theft	26.8
Car vandalism	28.8
Threat	33.8
Attempted burglary	53.9
Bicycle theft	59.3
Assault	64.5
Robbery without violence	69.2
Theft from car	75.7
Robbery with violence	81.3
Burglary	88.6
Car theft	97.0
Total	43.2

To adequately test the hypotheses, parameters for four different logistic multilevel models have been estimated (see Table 5.4). Crime and victim characteristics are included in all models, as are the two neighborhood level control variables. In each of the first three models, the indicator of one of the neighborhood characteristics is included also. In the fourth model, all three indicators of the neighborhoods characteristics are included simultaneously.[5.13]

[5.13] Explanatory characteristics can correlate strongly in regression models, particularly if they are aggregated characteristics. Including strongly correlated predictors at a neighborhood level can lead to problems with multicollinearity, in such a way that parameter estimates can be greatly influenced. At a value of .71, in the present analyses the correlation (Pearson's *r*) between socioeconomic disadvantage and the percentage of non-Western immigrants is the strongest. Since this is rather high, the Variance Inflation Factors (VIFs) of the various neighborhood characteristics have been calculated. They are a good indication of multicollinearity (Land, McCall, & Cohen, 1990; Stevens, 1996). The socioeconomic disadvantage appears to have the highest VIF of the neighborhood characteristics, i.e. 2.49. Although there is no general rule, VIFs higher than 10 are generally a cause for concern. Multicollinearity thus does not seem to cause any problems in the analyses (Belsley, Kuh, & Welsch, 1980; Stevens 1996).

Table 5.4 Effect parameters (log-odds ratios) of crime, individual, and neighborhood characteristics on the probability that crimes are reported ($N_{victims}$ = 101,592; $N_{neighborhoods}$ = 3,104)

	Model 1	Model 2	Model 3	Model 4
	Coeff. (S.E.)	Coeff. (S.E.)	Coeff. (S.E.)	Coeff. (S.E.)
Intercept	-.65 (.03)**	-.65 (.03)**	-.62 (.03)**	-.62 (.03)**
Crime characteristics				
Type of crime (ref.: bicycle theft)	-- --	-- --	-- --	-- --
car theft	2.67 (.20)**	2.67 (.20)**	2.66 (.20)**	2.66 (.20)**
theft from car	.51 (.04)**	.51 (.04)**	.51 (.04)**	.51 (.04)**
car vandalism	-1.40 (.02)**	-1.40 (.02)**	-1.40 (.02)**	-1.40 (.02)**
robbery with violence	1.43 (.16)**	1.43 (.16)**	1.43 (.16)**	1.43 (.16)**
robbery without violence	.72 (.04)**	.72 (.04)**	.72 (.04)**	.72 (.04)**
attempted burglary	.35 (.03)**	.35 (.03)**	.35 (.03)**	.35 (.03)**
burglary	1.25 (.05)**	1.25 (.05)**	1.25 (.05)**	1.25 (.05)**
other theft	-1.01 (.03)**	-1.01 (.03)**	-1.01 (.03)**	-1.01 (.03)**
other vandalism	-1.33 (.03)**	-1.33 (.03)**	-1.33 (.03)**	-1.33 (.03)**
threat	-.11 (.03)**	-.11 (.03)**	-.12 (.03)**	-.12 (.04)**
assault	.83 (.08)**	.83 (.08)**	.84 (.08)**	.84 (.08)**
Financial loss (ref.: < Dfl.100)[a]	-- --	-- --	-- --	-- --
Dfl.100 – Dfl.499	.97 (.02)**	.97 (.02)**	.97 (.02)**	.97 (.02)**
≥ Dfl.500	2.21 (.02)**	2.21 (.02)**	2.21 (.02)**	2.21 (.02)**
Physical injury (ref.: none or little)	-- --	-- --	-- --	-- --
average	1.57 (.16)**	1.57 (.16)**	1.57 (.16)**	1.56 (.16)**
severe	1.41 (.19)**	1.41 (.19)**	1.41 (.19)**	1.41 (.19)**
Victim characteristics				
Age	.01 (.00)**	.01 (.00)**	.01 (.00)**	.01 (.00)**
Male	-.10 (.02)**	-.10 (.02)**	-.10 (.02)**	-.10 (.02)**
Low education level	.15 (.02)**	.15 (.02)**	.15 (.02)**	.15 (.02)**
Employed >15 hrs/week	-.08 (.02)**	-.08 (.02)**	-.08 (.02)**	-.08 (.02)**
Jobless or unable to work	-.06 (.04)	-.06 (.04)	-.06 (.04)	-.06 (.04)
Non-native	-.20 (.05)**	-.20 (.05)**	-.20 (.05)**	-.20 (.05)**
Household type (ref.: mult. adults)	-- --	-- --	-- --	-- --
single person	-.19 (.02)**	-.19 (.02)**	-.19 (.02)**	-.19 (.02)**
single parent (child(ren)<15)	-.09 (.06)	-.09 (.06)	-.09 (.06)	-.09 (.06)
Neighborhood characteristics				
Percentage non-natives[b]	-.04 (.01)**	.06 (.01)**	.00 (.01)	.01 (.02)
Mobility[b]	-.10 (.03)**	-.13 (.03)**	-.05 (.03)*	-.04 (.03)
Social cohesion	.26 (.09)**			.19 (.09)*
Confidence in police		.04 (.12)		.05 (.12)
Socioeconomic disadvantage[b]			-.07 (.01)**	-.06 (.01)**
Socioecon.dis.[b] * socioecon.dis.[b]			-.01 (.00)*	-.01 (.00)*
Variance				
Neighborhood level	.07 (.01)**	.07 (.01)**	.06 (.01)**	.06 (.01)**

* = $p < .05$; ** = $p < .01$ (two-tailed).

[a] Dfl.100 = €45.38 (on October 17, 2005 this equaled $54.53).

[b] Centered and divided by ten.

The effect parameters are all shown in log-odds ratios.[5.14]

Features of crimes and victims are included in all models to test the net effect of neighborhood characteristics on reporting. In other words, neighborhood effects are controlled for effects of crime and victim characteristics. The estimated effect parameters in each of the models make it clear that crime and (to a lesser extent) victim characteristics are instrumental in predicting reporting behavior. The type of crime someone is a victim of, and the financial damages and physical injury that result from it, affect the decision of whether or not to report the crime. The greater the financial loss or injury resulting from a crime, the more likely it is to be reported to the police. The victim characteristics found to show the strongest correlation with reporting are age (the older the victims, the higher the probability that they will report their victimization) and educational level (the less educated they are, the more likely victims are to report to the police). Female victims are also more likely to report crimes to the police than male victims, and native Dutch victims are more apt to do so than non-Western immigrants. Victims who are employed more than fifteen hours a week are less likely to report crimes than other victims, and victims in a one-person household are less likely to do so than victims in a multi-person household. This shows how important it is to take into account the effects of crime and victim characteristics when examining the effects of neighborhood characteristics. The influence of crime and victim characteristics remains virtually unaltered when neighborhood characteristics are added to the model.

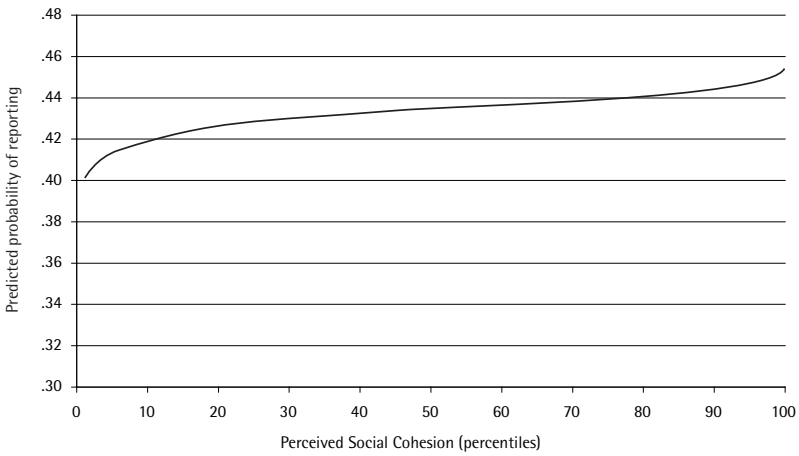
Model 1 addresses the relationship between a neighborhood's social cohesion and the probability of its residents reporting crimes to the police. The parameter for the effect of social cohesion is positive and statistically significant. This is a confirmation of the first hypothesis, which states that higher social cohesion in a neighborhood is related to a higher probability that crime victims who live there report crimes to the police (H1). Consequently, the second hypothesis (H2), which contradicts the first hypothesis, is not confirmed.

Figure 5.1 illustrates the relationship between social cohesion in neighborhoods and the probability that victims report crimes to the police. The predicted probability based on the parameters in Model 1 is shown as a function of the neighborhoods victims live in. The neighborhoods are subdivided into percentiles, based on their social cohesion scores (cf. Baumer, 2002). The figure shows that the predicted probability that victims report crimes in neighborhoods with a very low social cohesion, e.g. those in the 5th percentile, is around 40 percent. The stronger the social

[5.14] The intercepts in Table 4.4 show the probability, measured in log-odds, that a victim in the reference category, i.e. when the individual characteristics all equal zero, reports a crime in the reference category (bicycle theft with damages of less than Dfl.100) to the police.

cohesion in a neighborhood, the higher the probability that crimes are reported to the police. In the 100th percentile, the predicted probability has increased to 45 percent.

Figure 5.1 Predicted probability of reporting as a function of neighborhood social cohesion (Model 1)



The third hypothesis (H3) states that lower levels of confidence in police effectiveness in a neighborhood result in a lower probability that crime victims who live there report crimes to the police. This hypothesis is not confirmed, because the parameter for the effect of confidence in police effectiveness is not significant (see Model 2 in Table 5.4).

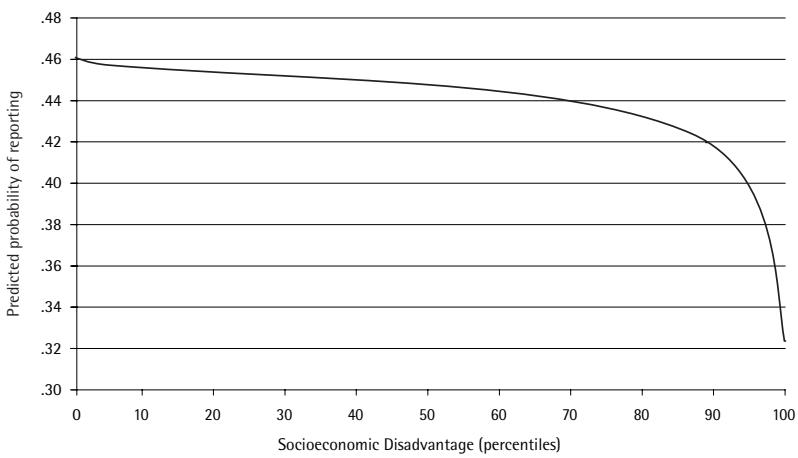
Next, Model 3 tests the hypothesis that a stronger socioeconomic disadvantage in a neighborhood is related to a lower probability that crime victims report crimes to the police (H4). Analogous to Baumer, the measure for socioeconomic disadvantage in a neighborhood is also included as a quadratic term in the model to test for a possible non-linear effect of this factor (Anderson, 1999; Baumer 2002).[5.15], [5.16] The parameters for the linear as well as the quadratic term are significant and negative. The fourth hypothesis is thus confirmed.

[5.15] Other possibilities have also been tested for modeling the non-linear relationship between neighborhood socioeconomic disadvantage and the probability of victims reporting crimes. With various piecewise linear spline models (Amemiya, 1981; Snijders & Bosker, 1999), two or three different segments were distinguished, e.g. neighborhoods below the 90th percentile, neighborhoods in the 90-95th percentile, and neighborhoods in the 95-100th percentile. These supplementary analyses yielded results comparable to the ones shown in Table 5.4 and led to identical conclusions.

[5.16] It was also tested whether the relationship between social cohesion and confidence in the police on one hand and reporting to the police on the other hand is non-linear, by including quadratic terms for these variables in Models 1, 2 and 4. These quadratic terms turned out to be not significant. They are therefore not considered and are not included in Table 5.4.

Figure 5.2 illustrates the relationship between the socioeconomic disadvantage in neighborhoods and the predicted probability that crime victims report to the police based on the parameters in Model 3. The neighborhoods are subdivided into percentiles based on their socioeconomic disadvantage scores. The figure shows that in neighborhoods with a limited socioeconomic disadvantage, the probability that a crime is reported is approximately 46 percent. The more disadvantaged neighborhoods are, the lower the odds of reporting. In neighborhoods in the 70th percentile, however, the predicted probability is still around 44 percent. The predicted probability of a crime being reported is only substantially lower in neighborhoods with the greatest socioeconomic disadvantage. In neighborhoods in the 90th percentile, the predicted probability of a crime being reported is reduced to 42 percent. In the 100th percentile, the predicted probability is just over 32 percent. This accelerated reduction in neighborhoods with strong socioeconomic disadvantage confirms the proposition formulated by Anderson (1999) and the findings of Baumer (2002).

Figure 5.2 Predicted probability of reporting as a function of neighborhood socioeconomic disadvantage (Model 3)



Before investigating the fifth hypothesis – which proposes that the effects of socioeconomic disadvantage are partly mediated by social cohesion and confidence in police effectiveness – it will be examined whether social cohesion and confidence in police effectiveness are indeed negatively associated with socioeconomic disadvantage. In Table 5.5, values for the various neighborhood characteristics are given for different levels of socioeconomic disadvantage. The neighborhoods are arranged according to their score on the scale for socioeconomic disadvantage, in percentiles.[5.17] From this table, it can be seen that socioeconomic disadvantage in

[5.17] It has to be noted that 2,613 (2.6%) of the victims whose data are included still live in the 31 (1%)

a neighborhood is negatively related to social cohesion. This is clear in strongly disadvantaged neighborhoods especially. The relationship between neighborhood socioeconomic disadvantage and confidence in police effectiveness is less clear, but for strongly disadvantaged neighborhoods there is definitely a negative association. Thus, social cohesion and confidence in the police seem indeed negatively associated with socioeconomic disadvantage. This implies the possibility that the relationship between a neighborhood's socioeconomic disadvantage and the probability that victims in the neighborhood report incidents to the police is partly mediated by social cohesion and confidence in police effectiveness.

Table 5.5 also shows that the greater the socioeconomic disadvantage in a neighborhood, the higher the percentage of non-Western immigrants. The mobility, or influx of new residents, is also higher in disadvantaged neighborhoods than in other neighborhoods. The findings are most striking in the one percent with the greatest socioeconomic disadvantage: an average of 52 percent of the population in these extremely disadvantaged neighborhoods consists of non-Western immigrants and there is a high mobility (19%). It is therefore important to take into account the possible influence of these variables in the models.

Moreover, Table 5.5 shows that there is an overrepresentation of neighborhoods with strong socioeconomic disadvantage in the three largest cities in the Netherlands (called 'G3'): Amsterdam, Rotterdam and The Hague. For example, of the five percent of neighborhoods with the greatest socioeconomic disadvantage, more than half are in one of these three cities, and of the one percent with the greatest socioeconomic disadvantage, this is true for even 80 percent.

Table 5.5 Neighborhood characteristics for different levels of socioeconomic disadvantage ($N_{neighborhoods} = 3{,}104$)

	Neighborhood socioeconomic disadvantage (in percentiles)							
	0-20	21-40	41-60	61-80	81-100	91-100	96-100	99-100
Socioecon. disadvantage[a]	12.1	16.5	19.7	25.1	41.6	49.9	57.6	72.5
Social cohesion (x100)	5.2	6.4	4.7	-.4	-17.5	-25.2	-29.7	-38.8
Conf. in police (x100)	-.3	-.1	-.3	-.8	.9	1.7	3.4	4.6
Percentage non-natives[a]	3.7	4	4.8	7.6	18.9	25.2	32.1	52.1
Mobility[a]	7.7	7.7	8.3	9.9	14.8	16.7	18.1	19.3
Neighborhoods in G3[b] (%)	.6	.8	1.8	3.1	23.5	36.1	51.6	80.6

[a] Raw scores. Not centered or divided by ten.

[b] Amsterdam, Rotterdam and The Hague.

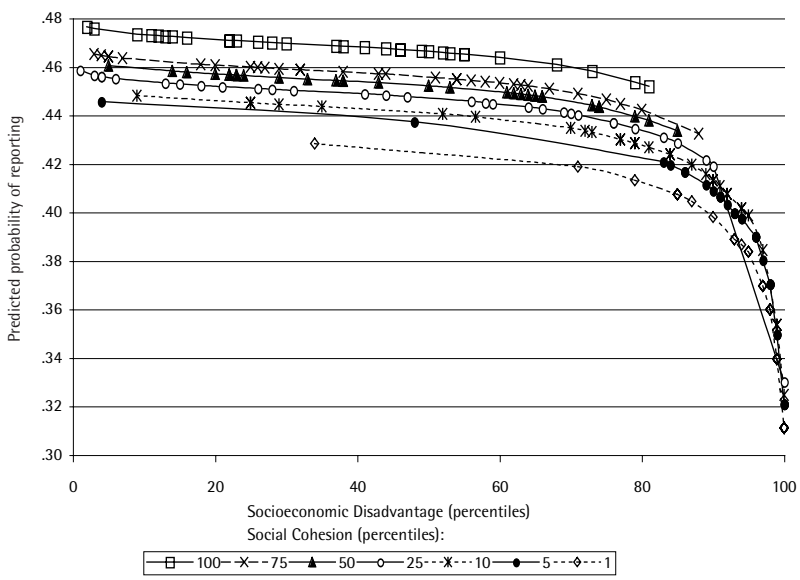
Lastly, to test the hypothesis that (part of) the effect of the socioeconomic disadvantage runs via two intermediary factors, namely the degree of social

neighborhoods with the strongest socioeconomic disadvantage.

cohesion and confidence in police effectiveness in neighborhoods (H5), a model that simultaneously includes all neighborhood characteristics is estimated (see Model 4 in Table 5.5). As in Model 2, the parameter for confidence in police effectiveness is not significant. The parameter for the effect of social cohesion is smaller than in Model 1, but still significant. The negative parameter for the measure of socioeconomic disadvantage is a little smaller than in Model 3, but still significant. This gives support to hypothesis 5, although it has to be noted that the reduction in parameter size is small.

Figure 5.3 shows the implications of the results of Model 4. Again, the predicted probability that victims report their victimization is given in this figure as a function of the socioeconomic disadvantage – in percentiles – of neighborhoods. Each line represents a specific percentile score for social cohesion. Only neighborhoods in the 1st, 50th, 90th, 95th and 100th percentile of social cohesion are shown. The figure shows that in neighborhoods with a high socioeconomic status, the probability that a crime will be reported is approximately 46 percent. The more disadvantaged a neighborhood is, the lower the probability that victims report their victimizations to the police. This is the case especially if social cohesion is weak also. If there is strong social cohesion in a neighborhood, a greater socioeconomic disadvantage results in a relatively small reduction in the predicted probability of reporting. This is a confirmation of the hypothesis that part of the effect of socioeconomic disadvantage is mediated by social cohesion. Nonetheless, there is a substantial direct effect of socioeconomic disadvantage as well.

Figure 5.3 Predicted probability of reporting as a function of neighborhood socioeconomic disadvantage, for different levels of neighborhood social cohesion (Model 4)



5.8 Conclusions

One of the most consistent findings in empirical studies on reporting behavior of crime victims is that the victims' decision whether or not to report is largely determined by the severity of the crime: victims report to the police if they have been (severely) injured or experienced great material losses. However, up until now only limited research has been conducted concerning the influence of contextual (e.g. neighborhood) characteristics on victims' reporting behavior. The empirical studies that do examine effects of neighborhood characteristics predominantly focus on neighborhood socioeconomic disadvantage. Effects of social cohesion and confidence in police effectiveness in neighborhoods on reporting have been suggested by different researchers, but have hardly been tested so far.

By combining individual-level data from the Dutch PPM with characteristics of neighborhoods, a unique data set was created that made it possible to test the effects of contextual factors and the effects of crime and victim characteristics simultaneously. The findings of the present study indicate that victims' decisions to (not) report crimes are not only influenced by crime characteristics – including the type and severity of the crime – and victim characteristics, but also in part by contextual characteristics. Even though, as in other studies, the severity of the crime – measured here by the extent of the financial damages and physical injuries – is found to be the most important factor in predicting a victim's decision whether or not to report a crime, two of the three neighborhood characteristics examined in this study appear to be important in predicting the decision also. The social cohesion in a neighborhood is positively related to the probability that victims from that neighborhood report their victimizations to the police and the socioeconomic disadvantage in a neighborhood is negatively related to the likelihood that victims from that neighborhood report their victimizations to the police. The probability of reporting turned out to be especially low in neighborhoods with extreme socioeconomic disadvantage, which is in accordance with findings by Baumer (2002). No significant effect of the confidence in police effectiveness in a neighborhood on the reporting decision by crime victims was found. Bennett and Wiegand (1994) reached the same conclusion in the only other study in which the effect of neighborhood confidence in police effectiveness on the reporting decision by crime victims was examined.

The results confirm the role of a neighborhood's social cohesion and socio-economic disadvantage in the reporting behavior of crime victims who live in that neighborhood, but don't give a definite answer as to how these factors exert their influence exactly. More research is required if we are to truly comprehend the mechanisms behind the social context effects on reporting.

In future studies, it would be useful to break down the analyses according to the type of crime. In this study, the type of crime is included in the model as a control variable, but this does not enable one to see whether or not certain factors have different effects on certain crimes. The effect of social cohesion might, for example, play a more important role in predicting reporting behavior of victims of violent crimes than of victims of property crimes. The data used in this study are not very suitable to test such a hypothesis, since they include a relatively small number of violent crimes. It might also be the case that the contextual factors under study are mainly effectual in the case of relatively minor crimes, which would be in accordance with Baumer's (2002) findings. Doing similar analyses for specific crime types would be useful therefore.

In a follow-up study, the models to be tested could also be expanded to take possible interactions between neighborhood characteristics, victim characteristics and crime characteristics into consideration. It would also be useful to include victim-level indicators for the social cohesion and confidence in police effectiveness. In the present study the individual-level versions of these two contextual factors could not be included due to data constraints, which makes it unclear whether the effect that was found of neighborhood social cohesion is really a neighborhood effect and not a compositional effect.

Lastly, one of the consequences of using police registrations for criminological research should be noted. It is often assumed in this type of research that the observed neighborhood differences in the nature and extent of crimes are a reflection of the actual differences in crime between these neighborhoods. In other words, it is assumed that police registrations of the nature and extent of crimes in neighborhoods are not affected by neighborhood characteristics. Since it is a fact that most of what the police know about crime stems from police reports filed by victims and witnesses (Bennett & Wiegand, 1994; Mayhew, 1993) and the present study shows that the probability of victims reporting crimes to the police is affected by neighborhood characteristics, this assumption should be taken with a grain of salt. More specifically, this study shows that especially in extremely socioeconomic disadvantaged neighborhoods with a low social cohesion, victims are less apt to report crimes. This means that the influence of socioeconomic disadvantage on the crime level is presumably underestimated in the analyses of this kind of criminological research. These results are in line with MacDonald (2001; 2002), who studied the effects of (individual-level) factors related to socioeconomic status on burglary victims' reporting decision. He concluded that a large component of hidden crime varies systematically with the economic cycle and that researchers need to be aware of the limitations of official crime data when employing them in economic models of crime and projections of future trends.

Further research is needed regarding contextual effects on the reporting decision made by crime victims. This study therefore invites other researchers to devote attention to contextual factors, like neighborhood characteristics, in future empirical studies on crime reporting and to expand the theories on reporting.

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6

REPORTING TO THE POLICE IN WESTERN COUNTRIES

A THEORETICAL ANALYSIS OF THE EFFECTS OF SOCIAL CONTEXT[6.1]

6.1 Introduction

Controlling crime is an important social problem and one of the principal tasks of any government. Of course, for this to occur crime has to come to the attention of the government. In this regard, the victim's decision to report victimization is essential. Victim reports are the main source of information for the police (Bennett & Wiegand, 1994; Greenberg & Ruback, 1992; Mayhew, 1993) and are the basis for most subsequent actions of the justice system. However, a lot of criminal victimization is not reported to the police. Recent findings show, for example, that only half of all incidents of six types of crimes in 17 industrialized countries are reported to the police (Bouten, Goudriaan, & Nieuwbeerta, 2002). Understanding why victims report (or fail to report) is important for the development and implementation of crime control strategies, and specifically for efforts to increase the percentage of crimes that is reported to the police.

In the literature it is often assumed that the victim's decision to report a crime to the police is made on the basis of a cost-benefit calculation, whether conscious or unconscious, to determine whether or not it is worth the effort to contact the police (Skogan, 1984). It is often thought that this cost-benefit calculation is in effect determined by the durable harm to the victim resulting from a crime (Gottfredson & Hindelang, 1979; Kury, Teske, & Würger, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977). If a victim is physically injured, or the monetary loss is high, he or she expects the benefits of reporting to the police to be much greater than when only

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minor injury or loss is involved. These assumptions have been supported repeatedly by empirical analyses. Without exception, empirical studies show that serious crimes are reported more often than less serious crimes (e.g. Bennett & Wiegand, 1994; Felson, Messner, Hoskin, & Deane, 2002; Fishman, 1979; Gottfredson & Hindelang, 1979; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Skogan, 1976, 1984; Sparks, Genn, & Dodd, 1977).

This emphasis in the literature on the seriousness of the crime can have undesired effects on both the understanding of reporting and on police policy. For example: if victims are perceived as willing to report serious crimes regardless of their feelings about the police, then there is little reason for the police to improve their image or service. Moreover, the emphasis in victimization surveys on the attributes of the crime obscures the importance of contextual factors that could influence reporting. Before the use of victimization surveys became routine, discussions about the decision to report to the police put much greater emphasis on contextual factors (Rossi, Berk, & Eidson, 1974).

The almost exclusive emphasis in theories about reporting on aspects of the crime event is particularly unfortunate if this is due to the lack of data regarding contextual variables in victimization surveys and the design of these surveys. National victimization surveys, for example, are designed to provide national estimates and usually do not cluster enough samples in sub-national jurisdictions that could be considered an important social context for reporting (such as a particular neighborhood or city). Hence it is difficult to test the effects of the social context on reporting when using these surveys. Confidentiality and disclosure rules further limit the ability of national victimization surveys to identify important social contexts.[6.2] These rules may prohibit identifying the neighborhood, city or even county in which a respondent lives and consequently make it impossible to characterize these social contexts.

Moreover, many important contextual factors may vary as much across countries as they vary within countries, such as perceived competence of the police. Comparing reporting behavior using country-specific surveys could provide identifiable social contexts at the country level that are likely to vary considerably, but methodological differences between surveys make useful comparisons very difficult.

In light of these complexities, the *International Crime Victims Survey* (ICVS) is a useful tool for testing the effects of the social context on the decision to report to the police. The ICVS is a large-scale survey with representative samples in many countries. Respondents are questioned about their experiences with different types

[6.2] The National Crime Victimization Survey (NCVS) conducted in the United States, for example, does not permit the identification of jurisdictions with populations under 100,000.

of crime and their reporting behavior. In the ICVS, countries are identified and these are found to vary substantially both with regard to social contexts for reporting and the proportion of crimes reported to the police. The ICVS also employs a more similar methodology across countries than country-specific surveys (Lynch, 2002; Van Dijk, Mayhew, & Killias,1990).

The aim of this Chapter is to bring social context into the discourse on reporting to the police by presenting a more all-encompassing model of crime reporting than is normally given and to empirically test the effects of the national social context on reporting while controlling for effects of attributes of crime incidents and victims. Data from the ICVS are employed to maximize the similarity of survey methods across countries. The effects of four aspects of macro-level social context are tested in this model of reporting: the perceived competence of the police, the institutionalization of the insurance business, the norm of conformity, and the level of individualism. These country-level variables were obtained from various sources and merged with the ICVS data on crime incidents.

6.2 Factors Explaining Reporting to the Police

For the purpose of developing an exhaustive model of crime reporting, this study makes a distinction between situational versus contextual effects on one hand and cost-benefit versus normative processes on the other. This two-dimensional model is explained in the following paragraphs and an overview is given in Table 6.1. In addition, this model is used to categorize the research on crime reporting that has been published to date.

6.2.1 Situation versus context

The situation refers to the immediate crime scene or the face-to-face interaction between the victim and the offender and nothing beyond that. Situational factors that influence reporting to the police can also be referred to as micro-level factors. Social context includes any social aspects of the location in which a crime event occurs apart from the immediate face-to-face situation. The amount of force used by the offender or the amount of money taken, for example, is part of the situation. The social disorganization of the neighborhood, whether there is a corporate entity with responsibility for the area, whether the public in general has confidence in the police, or whether the residents are willing to assist each other in maintaining order, are aspects of the social context.

The only social context that is not an aspect of the location is the victim's social network. Family and other close relationships (e.g. father, mother, child, sibling and lover) are powerful and enduring influences that people bring to any location and

that influence the decision to report a crime to the police. In general, intra-familial victimization is more likely to be kept private, although there may be crimes that are more likely to be reported if they involve family rather than strangers. Whatever the direction of the effect, family and quasi-familial relationships influence police reporting (e.g. Felson, Messner, & Hoskin, 1999).

Because social context is largely geographically defined, it is useful to consider the various geographically-based social entities that are important for crime and reactions to crime. Meso-level entities like city or housing blocks, neighborhoods, communities and organizations and macro-level entities like states and countries are geographically-based social entities commonly used in the study of crime. It is reasonable to hypothesize that these entities may be important social contexts affecting the decision to report a criminal victimization to the police (e.g. Black, 1976; Greenberg & Ruback, 1992). Moreover, it can be expected that these contexts are nested in such a way that the effects of living in a particular neighborhood will interact with attributes of a jurisdiction or country to influence the decision to report. Aspects of the social context could also interact with attributes of the situation to affect the reporting decision.

6.2.2 Cost-benefit versus norms

Within these ecological entities, reporting victimization to the police can be assumed to be either the result of a cost-benefit calculation or a normative response. Cost-benefit calculations are made on the basis of the expected expenditures (costs) and returns (benefits) for the victim. If the victim has lost property, then the return would be the replacement of that property or the substitution of something of equal value or use. If the victim is injured, a benefit of reporting to the police might be reducing the chance of additional injury by the offender (Singer, 1988). The expenditure would be the transaction costs of notifying the police or the risks of retaliation that might occur if the offender found out that the victim had contacted the police.

In contrast, normative responses are not directly triggered by expected costs or benefits, but by norms that exist in the victim's social context. "Crimes should be reported to the police", "this is not a case for the police", or "I should deal with this myself" are examples of possible norms that may influence crime reporting.

These cost-benefit calculations and normative responses may differ with the situation (e.g. the seriousness of the crime) and also with the context (e.g. the country) (Greenberg & Ruback, 1992; Ruback, Ménard, Outlaw, & Shaffer, 1999). A cost-benefit calculation might have a different outcome for a crime that results in minor injuries than for one that leads to major injuries, but between countries there might also be a difference in the degree of injury 'needed' to make reporting worth the effort, because the amount of effort it takes to report – or the expected benefits that

may result from reporting – may differ between countries. Norms about whether something is a case for the police will differ between serious and non-serious crimes, but might also be expected to differ between countries. In other words: any situation or social context in which a crime occurs offers different cost-benefit and normative considerations that can influence the decision to report the crime to the police. This can also be seen in the model presented in Table 6.1. The distinction between the three geographically defined social contexts and two types of considerations results in six ways in which reporting can be influenced. Each of these is discussed below.

There are a number of aspects of the situation that can affect the cost-benefit calculations of victims regarding reporting to the police. If the victim does not see the offender, for example, or if the offender is a stranger, the victim may not know enough about the offender to be able to identify him or her and, therefore, will see no benefit in reporting the crime to the police. If the injury or loss is minor, the victim may choose not to report because the transaction costs of reporting are greater than the possible return. If access to means of timely reporting to the police (e.g. telephone) is not available, then the likelihood of reporting will be lower than in situations where mobilizing the police is simpler. If the victim discovers the crime some time after the event, then he or she may believe that little can be done and therefore decide not to report to the police. These are all examples of cost-benefit considerations at the micro-level that increase the cost and decrease the potential benefits of mobilizing the police and which therefore may reduce the likelihood of reporting.

From the normative perspective, reporting behavior is affected by the victim's belief that it is appropriate or inappropriate to report in a particular situation. For example, the victim may know the offender and believe that he or she should resolve the situation without help from the police.

Any crime is nested within social contexts. Moving away from aspects of the situation (the micro-level) to the meso-level, the neighborhood has been a social unit important for crime and crime control. Attributes of the neighborhood can affect the decision to report crimes to the police. Neighbors can be a source of information for each other and can give one another assistance that can affect the cost-benefit calculation of reporting to the police. They can reduce the cost of reporting for the victim by reporting the victimization for the victim or helping the victim to do so. They can provide an alternative source of service by lending moral and sometimes physical support in resisting offenders.

Neighborhoods may also have norms that encourage or discourage reporting crimes to the police (Baumer, 2002). Neighbors may encourage each other to report crimes because the police will then have more complete information on crime patterns that they can use to provide better service to the neighborhood.

Table 6.1 Model for understanding the role of social context in the decision to report to the police in response to criminal victimization

Level	Process	
Situation vs. Context	*Cost-Benefit Considerations*	*Normative Considerations*
Micro-level situation	Knowledge about offender Perceived risk of retribution by offender Severity of injury Amount of loss Means of contacting police Distance from event in time or space Perceived likelihood of police response Perceived chance to receive some sort of compensation (e.g. recovery, repair, punishment of offender, payment by insurance company) Guilt Shame	Victim offender relationship Victim precipitation Guilt Shame
Meso-level context family & friends, organization, block, neighborhood, community, jurisdiction	Availability of (community organizations for) self-help Knowledge about area Reputation Knowledge of alternatives Private security	Attachments to family & friends, area or organization Reputation Norms regarding self-help Policies for handling crime incidents
Macro-level context state, country	Availability of (community organizations for) self-help Police competence (responsiveness, efficiency) Social stratification Gender roles Roles of adults and juveniles Level of individualism	Legitimacy of police or government Norms regarding self-help (individualism vs. collectivism) Compliance norm Institutionalization of insurance Gender roles Roles of adults and juveniles

Other examples of geographic entities at the meso-level are communities, organizations, towns or cities. These (mostly larger) entities often rely on face-to-face interaction less but nonetheless provide norms and/or services that can be used as alternatives to the police for repairing and redressing the costs of victimization. Victims may seek the help of community patrols to provide additional security in the wake of a burglary, rather than calling the police. Church groups may be sought out for assistance in repairing damage resulting from crime. Organizations such

as schools, workplaces and commercial establishments are distinct types of social contexts that offer both resources and norms that influence the reporting decision. These organizations offer alternatives to the police to ensure order within them and to respond to victimization. One can turn to, for example, teachers, principals, supervisors, conductors or bus drivers. In these contexts, organizational policies may have a strong normative influence especially if these policies are formal norms. Students, for example, may be required to report assaults to the teacher or principal, and workers may have the same obligation with respect to their supervisors. It then is the teacher or the supervisor who makes the decision to report the incident to the police.

Countries are social contexts at the macro-level that can influence reporting to the police (Greenberg & Ruback, 1992). The policies of police agencies can affect the cost-benefit calculations regarding reporting to the police. Emergency telephone numbers and toll free numbers can reduce the transaction costs of mobilizing the police. The general reputation of the police as being helpful or not will be factored into the decision to mobilize the police. Victims in countries where the police are viewed upon as ineffective or corrupt may perceive few benefits from reporting victimization to the police and therefore decide not to report. The reputation of the police and its effect on reporting may differ between countries with national police forces and those with more decentralized police systems.

General norms operating at the national level can also come into play, such as the opinions citizens have regarding the responsibilities of individuals and responsibilities of the government. In countries like the United States, for example, in most cases the role of the government is minimized and the role of the individual is maximized. U.S. citizens expect to and are expected to engage in self-help to a greater extent than residents of Sweden or the Netherlands (e.g. providing health care, obtaining a college education, providing for public safety). These norms are very general and their applicability will be influenced by the meso-level contexts as well as the situation, but they may still play a role in the decision to report crimes to the police. All other factors being equal, one would predict residents of Sweden or the Netherlands to report crimes to the police more often than citizens of the United States.

6.2.3 Existing research

The extensive empirical research on reporting to the police offers support for some aspects of this model, while other parts are infrequently addressed. As noted in the introduction, a great deal of study has been done on the attributes of situations (micro-level factors) that are correlated with reporting victimization to the police. Skogan's seminal publication from 1976 identified crime seriousness as the principal

determinant of reporting behavior and many of the studies done since then have reaffirmed his conclusions (e.g. Fishman, 1979; Gottfredson & Hindelang, 1979; Pino & Meier, 1999; Skogan, 1984; Sparks, Genn, & Dodd, 1977).

The influence of the relationship between the victim and the offender is another micro-level factor that has received a great deal of attention. It has long been assumed that victimizations occurring within the context of familial, intimate or friendship relationships will not be reported to the police as frequently as those involving strangers. The empirical results, however, are contradictory (Bachman, 1993; Bachman & Coker, 1995; Cretney & Davis, 1995; Felson, Messner, & Hoskin, 1999; Hanson, Resnick, Saunders, Kilpatrick, & Best, 1999; Singer, 1988). These apparent inconsistencies might be due to differences in survey methodologies and types and locations of crime (e.g. domestic violence versus non-domestic violence or violence in private as opposed to public locations).

While this body of work examining the correlation between attributes of crime situations and reporting to the police has established the importance of crime seriousness and the situational context, it has not clearly determined whether the influence of these factors is due to a cost-benefit calculation or some sort of normative process. Many victims who do not report explain this by referring to the trivial nature of the event, and others offer the ambiguous answer that they took care of it themselves.

In a series of clever experimental studies Ruback *et al.* (1999) used crime scenarios to identify norms that affect reporting to the police. They described crime situations in detail and then asked the subjects if the victim *should* report the crime to the police. Their responses demonstrated that there are norms involved in the decision to call the police. Reporting was perceived as more appropriate for women than for men, for older victims than for younger ones, and for victims who were not drinking than for those who were. While these findings are based on hypothetical scenarios rather than actual crime events, they are broadly consistent with situational correlates of reporting in actual crime events and provide useful evidence that situational norms influence the decision to call the police.

Much less attention has been given to the role of larger social and geographical aggregates in the decision to report victimizations to the police. At the meso-level, routine government reports show, for example, that schoolchildren show the lowest reporting rates of any part of the population, but few studies have suggested that it is the organizational context of the school that may account for this finding and not (only) the often more trivial nature of the events (Addington, Ruddy, Miller, & DeVoe, 2002; Garofalo, Siegel, & Laub, 1987). Even those studies that identify the importance of the school context in the decision to report crimes to the police have not tried to isolate the effects of the school context from the attributes of the

event, nor have they attempted to explain variations in the effects of school context. Other organizational contexts, such as the workplace, have not been studied at all for the purpose of explaining why victims report their victimization (Collins, Cox, & Langan, 1987; Lynch, 1987).

Virtually no studies on reporting behavior have compared neighborhoods or communities. This is largely due to the rarity of crimes and the scarcity of victimization surveys with sufficient data at these levels of aggregation. Community and neighborhood studies that include victimization data generally do not have sufficient sample sizes to estimate differences in reporting to the police between these areas (Greenberg, Rohe, & Williams, 1982; Skogan & Maxfield, 1981; Taylor, 2000). In one of the few multivariate examinations of community effects on reporting, Baumer (2002) found a curvilinear relationship between the socioeconomic status of the neighborhood and the reporting percentage of simple assaults to the police. The reporting percentage was lower in wealthy and poor areas and higher in middle-income areas. He speculated that this pattern occurred as a result of the higher levels of informal social control in the very poor and the very wealthy neighborhoods.

Some jurisdiction-level victimization surveys have been conducted, but they have not been used to investigate the influence of the jurisdiction on the decision to report crimes to the police. The percentage of victimizations that are reported to the police has been compared across jurisdictions, but usually not in the context of multivariate analyses in which attributes of crimes and victims are held constant (Smith, Steadman, Minton, & Townsend, 1999; Rossi, Berk, & Eidson, 1974). Consequently, it is difficult to separate the effects of the jurisdictional context from the effects of the composition of the crime problem and the victim populations in those jurisdictions. Moreover, the few multivariate analyses that have been done across jurisdictions have not taken into account the nested nature of the data and have not included jurisdiction-level covariates in an attempt to understand the source of jurisdiction-level effects.

At the macro-level, there have been investigations regarding the effects of national characteristics on the decision to report to the police. Some of these studies examine the effects of changes within countries over time. Orcutt and Faison (1998) found that changes over time in perceptions of gender roles in the United States are related to changes in the reporting of rape to the police. Ruback (1993) found an increase in the reporting of acquaintance rape as attitudes toward date rape changed in the United States. These changes in attitudes and norms occur at the country-level and influence the victim's decision to report to the police.

A number of cross-national comparisons of reporting have also been done. Skogan (1984) reviewed victimization surveys across nations and, again, the seriousness of the crime seemed to be the major determinant of reporting to the police. Country

and victim characteristics had relatively little effect on reporting to the police. These comparisons are suspect to some extent because the surveys that were compared did not employ uniform methodologies.

Simple cross-national comparisons of rates of reporting to the police that were done using the ICVS, showed larger differences (Bouten, Goudriaan, & Nieuwbeerta, 2002). The ICVS employs a reasonably uniform methodology across nations (Van Dijk & Mayhew, 1992). Also, Kury, Teske, and Würger (1999) conducted identical surveys in East and West Germany before and after the unification and found no effect of the country-level contextual characteristics they were studying on the decision to report to the police. However, like the jurisdiction-level analyses mentioned earlier, these multi-nation models did not take into account the nested nature of the data nor did they introduce nation-level covariates to explain similar results.

To summarize, the understanding of how the social context affects the decision to report criminal victimization to the police is fairly limited. Longitudinal studies of changes in national values have shown that the national context affects the decision of victims to report a crime. Cross-national comparisons at a given point in time fail to show major effects of the national context when characteristics of crimes and victims are held constant, but methodological differences in surveys across countries raises questions about these findings. Simple comparisons of the cross-national survey data that are most comparable (ICVS) show big differences in reporting between countries, but do not take into account the nature of crimes and the varying composition of the victim population across countries. None of the cross-national studies have taken account of the fact that respondents are clustered within countries, nor have they included country-level covariates to help understand why differences in reporting to the police occur between countries. As a result, it is unknown whether the country-level social context affects the decision to report and, if so, what aspects of the country-level social context influence reporting.

While victimization surveys have proven to be a very useful tool for exploring this topic, they have also limited our view of the social context by almost exclusively paying attention to the micro-level situation, victim and offender. As a result, a great deal is known about how characteristics of crimes, victims and offenders are related to reporting, but relatively little about contextual effects at meso- or macro-level. Specifically, it is unknown how norms, resources and policies at the organizational, community, jurisdiction and country level influence the decision to report. Many prescriptive statements are made about policies to increase the reporting of crime to the police, such as national emergency numbers (e.g. 911 in the United States and 112 in Europe), to reduce transaction costs or to increase the perceived legitimacy of the police, but these features of the social context have not been incorporated into our models and theories of reporting.

6.3 Testing Theories of Social Context with the ICVS

No conceivable victimization survey could include all the information necessary to test a complete model of the effects of the social context on the decision to report a crime to the police. The ICVS is useful because it (1) includes a large number of countries, (2) employs a reasonably uniform methodology across countries, (3) contains reasonably detailed information about offenses and victims and (4) identifies the countries in the sample and permits the ascribing of country attributes to the survey records that can be used in hierarchical modeling to explain any nation-level effects observed in the analysis.

The ICVS is a fully standardized sample survey examining householders' (aged 16 or older) crime experiences in a large number of countries. Surveys were conducted in 1989, 1992, 1996 and 2000. The ICVS includes data on more than 200,000 respondents in more than 60 countries in western, central and eastern Europe, North and South America, Asia, southern Africa, Australia and New Zealand. For more information on the ICVS, see Van Kesteren, Mayhew, and Nieuwbeerta (2000). For a number of comparative studies, see Nieuwbeerta (2002).[6.3]

In this study, ICVS data from 1992, 1996 and 2000 regarding western industrialized countries are used. Other countries and survey administrations are not used because they did not include all variables required for this analysis, or the samples were not representative for a country.[6.4] Furthermore, victims with missing values on explanatory variables or the dependent variable are excluded from the analyses.[6.5] The resulting sample contains 58,545 offenses committed against 33,132 victims in 16 countries. These include four 'new world' countries (Australia, Canada, New-Zealand and the United States) and 12 European countries (Austria, Belgium, Denmark, Finland, France, Great Britain,[6.6] Italy, The Netherlands, Poland, Portugal, Sweden and Switzerland).

[6.3] The ICVS data and codebooks are available at www.unicri.it/icvs and on www.icpsr.umich.edu.

[6.4] In addition, the 2000 wave from Switzerland and Great Britain and the 1992 wave from the United States had to be excluded due to missing variables in the questionnaires. The total number of (10 types of) offenses in the 16 countries included in this study is 60,939 and the total number of victims is 33,943.

[6.5] With regard to three individual-level variables – household income, town size, perceived competence of the police – 8 to 15% of the data were missing. For these variables an 'unknown' category was introduced, so that victims with missing data on these variables could still be included in the analyses. Victims with missing data on other variables were excluded from the analyses. This pertained to only 2,394 offenses (3.9%) and 811 victims (2.4%). There is no indication that these data were missing in a systematic way that could bias the findings.

[6.6] England, Scotland and Wales, to be more precise. The ICVS is also administered in Northern Ireland, but because of the violent situation and the possible influence of the British army this part of the United Kingdom is omitted.

Characteristics of the independent variables, described in the next paragraphs, can be found in Appendices 6.A and 6.B.

In the models, the decision to report criminal victimization to the police is a function of the crime situation, attributes of the victim and features of the macro-level national context. Separate models are estimated for property crimes (car theft, theft from car,[6.7] car vandalism, motorcycle theft, bicycle theft, burglary, attempted burglary, and theft of personal property) and contact crimes (robbery and assaults & threats).[6.8] The ICVS also includes questions on experiences with sexual crimes, but because these are not used in all waves in all countries for male respondents, this type of crime has been excluded from the analyses. The reason for the clustering in two types of crime is that, on theoretical grounds, different effects of country characteristics might be hypothesized to exist for these two crime types and somewhat different explanatory variables for both types are used. Furthermore, because some of the crime types have a very low frequency, analyzing them separately would not give reliable estimates. To control for possible differences in the reporting behavior of victims for the separate crime types, dummies for the original type of crime were included as covariates in the analyses.

6.3.1 Reporting to the police

In the ICVS, respondents are first asked about their experience with the types of crime mentioned above in the five years preceding the survey.[6.9] All respondents who say they have been victimized are, per type of crime, asked a number of follow-up questions about what happened – including whether the offense was reported

[6.7] Unfortunately, in the ICVS it is unclear whether elements of the car exterior were stolen or the car was broken into.

[6.8] In much of the existing literature, the latter are referred to as 'crimes against persons' or 'violent crimes'.

[6.9] The use of a 5-year reference period has probably resulted in an underestimate of victimization rates and an overestimate of the percentage of crimes reported to the police. Memory decays with time and the longer the reference period, the less complete the recollection and reporting of crime events. Because events reported to the police are rehearsed and have consequences subsequent to the event, they will be remembered more frequently than events that are not reported to the police. Biderman and Lynch (1981) have shown, however, that this type of recency bias is not correlated with other attributes of the crime, so it is unlikely to affect the analyses presented here. They compared attributes of events reported in the last month of the reference period for the National Crime Survey with those reported in the first month of the reference period. The distributions of these event attributes were similar for the first and last month of the reference period for all attributes except for reporting to the police. The percentage of crimes reported to the police in the first month was significantly higher than the crime reporting percentage in the last month.

to the police.[6.10] If more than one incident of a particular type of offense has taken place, these questions are posed in relation to the most recent incident only.

6.3.2 Characteristics of the crime situation

Cost-benefit theories of reporting assume that a victim or a bystander performs a cost-benefit calculation to determine whether it is worth the effort to report the offense to the police (Skogan, 1984). These types of theories operate at the offense level. Seriousness explanations, which are most widely used in theories on crime reporting (e.g. Fishman, 1979; Pino & Meier, 1999; Skogan, 1976), can be seen as a simple type of cost-benefit model: when a crime is very serious, the benefits of reporting to the police are great. Seriousness is usually defined in terms of the degree of injury or loss. Large losses make it worth the victim's while to mobilize the police, since the police offer some hope of recouping those losses. The same is true for events that result in serious injuries. The more severe the injury, the less likely it is that victims are able to help themselves and the more likely they are to seek help from others including the police. Factors other than loss or injury can also affect the victim's perception of the seriousness of the event. According to Skogan (1984), the presence of a weapon of any kind is an indicator of crime seriousness, as is the presence of multiple offenders (Lynch & Danner, 1993).

In the present study, crime seriousness is measured using self-reports (not very serious, fairly serious, very serious) of victims in the ICVS. In addition, for contact crimes, the variables whether the offender(s) carried a weapon and whether there were one or more offenders, are used as indicators of seriousness. Events involving weapons or multiple offenders are considered more serious than events without weapons or those involving single offenders.

The possibility of retribution by the offender is another element of the crime event that plays a role in the cost-benefit calculation. Victims of contact crimes who know the offender(s) might fear retribution if they report the offense to the police (e.g. Bachman, 1993; Singer, 1988). Strangers will be less likely to seek retribution

[6.10] At this point, not much is known about the validity of survey measures of crime reporting. Currently we rely upon a single 'yes-no' indicator that undoubtedly is subject to measurement errors. In many cultures, crime reporting is widely seen to be a socially desirable act and respondents might sometimes give socially desirable responses. There have been some attempts to trace back victimizations that were said to have been reported to actual police incidents (e.g. Persson, 1980; Schneider, 1977). These attempts came up with disconcerting findings: not many matches between police registration and victims' self-report in surveys were found. Subsequent critiques of these record-check studies provided convincing arguments that this was not a useful approach to the validation of self-report surveys of victimization (Biderman & Lynch, 1981; Miller & Groves, 1985). Further work on the reliability and validity of self-report measures of crime reporting is certainly needed.

for reporting because they are less likely to know where to find the victim. As an indicator of the chance of retribution, a measure of whether victims of contact crimes knew the offender(s) (not known, versus known by face or name) was used. Descriptive statistics of these crime characteristics are given in Appendix 6.A.

6.3.3 Country characteristics

There are a wide variety of attributes of countries that might affect the decision to report crimes to the police. Among these contextual factors, citizens' perceptions of the police would seem to be of great importance. The cost-benefit calculation, for example, can be affected by citizens' perceptions of the effectiveness and honesty of the police. In countries where the police are perceived as being competent, citizens will be more likely to report their victimizations. When citizens cannot make these assumptions, they will be more reluctant to report offenses to the police. The indicator of the *perceived competence of the police* is based on the mean score per country on the item "taking everything in account, how good do you think the police are at controlling crime?".[6.11] As can be seen from Appendix 6.B, averaged over the 16 countries, 73 percent of the respondents say that the police do a good job in controlling crime. Respondents in Poland and Portugal are the least positive (43% and 47%) and respondents in Canada and New Zealand the most positive (both 89%). The measure gives a subjective indication of the competence of the police, which does not have to coincide with the real functioning of the police. This is fine, because it is hypothesized that it is the subjective perception of police competence that influences victims' decision to report.

The institutionalization of the insurance business in a country may also affect the reporting behavior of victims, in particular with respect to property crime. In most cases, submitting an insurance claim after victimization requires filing a police report.[6.12] Insured victims are virtually assured of getting something back as long as they report the offense to the police first and then to their insurance company. Therefore, cost-benefit calculations by victims who are insured have a greater chance of resulting in reporting the crime to the police than cost-benefit calculations by victims who are not insured. This is a micro-level process that explains why insured people report more frequently than uninsured people. At the country level, however, a high prevalence of insurance can be predicted to have a

[6.11] In the last wave of the ICVS, the item regarding how well the police do their job was changed from a dichotomous item (poor, good) to a polytomous item (very poor, fairly poor, fairly good, very good). In the present study the scores for the last wave are dichotomized (poor versus good).

[6.12] This is not the case in all countries. For instance, since the mid-nineties, insurance companies in Switzerland do not systematically require a police report from their clients. This might explain the reduced reporting percentage for minor property crimes in Switzerland since then (Diserens, 2003).

positive effect on the extent to which residents have acquired the 'norm' to report damage or loss to the police. In this case, even if a victim does not have insurance or the insurance does not pay for the item taken or damaged or for psychological damage after a contact crime, the victim will be more likely to report to the police because in his or her country reporting has become the common way of responding to such incidents. The indicator of the *institutionalization of insurance* in a country is the average penetration percentage (direct gross premiums/GDP*100) of non-life insurances between 1993 and 1999 as found in the Insurance Statistics Yearbook 1992-1999 (Organisation for Economic Co-operation and Development, 2001).[6.13] As can be seen in Appendix 6.B, averaged over the 16 countries premiums of non-life insurances amount to 3.1 percent of the Gross Domestic Product. The smallest percentage is found in Poland (1.6%) and the largest in the USA (5.9%). For more accurate analyses it would be important to know exactly for which incidents people are insured or at least what percentage of households has insurance. Unfortunately, no comparable data of this type have been found for the 16 countries under study.

Another normative consideration that might influence the preferred response to criminal victimization in a country is the norm of conformity. Some societies are thought to be more 'conforming' than others are. In societies with a strong conformity norm, there are well-known rules for behavior that are rigorously enforced through a myriad of formal and informal sanctions. People form lines at bus stops in these countries, while they elbow for position in less conforming societies. Some countries have mass transit systems that function by an honor system, while others must take elaborate steps to prevent theft of service. As an indicator of a country's *norm of conformity*, the response rate on the ICVS for each country is used.[6.14] This response percentage gives an indication as to what extent people in a country are inclined to conform to what is requested. People who acquiesce to the request of interviewers to answer questions will be more likely to respond to the police request to report victimization. In a study on pro-social behavior within organizations, Becker and Randall (1994) used the (non) response of employees in a survey as a measure of conformity per individual. Here the aggregated response percentage in a country is used as a measure for the norm of conformity in that country.

In addition to differences between countries in the norm of conformity, there are differences in the extent to which citizens are used to and expected to look

[6.13] Non-life insurances also include accident and health insurances, but predominantly consist of property insurances.

[6.14] In most of the countries included in this study, the ICVS has been conducted via telephone by means of random digit dialing. However, in Poland face-to-face interviews were conducted. This may have had some influence on the response percentages, but the extent and direction of this effect are unclear (Van Kesteren, Mayhew, & Nieuwbeerta, 2000).

after themselves. Across countries there are large differences in the relationship between the individual and the society as a whole. According to Hofstede (1980) and Triandis (1995), the relationship between the individual and the collective is intimately linked with societal norms in the sense of value systems of major groups of the population. In more individualistic societies, the ties between individuals are looser and people are most often expected only to take care of themselves and their immediate families. In more collectivistic societies, on the other hand, from childhood on people are more integrated into strong, cohesive groups that protect them in exchange for loyalty to the group. It could be predicted that victims in more collective societies do not to seek assistance from the police as much as victims in more individualistic societies, because the former have a lot of people around them to whom they can turn for support. Victims in more individualistic countries receive less help from the people around them and, thus, will be more in need of police assistance. As a measure of the *level of individualism* in a country, Hofstede's individualism index (Hofstede, 1980) is used, which was developed in a study of IBM employees in 53 countries.[6.15] In Hofstede's research, scores on this index ranged from 6 (collectivistic) to 91 (individualistic), with an overall mean of 43. In the 16 countries included in the present study, the scores vary from 27 (Portugal) to 91 (United States), with an average of 72. It is possible that Hofstede's index gives a somewhat distorted picture of the level of individualism in a country because scores reflect the responses of IBM employees around 1970, rather than more recent figures for the general population (Yoo & Donthu, 1998). However, more recent indicators based on the general population do not exist for all 16 countries included in this study. Moreover, recent small-scale comparative studies of individualism (e.g. Søndergaard, 1994; Van Oudenhoven, 2001) and studies on the individual level show a strong correspondence with Hofstede's country scores (for an overview, see Kim, Triandis, Kâğitçibaşi, Choi, & Yoon, 1994; or Triandis, 1990).

A fifth country-level factor has also been included in the models of crime reporting, namely the *prevalence rates* of property or contact crimes. The prevalence rate is the percentage of respondents who experienced a specific type of crime at least once in the five years preceding the survey. It is not hard to imagine that crime rates might be relevant for reporting. For example, people in high crime areas may be less likely to report minor crimes to the police because they believe the police will not take them very seriously or because they are more accustomed to crime and therefore take crimes less seriously themselves (Anderson, 1999; Klinger & Bridges, 1997). On the other hand, it may be that prevalence rates are positively related to reporting.

[6.15] Because an individualism score for Poland was missing in Hofstede's research, the score computed by Nasierowski and Mikula (1998) in an additional study is included.

Victims in high crime areas might be fed up with crime and try to reduce it by reporting more to the police. No specific hypothesis is formulated for the effect of prevalence rates on reporting, but it is taken into account in the models to control for its possible effects. Appendix 6.C gives an overview of the prevalence rates per crime type per country. In the models for reporting property and contact crimes, the overall prevalence rate for property crimes and contact crimes are included (see columns 12 and 13 in Appendix 6.C).

These five attributes of the national context do not exhaust the dimensions of macro-level contextual factors that could affect citizens' reporting behavior. Moreover, there are meso-level contexts, such as organization, city or neighborhood, that could also influence the decision to report. Nonetheless, examination of these attributes of national context constitutes greater attention to social context than has been given in previous studies. Given the modest number of contextual characteristics included here, this will be a particularly conservative test of the effects of context on reporting.

Ideally, the first four macro-level factors under study should also be included in the model at the micro-level. It would then be possible to know for sure whether effects of the contextual variables are truly contextual or whether they are (partly) compositional. This has been done for the victim's perception of police competence, but unfortunately the other country characteristics could not be included at the micro-level as there were no corresponding micro-level data.

6.3.4 Victim characteristics

In addition to questions about victimization, the ICVS features a limited number of personal and household-related questions. These include indicators of social position and general behavior that have been shown in prior studies to influence reporting behavior (see Avakame, Fyfe, & McCoy, 1999; Bennett & Wiegand, 1994; Conaway & Lohr 1994; Greenberg & Ruback, 1992; Kury, Teske, & Würger, 1999; Pino & Meier, 1999; Ruback *et al*., 1999). The present study controlled for the possible effects of the following victim characteristics: age, gender, cohabitation/marital status, household income, town size, household size and the victim's perception of the competence of the police. Household income, household size and town size are dichotomized (household income level: lower 50% versus upper 50%; household size: 1 or 2 versus more than 2 household members; town size: 50,000 or less versus more than 50,000). For household income, town size and perceived competence of the police, an 'unknown' category is included to preserve cases with missing data on these variables. Descriptive statistics for these variables are provided in Appendix 6.A.

6.3.5 Analysis technique

To test the formulated hypotheses, a 'multilevel' or 'hierarchical' logistic model is used (e.g. Goldstein, 1995; Snijders & Bosker, 1999). These models can be viewed as generalizations of models for 'pooled time series' and cross-sectional data. Hierarchical models have the advantage over traditional techniques (e.g. OLS-regression) of taking the layered structure of the data into account, so that measurement errors can be specified at each of the distinct levels. When estimating the coefficients, the measurement error within individuals (for those who experienced multiple victimizations) and within countries is taken into account. In addition, hierarchical models offer the advantage that in estimating the parameters they take into account the number of cases within a single level. Here this means that, for example, in countries with a relatively small sample size, data will have a smaller weight than in countries with a relatively large number of respondents.

The model used in this study consists of three distinct levels: situation level, victim level and country level. Since the dependent variable is dichotomous (reported or not reported to the police), logistic hierarchical models are appropriate.[6.16] At situation level, for every offense i experienced by individual j in country k, the following equation applies:

$$Y_{ijk} = \ln\left(\frac{p_{ijk}}{1-p_{ijk}}\right) = \beta_{0jk} + \sum_{p=1}^{n} \beta_p (situation\_characteristic_{ijk}) + \varepsilon_{ijk} \ , \qquad (1)$$

where Y_{ijk} is the log-odds for the probability of reporting (p) versus the probability of not reporting ($1 - p$). The β_p parameters are the logistic regression coefficients for the n level-1 explanatory variables (the situation characteristics) on the dependent variable Y_{ijk}. The term ε_{ijk} corresponds to the error (unexplained variance) in Y_{ijk} for this specific observation. By default, in logistic multilevel models, these level-1 errors are assumed to be binomially distributed and therefore their variance is set at 1.[6.17] The intercept β_{0jk} is the probability (in log-odds) of reporting for victim j (level-2 unit) in country k (level-3 unit).

[6.16] Because the dependent variable is dichotomous and the number of level 1 units per level 2 unit is relatively small, the models are estimated using second-order Iterative Generalized Least Squares (IGLS) Penalized Quasi-Likelihood (PQL) estimation methods. Second-order estimates provide less downward bias than first-order estimates, but a higher mean squared error. PQL-estimates provide approximations around the fixed plus the random part, while the default method (Marginal Quasi-Likelihood; MQL) in the software package used provides approximations around the fixed part. For more information, see Goldstein (1995) or Snijders and Bosker (1999).

[6.17] As this residual variance is fixed, it is possible that the other estimated variances become larger after adding more variables. For more information, see Snijders and Bosker (1999).

The intercept parameter β_{0jk} also acts as a dependent variable in the level-2 equation (victim level). In this equation, the explanatory victim characteristics are included:

$$\beta_{0jk} = \delta_{00k} + \sum_{q=1}^{m} \delta_q (victim\_characteristic_{0jk}) + \mu_{0jk} \cdot \quad , \tag{2}$$

The δ_q parameters are the regression coefficients for the *m* explanatory victim characteristics on reporting to the police. The error-term μ_{0jk} represents that component of the variance that is specific for victim *j* in country *k* and is assumed to follow a normal distribution. The intercept δ_{00k} stands for the general log-odds of reporting in country *k*. This intercept also serves as a dependent variable at level-3 (country level):

$$\delta_{00k} = \gamma_{000} + \sum_{r=1}^{l} \gamma_r (country\_characteristic_{00k}) + \varphi_{00k} \quad , \tag{3}$$

Where the γ_r parameters are the regression coefficients for the *l* explanatory country characteristics on reporting to the police. The error-term φ_{00k} represents that component of the variance that is specific for country *k*. It indicates the magnitude of cross-national differences in reporting and is assumed to follow a normal distribution. The intercept γ_{000} is the average log-odds of reporting for the entire sample.

To estimate the regression parameters for these models, the MLwiN software package (Rasbash, Steele, Browne, & Prosser, 2004) has been used.

6.4 Description of Reporting Behavior

The frequency with which victims say they have reported offenses to the police is strongly related to the type of crime involved, but also differs quite a lot across countries (see Table 6.2). Overall, the majority of cars and motorcycles that are stolen are reported, as well as most burglaries. Reporting percentages are over 60 percent for thefts from cars and bicycle thefts, 50 percent for robberies, but less than 50 percent for thefts of personal property. For car vandalism and attempted burglary the reporting percentages are respectively 40 and 44 percent. Assaults and threats are reported least frequently: slightly more than one-third of all incidents are reported to the police.

The percentage of property crimes reported to the police is, on average, about 17 percent higher than the percentage of contact crimes that is reported, but this difference is not found in all countries. For example, in Italy, Poland, Portugal and the United States the difference is six percent or less. With the exception of the United States, where reporting percentages for property crimes are average, these four countries are amongst the countries with the lowest reporting percentage for

property crimes: less than half of the property crimes are reported to the police. In Austria, Belgium and Sweden, the differences between the reporting percentages of property and contact crimes are over 25 percent, and in Switzerland this difference is even more than 30 percent. Switzerland has the lowest reporting percentage for contact crimes (25%), followed by Austria and Finland (27% and 29%, respectively). Between countries, the reporting percentage for property crimes fluctuates between 38 percent (Portugal) and 65 percent (Denmark), and for contact crimes it ranges from 25 percent (Switzerland) to 53 percent (United States). These differences are quite large.

Table 6.2 Percentage of reported crimes per type of crime per country

Country	Type of crime												
	car theft	theft from car	car vandalism	motorcycle theft	bicycle theft	burglary	burglary attempt	theft of pers. prop.	robbery	assaults & threats	Property crime[a]	Contact crime[b]	All crimes[c]
Australia	92	53	31	86	68	85	45	39	51	41	54	43	52
Austria	100	78	34	100	70	79	28	51	50	23	54	27	51
Belgium	94	72	41	90	71	91	52	59	52	32	64	38	61
Canada	93	60	48	68	58	83	47	33	48	37	55	40	53
Denmark	98	75	43	77	68	87	27	54	73	33	65	41	62
Finland	97	67	45	90	54	72	28	40	42	26	52	29	48
France	94	62	46	82	44	76	44	46	51	33	57	38	54
Great Britain[d]	95	71	38	90	77	95	56	49	48	41	63	42	61
Italy	95	40	15	76	27	66	21	44	42	22	41	35	40
Netherlands	91	74	43	90	66	88	53	55	67	42	62	48	61
New Zealand	96	62	36	87	87	88	48	51	50	39	64	41	62
Poland	92	48	30	83	49	58	28	23	41	33	40	36	40
Portugal	75	40	23	71	33	58	27	37	45	30	38	38	38
Sweden	96	74	55	88	63	69	34	50	72	31	63	37	61
Switzerland	92	83	33	89	74	88	44	41	30	24	57	25	54
USA	92	65	50	82	51	69	51	35	67	49	55	53	55
All countries[e]	94	63	40	85	61	81	44	42	50	35	56	39	54

[a] Including car theft, theft from car, car vandalism, motorcycle theft, bicycle theft, burglary, attempted burglary and theft of personal property.

[b] Including robbery and assaults & threats.

[c] Calculated over individual offenses, because some types of offenses occur more often than others.

[d] England, Scotland and Wales.

[e] All countries are given the same weight, even though some have larger samples than others.

In the ICVS, victims were asked to give reasons why they did or did not report a crime to the police. In Table 6.3, the reasons given by victims for reporting or not reporting property crimes and contact crimes are presented. The main reason given for not reporting is that the crime was "not serious enough" (mentioned by nearly half of the victims of property crimes and over one third of the victims of contact crimes). For property crimes, the second and third most common reasons for not reporting a crime are "the police couldn't do anything" and "the police wouldn't do anything". For contact crimes the second most common reason is "I solved the problem myself", the third is "the police couldn't do anything", and the fourth is "the matter was inappropriate for the police". The most common reason for reporting given by victims of property crimes is "it should be reported" (41%), which is in accordance with Maguire (1982) and Smith and Maness (1976).

Table 6.3 Reasons given by victims in all countries for (not) reporting a crime (%)[a]

	Property crime	Contact crime	Overall
Not reported[b]			
not serious enough	46.7	35.5	43.2
police couldn't do anything	22.0	14.1	19.5
police wouldn't do anything	12.3	10.8	11.8
inappropriate for police	8.9	11.2	9.6
solved it myself	6.1	15.5	9.1
fear of reprisals	2.4	6.6	3.7
reported to other authorities	3.0	3.9	3.3
fear/dislike of police	0.9	3.3	1.6
family solved it	1.4	2.1	1.6
no insurance	2.0	0.3	1.5
other reasons	12.8	18.1	14.5
don't know	2.8	3.0	2.8
Reported[c]			
should be reported	41.2	37.0	40.1
want offender caught	29.6	38.3	31.9
insurance reasons	40.0	6.4	31.0
to recover property	35.5	12.8	29.6
to stop it	20.0	36.0	24.3
to get help	9.2	20.8	12.3
compensation from offender	6.8	4.8	6.2
other reasons	11.7	19.0	13.7
don't know	0.9	0.5	0.8

[a] Multiple responses were allowed, so percentages may add up to more than 100%.

[b] For the property crimes car theft, car vandalism, theft of motorcycle/moped, bicycle theft and theft of personal property this question was not asked in the last two waves, and for attempted burglary it was only asked in the second wave.

[c] For all types of crimes this question was only asked in the last two waves and regarding property crimes it was asked only for theft from car and for burglary.

Other important reasons given for reporting are "insurance reasons" and "to recover property". For contact crimes the reasons given are somewhat different: the most common reason is "want offender caught" (38%), followed by "it should be reported" and "to stop it". Previous surveys have found similar reasons for reporting and not reporting (e.g. Bennett & Wiegand, 1994; Fishman, 1979).

6.5 Testing the Hypotheses

6.5.1 Bivariate results

In Table 6.4 it can be seen that crimes that are perceived as more serious, crimes in which the offender(s) carried a weapon and crimes with more than one offender are reported more often than crimes that are perceived as less serious, crimes in which the offender did not carry a weapon, and crimes with only one offender. Victims who know the offender(s) seem to report their victimization more often than victims who are unfamiliar with the offender(s).

Victims who are older are significantly more likely to report their victimization to the police than victims who are younger, but for victims over 60 the reporting percentage seems to decline a bit. Victims who have a relationship and victims who live in towns with less than 50,000 inhabitants are more likely to report their victimizations to the police than victims who are single and victims who live in towns with more than 50,000 residents. Furthermore, those who perceive the police as competent are more likely to report victimization to the police than victims with a less positive perception of police competence. Other victim characteristics seem to have no clear effect. In the case of contact crimes, female victims are more likely to report to the police than male victims, but there is no significant difference between the sexes in reporting percentages for property crimes. For property crimes, reporting percentages are significantly higher for victims with a high income than for victims with a low income, and somewhat lower for victims from households consisting of at least three people than for victims from smaller households, but this pattern is not found for contact crimes.

Some of these bivariate relationships between attributes of events or victims and reporting to the police may be due to factors that are correlated with both victim characteristics and reporting to the police. The fact that high income victims of property crimes report to the police more often than lower income victims, for example, may be due to the fact that the property stolen from high income victims is worth more or is more likely to be insured than property of lower income victims. Multivariate analysis is the only way to disentangle these effects.

Table 6.4 Percentage of offenses reported to the police depending on the situation and victim characteristics

		Property crime	Contact crime
Situation characteristics			
seriousness	not very serious (self-report)	39.8***	17.1***
	fairly serious (self-report)	62.8	35.2
	very serious (self-report)	78.2	60.1
	no weapon carried	n/a[a]	33.6***
	weapon carried	n/a[a]	58.1
	1 offender	n/a[a]	35.9***
	> 1 offender	n/a[a]	42.3
chance of retribution	low (offender not known)	n/a[a]	37.3***
	high (off. known by face or name)	n/a[a]	41.3
Victim characteristics			
age	16-29	51.3***	32.5***
	30-44	56.6	40.3
	45-59	59.7	45.2
	≥ 60	57.0	44.1
gender	male	56.0	37.1***
	female	56.0	41.0
marital status	single/divorced/widowed	53.4***	36.4***
	married/living together	57.7	41.8
income	lower 50%	53.0***	39.8
	upper 50%	58.4	38.1
town size	≤ 50,000	56.9***	40.1***
	> 50,000	54.9	37.6
household size	≤ 2 persons	56.7**	39.8
	> 2 persons	55.4	38.1
perceived competence of police	not good	53.8***	37.1***
	good	57.8	40.5
Total		56.0	38.9

χ^2-tests are run to test whether reporting percentages differ between the categories: ** $p < .01$, *** $p < .001$ (two-tailed).

[a] Only asked for contact crimes.

6.5.2 Hierarchical logistic regression results

To test the hypotheses, the parameters of two hierarchical logistic models are estimated (see Table 6.5). The first shows the influence of the different predictors on the reporting of property crimes, the second on the reporting of contact crimes. In both models the effects of situation, victim and country characteristics are included. In this manner the influence of the country characteristics is assessed after controlling for the influence of crime and victim characteristics. The intercepts approximate the

mean probability that victims in the reference category report a crime to the police (measured in log-odds).[6.18] The ten types of crimes are included as dummies in the model to control for their possible effects. As can be seen in the table, there are significant differences in reporting between the various types of crimes. This is consistent with the differences found in Table 6.2.

Effects of the situation and victim characteristics

All situation characteristics in the models have significant effects on the victim's decision to report. The parameters for the perceived seriousness of the crime are positive and significant. The higher the perceived seriousness of a crime, the greater the probability that a victim will report his or her victimization to the police. Furthermore, for contact crimes, the involvement of a weapon and the number of offenders are significantly and, in accordance with the prediction, positively related to individual reporting of the crime. Familiarity with the offender is, in contrast to the prediction, positively related to reporting. A possible explanation is that victims of a known offender perceive the chances of the offender being caught and punished as being higher than when the offender is unknown, increasing the perceived benefits of reporting. According to Gartner and Macmillan (1995), however, this unpredicted finding might be due in part to measurement errors in the ICVS. Contact crimes by people you are close to or acquaintances are less likely to be mentioned in victimization surveys than similar crimes by unknown offenders because such surveys often do not encourage respondents to think about intimate violence as relevant for the survey (Cantor & Lynch, 2000; Kalish, 1974). Victims of intimate violence tend to mention only the more serious crimes, which they have also reported to the police. In other words, victims of less serious attacks appear more willing to reveal these in surveys if the offender was a stranger. This tendency will bias estimates of the effects of the victim-offender relationship on reporting to the police (Gartner & Macmillan, 1995).

Many of the victim characteristics also have a significant impact on reporting to the police. The effect parameters for age and relationship are significant and positive for both types of crime. Household income has a positive effect on the reporting of property crimes and women report property crimes less often than men. In summary, victims who are older, male, have a partner and have a higher than average income,

[6.18] Because the explanatory variables on victim and country level are centered around the mean, the intercepts approximate the probability that an average victim (mean scores on victim characteristics) in an average country from the sample (mean scores on country characteristics) reports a case of car vandalism that is perceived as not serious, or a non-serious assault or threat with a single, unknown offender in which no weapon was used. As the link function is non-linear this is not exactly equal to the overall mean (for a further discussion, see Goldstein, 1995).

report property victimizations more often than victims who are younger, female, single, and those who have a below average income. Victims of contact crimes report their victimization more often if they are older or have a partner than when they are younger or single. The other demographic variables (household size, town size and gender) do not seem to have a substantial effect on the reporting of contact crimes. As predicted, for both types of crime the victim's favorable perception of police competence is positively related to reporting.

Effects of country characteristics

Finally, the hypotheses with respect to the effects of country characteristics are tested by adding country-level factors to the model.[6.19] It was hypothesized that the perceived competence of the police, the institutionalization of the insurance business, the norm of conformity and the level of individualism, would be positively related to reporting.

The *perceived police competence* has no effect on the reporting of contact crimes, but does have a significant positive effect on the probability that a property crime is reported to the police. This means that – after controlling for the influence of different situational and victim characteristics – the higher the perceived competence of the police in a country, the greater the probability that victims will report property crimes to the police, even after controlling for the victim's own perception of police competence. This result suggests that the cost-benefit analysis is not completely dependent on characteristics of the situation (e.g. seriousness) because the perception of the (competence of the) police is also relevant. This effect exceeds the individual level. A victim in country *X* (where people generally have a positive perception of police) with a negative perception of police competence will have a greater probability of reporting a property crime than a comparable victim with a comparable perception of the police in country *Y* (where the general perception of

[6.19] Including highly correlated variables on country level could lead to problems of multicollinearity (MC). In the present study the strongest correlation is the one between the level of individualism and the prevalence of property crimes ($r = .73$, *two-tailed* $p < .01$). To get a more precise indicator of MC, the Variance Inflation Factor scores (VIFs) for the different independent variables were calculated in Ordinary Least Squares (OLS) regression models with the explanatory country-level variables and the dependent reporting percentage of property crimes and contact crimes. The higher the VIF for a typical OLS parameter, the higher the variance for that parameter and the greater the chance of finding that parameter to be insignificant, which means that severe MC effects are present. For the property crime model, the highest VIF turned out to be 4.10 for the level of individualism. In the model for contact crimes the highest VIF was 2.70, also for the level of individualism. VIFs above 10 are generally thought to cause concern, although there is no real 'golden rule' (Belsley, Kuh, & Welsch, 1980; Stevens, 1996). However, MC does not seem to cause a serious problem here.

police functioning is not as positive). This finding suggests that improvement of police image could have a positive effect on victims' willingness to report crimes.

The *institutionalization of insurance* has no significant effect on victims' reporting of contact or property crimes. It was hypothesized that this factor would primarily influence the reporting of property crimes, because the benefits of reporting are greater if the victim is insured for property losses (influence at the situation level). It was also hypothesized that "reporting for the insurance" would influence the probability of reporting property crimes for which one is not insured as well as the reporting of contact crimes, although to a lesser degree. The finding that the insurance factor does not influence the reporting of property or contact crimes at the country level suggests that the theory is incorrect. At the situation level, however, insurance probably does have an effect on the reporting of property crimes (see Table 6.3, which shows that 40% of the victims of a property crime who reported their victimization, said they did so for insurance reasons). Unfortunately, unlike some of the national victimization surveys in European countries, the ICVS does not ask victims whether they are insured for the specific offense.

It was hypothesized that victims in countries with a high *norm of conformity* would be more likely to report their victimizations to the police. However, the norm of conformity in a country does not seem to influence the reporting behavior of crime victims.[6.20]

The *level of individualism* in a country also has no influence on victims' reporting behavior. It was hypothesized that victims in more collectivistic countries would report to the police less often than similar victims in more individualistic countries, because in more collectivistic countries victims have less need for an institutionalized police force. However, the findings do not support this reasoning.[6.21]

Finally, *crime prevalence*, which was included in the models as a control variable, does not influence the reporting of property crimes and is only marginally positively related to the reporting of contact crimes.

[6.20] It is important to examine other operationalizations of the norm of conformity in the future. Here, the response percentage per nation in the ICVS was used as a measure of conformity, while data on, for example, tax compliance might be a more valid measure. Using tax compliance as a measure of conformity, however, might introduce another problem: tax evasion is a form of criminal behavior. In a country where many people do not comply with taxes, reporting rates could be lower due to the fact that more victims have a bad record themselves and therefore prefer not to have contact with the police, instead of people in these countries being less conforming.

[6.21] It is important to examine in future research whether this finding results from the measure of individualism used in this study. This measure has been constructed from questions to IBM employees on work goals in the seventies. Other indicators, based on the attitudes of the general population, could yield different results. The percentage of marriages that end in divorce might also be a good indicator.

Models with situation and victim characteristics only have also been tested and compared to the full models. There were two reasons for doing this. The first was to see whether introducing country-level variables into the model would change the parameters for the other factors on the dependent variable. This was not the case; the parameters remained stable. The second was to see how much of the variance between countries is explained by the contextual factors. For property crimes, the remaining variance between countries before introducing country-level characteristics into the model is .32. In the full model it is .12 (see Table 6.5); a reduction of 62 percent. For contact crimes, the remaining variance before introducing country-level characteristics is .12. After introducing these characteristics the remaining variance (.05) is hardly significant. This means that the particular aspects of the national context chosen for examination in this study account for a substantial amount of the cross-national variation in reporting to the police. The national context seems to be more important in explaining reporting of property crimes than contact crimes, as the unexplained variance between countries for property crimes is almost three times larger than for contact crimes in the models without the country characteristics (.32 versus .12). This may be caused by the fact that there is more consensus in the moral evaluation of contact crimes than property crimes and more uniformity across nations in the perceived appropriateness of reporting these types of crimes to the police. In that case, the national context will have less effect on the decision to report contact crimes than property crimes.

Table 6.5 Unstandardized effect parameters (log-odds ratios) of situation-, individual- and country-level contextual characteristics on the reporting decision

	Property crime	Contact crime
	Coeff. (S.E.)	Coeff. (S.E.)
Intercept	-1.10 (.10)***	-2.35 (.11)***
Prop. crime type (ref. = car vandalism)		
car theft	2.82 (.09)***	
theft from car	1.08 (.03)***	
motorcycle/moped theft	1.99 (.11)***	
bicycle theft	.80 (.03)***	
burglary	1.55 (.05)***	
attempted burglary	-.03 (.04)	
theft of personal property	-.11 (.03)***	
Cont. crime type (ref. = assaults & threats)		
robbery		.63 (.07)***
Situation characteristics		
seriousness (ref. = not serious)		
fairly serious	1.11 (.03)***	1.05 (.09)***
very serious	1.85 (.03)***	2.10 (.09)***
multiple offenders		.26 (.07)***
weapon carried		.86 (.07)***
offender known		.25 (.07)***
Victim characteristics		
age	.01 (.00)***	.01 (.00)***
female	-.05 (.02)*	.02 (.07)
relationship	.12 (.03)***	.31 (.07)***
high income	.29 (.03)***	-.09 (.07)
income unknown	.15 (.04)***	-.16 (.12)
town > 50,000 residents	-.04 (.02)	-.11 (.07)
town size unknown	.02 (.05)	.26 (.12)*
household size > 2	.01 (.03)	-.02 (.07)
perceived competence police	.10 (.03)***	.21 (.07)**
perceived competence police unknown	-.09 (.04)*	-.21 (.11)
Country characteristics		
prevalence of crime type	-0.80 (1.85)	6.94 (3.50)*
perceived competence police	2.75 (.92)**	.61 (.67)
institutionalization of insurance (/10)	.89 (1.06)	.59 (.81)
conformity norm (/10)	.11 (.10)	-.01 (.08)
level of individualism (/10)	.02 (.12)	-.08 (.08)
Variance at victim level	.53 (.03)***	.85 (.10)***
Variance at country level	.12 (.05)**	.05 (.02)*
Number of offenses	51,276	7,269
Number of individuals	31,250	6,635
Number of countries	16	16

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed).

6.6 Conclusions

One of the most consistent findings in empirical studies using victimization data is that victims' decision to report to the police is basically determined by the characteristics of the situation, especially by the seriousness of the crime: the police will be notified more often about crimes that involve more serious injury or greater monetary loss. In this study it has been argued that these findings explain only a part of the phenomenon of crime reporting by victims. It has been noted that many victimization surveys contain a great deal of information on the crime situation and relatively little on the social context in which the crime took place. Had the surveys included more information about external factors, then perhaps the social context might feature more prominently in our understanding of reporting. The ICVS offered the opportunity to test the effects of the country-level context on the decision to report, while controlling for the attributes of the crime situation and victim characteristics. The results presented here indicate that the decision to report criminal victimization is not influenced by attributes of the crime situation exclusively: the country-level variables in this model of reporting account for a substantial amount of the cross-national variation in reporting. This confirms the importance of the country-level social context in the decision to report, even though most of the country-level characteristics included here did not turn out to have an effect. For property crimes only, a significant effect of the perceived police competence is found: in countries where the police are perceived to be more competent, victims are more likely to report property crime victimizations to the police.

This study suggests some specific dimensions of the national social context that affect reporting to the police and invites reseachers to elaborate their theories of reporting to the police to include social context. However, more work is needed to understand the effect of the national context on the reporting of both property and contact crimes. As noted in the previous section, one of the first steps that can be taken is to find better indicators for the aspects of the national social context that have been examined in this study.

A second step that should be taken is to consider other aspects of the national context that could affect the decision to report. The importance of contextual attributes can be tested with the ICVS in a similar manner as was done here. The models used to test these theories should go beyond the models tested here to include interactions between country-level variables, victim-level variables and attributes of the situation. Hierarchical analysis is particularly well suited to this type of modeling.

It would also be useful to start thinking of social context in terms of sub-national units (the meso-level presented in Table 6.1) as well as at the national level. The

influence of alternative dispute resolution resources in a city or neighborhood, for example, may influence a victim's decision to report a crime to the police. This effect would not show at a national level, but might influence reporting in a particular community. Similarly, perceptions of police competence may be unimportant at the national level for countries such as the United States where the organization of the police force is very much decentralized. In countries like France, on the other hand, where the police force is organized in a centralized fashion, country-level perceptions of the police may be more consequential. It may be very difficult to test the effects of social context at the sub-national level due to the absence of a vehicle like the ICVS at that level. It is, however, certainly worth considering what aspects of neighborhoods, communities and jurisdiction are important for the decision to report victimizations to the police (e.g. Baumer, 2002).

Finally the results presented here certainly point to the importance of public perceptions of police competence as an element of country-level context that can influence the decision to report a crime to the police. If the police are perceived as competent, then citizens are more likely to report their victimizations. This raises the question of how the public's opinion of the police comes about. Is it primarily through direct experience with the police or through some sort of vicarious experience through people they are close to, acquaintances, the press or some other source? The answer to this question will provide valuable insight for changes in police policy and the manner in which the police present themselves to the public.

6.7 References

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Appendix 6.A

Descriptive statistics of situation and victim characteristics

	Range	Mean (SD)	
		Property	Contact
Situation characteristics			
self-reported seriousness	0 – 2	.78 (.79)	1.08 (.79)
multiple offenders	0 – 1	n/a[a]	.48 (.50)
weapon carried	0 – 1	n/a[a]	.22 (.41)
offender known (by face or name)	0 – 1	n/a[a]	.41 (.49)
Victim characteristics[b]			
age (in years)[c]	17.5 – 75.0	41.72 (15.66)	38.29 (15.28)
female	0 – 1	.52 (.50)	.48 (.50)
relationship	0 – 1	.62 (.49)	.48 (.50)
high income (upper 50%)	0 – 1	.53 (.50)	.49 (.50)
income unknown	0 – 1	.09 (.29)	.08 (.28)
town > 50,000 residents	0 – 1	.43 (.50)	.47 (.50)
town size unknown	0 – 1	.08 (.26)	.08 (.27)
household size > 2	0 – 1	.54 (.50)	.51 (.50)
perceived competence police	0 – 1	.56 (.50)	.54 (.50)
perceived competence police unknown	0 – 1	.15 (.36)	.12 (.33)

[a] Only asked for contact crimes.

[b] Averaged over victims.

[c] Based on the class-means from 12 categories.

Appendix 6.B

Values of country-level factors

Country	Competence police	Level of individualism	Institutionalization of insurance	Conformity norm
	% saying police does good job[a]	Individualism[b]	non-life insurance penetration %[c]	response % ICVS[d]
Australia	85	90	3.4	53
Austria	73	55	3.4	76
Belgium	69	75	3.0	45
Canada	89	80	2.5	58
Denmark	86	74	2.5	66
Finland	72	63	2.0	82
France	76	71	3.0	52
Great Britain[e]	79	89	4.7	48
Italy	55	76	2.3	61
Netherlands	69	80	4.1	63
New Zealand	89	79	2.0	65
Poland	43	56	1.5	86
Portugal	47	27	2.6	56
Sweden	76	71	2.3	72
Switzerland	81	68	3.8	64
USA	85	91	6.1	44
Mean	73	72	3.1	62
S.D.	14	16	1.2	13

[a] Mean score ICVS respondents.

[b] Hofstede (1980).

[c] Organisation for Economic Co-operation and Development (2001).

[d] Van Kesteren, Mayhew, and Nieuwbeerta (2000).

[e] England, Scotland and Wales.

Appendix 6.C

Prevalence rates (%) of the different crime types by country

Country	Type of offense												
	Car theft	Theft from car	Car vandalism	Motorcycle theft	Bicycle theft	Burglary	Burglary attempt	Theft of pers. prop.	Robbery	Assaults & threats	Property crime[a]	Contact crime[b]	All crimes
Australia	2.6	8.1	11.8	.2	2.1	5.4	4.4	7.4	1.1	9.0	42.3	10.1	52.5
Austria	.1	1.7	8.4	.0	3.8	.9	.6	5.3	.2	3.4	20.8	3.6	24.4
Belgium	1.1	4.1	8.4	.6	3.7	2.7	3.2	4.1	1.3	3.6	28.1	4.9	33.3
Canada	1.3	8.4	8.9	.2	4.1	3.8	3.3	7.0	1.5	7.6	36.3	9.1	45.4
Denmark	1.0	3.7	4.5	.7	7.6	2.7	1.4	4.4	.7	3.7	26.1	4.4	30.5
Great Britain[c]	2.1	8.3	12.5	.3	2.4	2.6	3.4	4.7	1.1	7.0	39.8	8.1	49.6
Finland	.5	3.3	5.3	.2	5.9	.7	.9	3.8	.9	6.4	21.1	7.3	29.2
France	1.8	7.9	9.7	.7	2.1	2.5	2.1	4.4	1.2	5.5	32.5	6.7	40.6
Italy	2.9	8.3	10.9	1.7	2.6	2.5	1.8	4.0	1.6	1.1	34.6	2.8	37.4
Netherlands	.4	6.8	12.4	.7	11.3	2.7	3.5	5.8	1.2	6.4	45.1	7.5	52.2
New Zealand	2.7	8.2	9.7	.3	4.3	5.7	4.6	6.4	1.2	8.4	41.8	9.6	51.5
Poland	.8	6.5	7.8	.3	3.6	2.7	2.5	7.2	2.5	6.3	31.3	8.8	40.1
Portugal	.8	6.0	8.0	.2	.8	1.7	1.7	2.1	1.4	1.8	21.1	3.2	24.0
Sweden	1.4	6.0	6.1	.6	8.9	2.0	1.1	6.4	.7	6.5	32.3	7.2	39.5
Switzerland	.1	2.2	7.5	1.2	5.7	1.4	2.0	6.4	1.0	3.3	32.4	4.2	37.8
USA	1.8	9.9	10.0	.1	3.2	4.5	4.0	6.0	2.1	8.7	33.7	10.8	42.5
All countries[d]	1.3	6.2	8.9	.5	4.5	2.8	2.5	5.3	1.2	5.5	32.5	6.8	39.4

[a] Including car theft, theft from car, car vandalism, motorcycle theft, bicycle theft, burglary, attempted burglary and theft of personal property.

[b] Including robbery and assaults & threats.

[c] England, Scotland and Wales.

[d] All countries are given the same weight, even though some have greater samples than others.

7 CONCLUSIONS

7.1 Summary

The studies described in this thesis have examined the extent to which reporting behavior by crime victims is influenced by factors constituting the social contexts in which crimes and victims are nested, after controlling for effects of attributes of the crimes and victims. By simultaneously analyzing the effects of crime, victim and contextual factors, this book contributes to the growing body of research on reporting behavior.

When and why crime victims (do not) report has been the subject of many empirical studies over the past decades. The majority of these studies use a simple cost-benefit model (which has been called the *economic model* throughout this book) in which crime seriousness is assumed to be the most important predictor of victims' decision (not) to report (Skogan, 1984). Crime seriousness has indeed been proven to be an important determinant of reporting behavior. However, according to many researchers, other factors are important as well and these factors should be included in models of crime reporting to increase the insight into reporting behavior.

In this book, it has been argued that taking into account factors that constitute the social contexts in which crimes and victims are nested, while also incorporating characteristics of crime incidents and victims, is necessary to improve the understanding of victims' reporting behavior. The socio-ecological model introduced in Chapter 1 (see Section 1.4) has therefore been the theoretical basis of this thesis. In that model, it is assumed that victims' decision-making is determined by various factors that exert their influence at different levels. These levels are the crime incident, the victim, the context in which crimes take place (e.g. within an organization or in the private domain), and the meso- and macro-level context in which victims reside (e.g. victims' social network, their neighborhood, and the country they live in). Within these different levels, victims' decision-making can be the result of a cost-benefit calculation, a normative decision, or a combination of the two.

Regarding the different levels in the socio-ecological model, the crime incident refers to the immediate crime scene. For example, the value of a theft or the amount of force used by an offender is a characteristic of the crime incident. Social contexts

include any aspects of the location in which a crime incident occurs or in which a victim is embedded outside the immediate crime incident situation. The social cohesion in a neighborhood, whether there is an organization responsible for the area in which the crime took place, the general public's confidence in the police, or the willingness of residents to assist each other in maintaining order, all are aspects of the social context.

Regarding the two processes that are assumed to be important in this model, cost-benefit calculations are made based on the expected expenditures and returns to the victim. This calculation is assumed to be influenced by characteristics of the crime incident (e.g. the seriousness of the incident) as well as contextual-level factors (e.g. the willingness of residents to assist each other in maintaining order). Normative processes, on the other hand, are based on norms that exist, for instance, in the victims' social network or in a neighborhood or country (e.g. the degree to which people in general are inclined to conform to what is requested; the conformity norm).

The empirical studies presented in this book have tested the tenability of the socio-ecological model by focusing on the effects of various factors that compose three contexts that are assumed to be especially important in the literature. These contexts are: the context in which crime incidents are embedded and the neighborhood and country context in which victims are embedded – while controlling for possible effects of crime incident and victim characteristics.

The studies described in this thesis have several methodological strengths when compared with other studies on victims' reporting behavior in general and with research regarding contextual effects on victims' reporting behavior in particular. First, the effects of various factors constituting different social contexts have been tested. There have been similar studies on the effects of neighborhoods or counties in which victims are nested (e.g. Baumer, 2002; Ménard, 2003), but no comparable study has been done on the effects of the country in which victims reside, nor on the effects of factors composing the context in which crime incidents take place. Second, the various hypotheses have been tested for violent as well as property crimes, whereas many other studies focus on a single crime category or crime type. Third, the hypotheses have been tested using data from large-scale national surveys as well as an international standardized questionnaire survey. In the studies on neighborhood and country characteristics, the data have been combined with independently collected data on contextual factors. Fourth, these hypotheses have been tested using an analysis technique that has been designed especially for the nested nature of the data under study, namely multilevel analysis (also known as hierarchical linear modeling). Fifth, the hypotheses have been tested using an alternative research method as well (a vignette experiment among juvenile students),

while most other studies on crime victims' reporting behavior only use data from victimization surveys.

This thesis was focused on answering the following general research question: *To what extent can crime victims' reporting behavior be explained by the context in which crimes and victims are nested, while controlling for effects of crime incident and victim characteristics?* To answer this general question, various hypotheses on the effects of factors composing three types of context – the context in which crime incidents take place, the context of the neighborhood in which crime victims reside, and the context of the country in which victims reside – have been formulated and tested empirically. These hypotheses – and a summary of the outcomes of all of these tests – are presented in Table 7.1. The findings, and the answers to the three main research questions are discussed in the following sections.

7.1.1 The context in which crimes take place

To examine the first main research question – *To what extent does the context in which crimes take place have an effect on crime victims' reporting behavior, after controlling for effects of the attributes of the crimes and victims*? – two empirical studies have been carried out (see Chapters 3 and 4).

The main factor assumed to be of importance here was the type of location in which crimes take place. In this regard, four types of crime locations were distinguished: (1) private locations, (2) semi-private locations, (3) semi-public locations, and (4) public locations. Because the crime location is related to the victim-offender relationship – e.g. relatively many crimes within the (semi-)private domain are committed by known offenders (Felson, Messner, Hoskin, & Deane, 2002; Garofalo, Siegel, & Laub, 1987) – effects of this factor, and interactions of this factor with the type of location, have also been considered.

To examine whether the type of location in which violent crimes take place, the degree to which the offender is known, and the interaction between these two factors influence victims' reporting behavior, data from the Netherlands Survey Crime and Law Enforcement (*Nederlandse Survey Criminaliteit en* Rechtshandhaving; NSCR) have been used in Chapter 3. In Chapter 4, a vignette experiment is described that was conducted among juvenile students and focused specifically on the semi-private domain (the participants' school) and the public domain (the street), while effects of the degree to which the offender is known, and whether the offender is part of the same organization as the victim (here: the school), were studied also.

Type of location

Although according to previous research the odds of violence taking place in the private domain being reported are relatively low (e.g. Block, 1974; Gartner &

Macmillan, 1995), this finding has not been reproduced by the empirical studies described in this book. In fact, the likelihood of reporting was found to be higher for acts of violence taking place in the (semi-)private domain than for violent acts occurring in the (semi-)public domain. This finding suggests that victims experience stronger feelings of injustice and anger when crimes take place in the (semi-)private domain, as their desire to be safe is greater in these locations than it is in (semi-)public locations. When people enter the (semi-)public domain, where many other (unknown) people are present, often they may factor in that they will have less privacy and accept – to a certain degree – that unforeseen things could happen. Furthermore, if they are victimized in the (semi-)public domain, they could decide to avoid the crime location in the future to protect themselves against further victimization (Greenberg & Ruback, 1992). Thus, the costs of victimization in the (semi-)private domain might be perceived as being higher.

The hypothesis that people are less inclined to report violent victimizations taking place in the semi-private (and semi-public) domain than similar victimizations in the public (and private) domain was also supported by the results. The reasoning behind this hypothesis was that in the semi-private and semi-public domain (thus within organizations) often formal rules and regulations exist that describe what to do when a crime takes place. The organization can be asked for help after a victimization has occurred. For example, the organization can sometimes offer help with recovering stolen property, and in some cases those who commit crimes can even be punished by the organization (e.g. they can be refused entrance to the organization) and others can be protected. If victims believe that the organization is able to help them with recovering stolen property or capable of protecting them against future crimes and/or punish the offender, they might be less likely to (also) report to the police (Finkelhor & Ormrod, 2001). Vice versa, in the case of a comparable crime taking place in a public space (e.g. on the street), absence of an alternative formal authority that can offer help can increase the odds of an incident being reported to the police. In those cases, the police are often the only formal organization one can turn to.

Victim-offender relationship

It has been hypothesized that there is a negative relation between the degree to which the offender is known and the likelihood that victims will report to the police. The main reasoning behind this hypothesis is that people are less in need of formal social control (police intervention) in situations with higher levels of informal social control. If the offender is (well) known, the situation could be solved informally, while this is not the case when the offender is not (or hardly) known. This factor was thus assumed to influence the cost-benefit process.

A lower likelihood of reporting in he case of incidents committed by well known offenders was found in both studies. However, the other results regarding the effects of this factor diverge. The reporting percentage was found to be lower for incidents with vaguely and well known offenders than for incidents with unknown offenders in the study described in Chapter 3, while no difference between incidents with vaguely and well known offenders was found. In the research presented in Chapter 4, the likelihood of reporting was found to be lower for incidents with well known offenders than for incidents with vaguely known offenders, while no difference between incidents with vaguely known and unknown offenders was found.

The somewhat divergent findings of the studies described in the two chapters on the effect of knowing the offender could (partly) be caused by differences in research methodology. With the vignette study (Chapter 4), an experimental situation was created in which other factors were kept constant, while in the NSCR (Chapter 3) people were asked about their experiences and behavior in real life. The different findings could also be caused by differences in the models that were tested. In Chapter 3, an interaction between the crime location and knowing the offender was included in the model, which was not the case in the study described in Chapter 4. This interaction variable influenced the main effect of knowing the offender.[7.1] In turn, the model studied in Chapter 4 included an experimental variable on whether the offender is part of the same organization or not.

Interaction between location and victim-offender relationship

The crime reporting percentage was not only found to be higher for violence taking place in a (semi-)private location (cf. a public or semi-public location), but it was also found to be especially high for violence committed by an unknown offender in a (semi-)private location (Chapter 3). This suggests that an unknown offender (cf. a known offender) who intrudes in a (semi-)private location (cf. a public or semi-public location) might cause a greater invasion of one's privacy.

An interaction effect was also found between the location and whether the offender belongs to the same organization as the victim (Chapter 4). More precisely, it was found that victims report violent incidents to the police less often especially if the incident takes place within their own organization *and* the offender belongs to this organization also. If the same incident, with the same offender, takes place in the public domain, the willingness to report to the police is higher than for similar incidents with offenders who are not part of the same organization. It was argued that this finding suggests that people weigh the perceived probability that the offender

[7.1] In fact, in an additional analysis in this study, which did not allow for an interaction between the location and knowing the offender, no effect at all was found of knowing the offender.

can be caught in a cost-benefit calculation to decide whether or not to report to the police (or to an employee of the organization).

Recapitulating the results of testing the hypotheses discussed in this section, it can be concluded that: *The context in which crimes take place does have an effect on crime victims' reporting behavior after controlling for characteristics of crime incidents and victims*.[7.2] The type of location in which crimes take place was found to influence reporting behavior: reporting percentages were found to be higher for violence taking place in (semi-)private locations than in (semi-)public locations, and lower for violence within organizations (semi-private and semi-public locations) than for violence in the private and public domain. Furthermore, this factor was found to interact with the victim-offender relationship: the likelihood of reporting is especially high if violence takes place in the (semi-)private domain *and* it is committed by an unknown offender, and it is especially low when violence takes place within an organization *and* it is committed by someone who is also part of that organization.

7.1.2 The context in which victims live: neighborhood characteristics

The second main research question concerned the neighborhood in which victims reside: *To what extent do factors constituting the context of the neighborhood in which crime victims live have an effect on their reporting behavior, while controlling for effects of crime incident and victim characteristics?* To answer this question, the Dutch Police Population Monitor (PPM) was used in Chapter 5.

Three factors composing the neighborhood context have been assumed to be important for crime victims' reporting behavior: the level of social cohesion, the level of confidence in police effectiveness, and the extent of the socioeconomic disadvantage at neighborhood level. Drawing mainly on the classic social disorganization model (Shaw & McKay, [1942] 1969), a higher social cohesion at neighborhood level was hypothesized to be positively related to reporting. This hypothesis was supported by the analyses. There was no effect of the confidence in police effectiveness at neighborhood level on reporting, but a stronger socioeconomic disadvantage turned out to be related to a lower probability of reporting. The idea that socioeconomic disadvantage is related to crime victims' reporting behavior is not exactly new (e.g. Rousseau, 1762) and has been tested empirically before. However, existing ideas do not make clear why this factor in itself would affect reporting. It is unlikely that victims from socioeconomic disadvantaged neighborhoods are lacking the money to report a crime, since reporting is free of charge. Findings in this study, however,

[7.2] Note that the effects of this type of context have only been studied for violent crimes.

suggest that (part of) the relationship between the socioeconomic disadvantage and reporting is indirect, with the level of social cohesion acting as an intermediate (which is negatively related to neighborhoods' socioeconomic disadvantage).

Although not all neighborhood-level factors studied in this book were found to influence victims' reporting behavior (i.e. no effect of confidence in the police was found), it can be concluded that: *Factors composing the context of the neighborhood in which crime victims live do have an effect on their reporting behavior after controlling for characteristics of crime incidents and victims.*

7.1.3 The context in which victims live: country characteristics

The third main research question – *To what extent do factors constituting the context of the country in which victims live have an effect on reporting to the police, while controlling for effects of crime incident and victim characteristics?* – was examined using the International Crime Victim Survey (ICVS) in Chapter 6.

The effects of four aspects of this macro-level social context have been tested in this book: the perceived competence of the police, the institutionalization of the insurance business, the norm of conformity, and the level of individualism. Note that these attributes of national context do not exhaust the dimensions of macro-level contextual factors that could affect citizens' reporting behavior.

All four factors were assumed to be positively related to crime victims' reporting behavior. Only the perceived police competence in a country was found to be significantly positively related to the reporting behavior of victims of property crimes (after controlling for factors at the crime and individual level, including victims' own perception of police competence). Other factors turned out to have no significant effect. However, the variance in the reporting variable at country level did decrease significantly after including the four country characteristics in the model for property crimes as well as violent crimes (with 62% and 58%, respectively). This means that the particular aspects of the national context examined in this study account for a substantial amount of the cross-national variation in reporting to the police. Thus, the separate aspects included in this study seem to be of minor importance in predicting reporting behavior of crime victims, but together they explain a significant part of the variation in reporting found at country level.

On one hand most hypotheses posed in this study were not confirmed, on the other hand the specific factors that were studied did turn out to account for a substantial part of the cross-national variation. Therefore, it can be concluded that: *Factors constituting the context of the country in which victims live (seem to) have some effect on their reporting behavior after controlling for characteristics of crime incidents and victims.*

Table 7.1 Schematic overview of the hypotheses and findings

Type of context	Process	Factor	Hypothesized effect on reporting	Supported?
Crime incident	cost-benefit	location (semi-)public (vs. (semi-)private) [3]	+	no
Chapter 3 & 4	cost-benefit	location (semi-)public (vs. (semi-)private) [3]	–	yes
	cost-benefit & normative	location private or public (vs. other locations, i.e., organizations) [3]	+	yes
	cost-benefit	location public (vs. semi-private) [4]	+	yes
	cost-benefit	degree to which offender is known [3, 4]	–	partly (lowest for well-known)
	cost-benefit	offender part of own organization (vs. not part) [4]	–	no
	cost-benefit	offender unknown * location (semi-)private [3]	+	yes
	cost-benefit	location semi-private * offender part of own organization [4]	–	yes
Victims' neighborhood	cost-benefit	social cohesion	+	yes
Chapter 5	cost-benefit	social cohesion	–	no
	normative	socioeconomic disadvantage	–	yes
	cost-benefit & normative	socioeconomic disadvantage	–, but (partly) via social cohesion & confidence in police	yes
	cost-benefit & normative	confidence in police	+	no
Victims' country Chapter 6	cost-benefit & normative	perceived competence police	+	yes for property crimes; no for violent crimes
	cost-benefit & normative	level of individualism	+	no
	normative	institutionalization of insurance	+	no
	normative	conformity norm	+	no

7.1.4 Other empirical findings

Because this book deals with the effects of the contexts in which crimes and victims are embedded on reporting behavior, no specific hypotheses were formulated and tested on the effects of victim and crime characteristics. Variables of this type, however, were included in all regression models to control for their possible effects, while focusing on the effects of contextual factors. Although the effects of these variables have not been the prime focus throughout this book, they are of interest and deserve some attention. Therefore, consistent findings are discussed in this section.

Crime seriousness, whether it is the seriousness as perceived by the victim or a more objective measure based on the financial loss or physical injury resulting from the crime, is probably the most important factor in predicting the reporting behavior of victims. In all regression models presented in this book, financial loss, physical injury and the perceived seriousness are highly significant predictors of reporting. Crimes with multiple offenders and crimes in which the offender carried a weapon are also more likely to be reported than other crimes. These findings are in line with all other studies on reporting behavior of crime victims.

The likelihood of crimes being reported to the police also strongly correlates with the *type of crime*. The studies presented in Chapters 3, 5 and 6 show that, even when controlling for aspects of crime seriousness, the crime type is strongly related to crime victims' reporting behavior. The odds of reporting are highest for car theft. Other property crimes with a high chance to be reported are theft of car contents, robbery involving violence, motorcycle/moped theft and burglary. Car vandalism and other vandalism, pickpocketing and unspecified theft of personal property are property crimes with the lowest chance of being reported. A factor that might be of great importance here, but which could not be tested due to lack of data, is whether the victim is insured for the damage or loss of property resulting from the crime. An indication of the importance of this factor, however, can be found in Table 6.3 (Chapter 6): 'insurance reasons' is the second most important reason victims give for reporting a property crime to the police in 16 western nations. Most car owners (in the Netherlands) are insured for theft of their car or its contents, and the vast majority of people are insured for burglary. Submitting an insurance claim after victimization generally requires filing a police report.

The types of violent crimes used for the analyses described in this book also differ with regard to their chances of being reported to the police. After controlling for aspects of crime seriousness, robberies with violence (a property crime as well) and assaults have a higher chance of being reported than sexual assaults and threats. A factor that might be of importance here (not tested in this book), is whether people define the violence as a crime, and thus as something they could call the police for. In Tables 4.2 and 6.3 it can be seen that 'I solve these situations myself', 'the police

couldn't do anything', and 'the police wouldn't do anything' are often mentioned as reasons for not reporting a violent crime. In victimization surveys, questions such as 'Have you ever (or: in the past … months) been threatened by someone?' are asked. The incidents people recall after being asked a question such as this might not always be incidents that they have defined as a crime.

The effects of victim characteristics are sometimes contradictory and they are certainly less important in predicting reporting behavior than crime characteristics. However, some consistent findings are worth mentioning here.

Generally, victims' *gender* seems to be related to reporting: (Dutch) female victims seem to report to the police somewhat more often than (Dutch) male victims (see Chapters 3 and 5). The Chapter in which the ICVS was used to study country-level factors did not confirm these findings. Males were found to report property crimes more often and no difference between the sexes was found for contact crimes. This gender difference regarding reporting behavior might not be the same in all western countries.

The victim's *age* was found to be positively related to the probability of reporting in all analyses (Chapters 3, 5 and 6). This is in accordance with earlier studies on reporting behavior of crime victims. Juvenile victims especially are found to report to the police less often (Finkelhor & Ormrod, 2001; Garofalo, Siegel, & Laub, 1987), but this relation between age and willingness to report is also found for adult victims (e.g. Avakame, Fyfe, & McCoy, 1999; Conaway & Lohr, 1994).

Finally, the victim's *educational level* was found to be negatively related to the chance of a crime being reported (Chapters 3 and 5). Thus, the more educated the victim, the lower the chance that he or she will report victimization to the police. The cause of this effect is unclear.

7.2 Assessment of Data and Methods

As mentioned in the introduction, in comparison to earlier studies regarding contextual effects on victims' reporting behavior, the research described in this book has several methodological strengths. The hypotheses posed here have been tested: (1) across different social contexts, (2) for violent as well as property crimes, (3) using data from large-scale national as well as international standardized questionnaire surveys (combined with independent data on contextual factors), (4) using multilevel analysis, which has been designed especially for nested data, and (5) using an experimental study as well.

The studies presented in this book used data from three different existing population surveys on victimization (NSCR, PPM and ICVS) and a vignette experiment

to examine to what extent reporting behavior is affected by the context in which crimes take place and in which victims live (the neighborhood and the country), controlled for effects of crime and victim characteristics.

To examine the effects of factors constituting the context in which crimes take place, the NSCR was used. Unlike the PPM and the ICVS, this survey includes detailed information not only on how well the victim knows the offender, but also on the type of location (e.g. on the street, at work, or at home) in which incidents take place. This made the NSCR very suitable for this study.

To study the extent to which the neighborhood context has an effect on reporting net of the effects of the characteristics of crimes and victims, use was made of the PPM. This is a large-scale national population survey (one of the largest in the world) on a subject related to public safety and crime in the Netherlands and it contains detailed information on where victims live. The PPM data were combined with information on neighborhoods (e.g. neighborhood socioeconomic status) from different sources. The PPM is one of the very few data sources that allow for specifying neighborhood-level effects on crime reporting by victims.

The ICVS was used to study to what extent the national social context has an effect on reporting net of the attributes of crimes and victims. The relatively uniform methodology applied across nations makes it the most suitable victimization survey to use for this purpose. Furthermore, it contains detailed information about crimes and victims, includes a large number of countries, and identifies the countries in the sample (and thus permits the affixing of country-level factors to the survey records that can be used in hierarchical modeling to explain country-level effects). Between 1989 and 2000, more than 60 countries participated in the ICVS. Regrettably, for many countries the data could not be used for the present analyses, because the samples in these (non-western) countries were drawn from (one or more) cities only and therefore were not nationally representative. In addition, the data from the 1989 wave had to be excluded, as this first administration of the ICVS did not include all variables needed for the analyses. Consequently, the analyses presented in Chapter 6 only included 16 western countries.

Using data from population surveys on victimization to study reporting behavior of crime victims has many advantages. For example, these data are often readily available to researchers, they contain detailed information on crimes, victims, and their reporting behavior, and in many cases they have been administered on a large scale, allowing the use of advanced quantitative methods of analysis. In the present research, thanks to the survey data, it was possible to use multilevel modeling, which is the most appropriate method of analysis for disentangling the effects of crime, victim and contextual characteristics in data with crimes ‘nested’ in victims

(victims were often victimized multiple times) and victims nested in neighborhoods and countries.

However, using survey data also has its drawbacks. Apart from the sampling problems, problems with (selective) non-response, memory bias and measurement problems (e.g. Biderman & Lynch,1981; Cantor & Lynch, 2000; Schneider, 1981; Stoop, 2005) that were also discussed in Chapter 1, problems regarding inference have been the object of debate since the emergence of surveys. If researchers attempt to test propositions derived from causal theories using data from a survey performed at a single point in time (like the surveys used in this book) rather than a panel design, the designation of certain variables as independent or dependent may be arbitrary and the direction of causality may be impossible to ascertain.

Therefore, in this book, use was made of an experimental vignette study also. In this factorial survey design, subjects were randomly assigned to one out of ten experimental conditions (the vignette). Consequently, differences in reporting behavior between vignettes can be assumed to be caused by differences between the experimental conditions and not by crime or victim characteristics not accounted for (as could happen when testing hypotheses with survey data). A limitation of such a vignette study is that it does not register real victim behavior. Instead, subjects have to place themselves in a hypothetical situation and think about what they would do in such a situation. It is assumed that intentions are indications of the effort people are willing to make to carry out certain behavior (Fishbein & Ajzen, 1975).

In conclusion, both victimization surveys and vignette studies have their strengths and limitations – as does every research method. Using more than one research method to study one phenomenon is a form of methodological triangulation (e.g. Denzin, 1984; Patton; 1990), which has the principal goal of minimizing bias and enhancing validity.[7.3]

7.3 Conclusions

7.3.1 General research question

This study was geared to explaining differences in reporting behavior by focusing on the effects of factors constituting the contexts in which crime incidents and victims are embedded, while controlling for the effects of crime incident and victim characteristics. Given the findings summarized in Section 7.1, what is the answer to the general research question *(to what extent can crime victims' reporting behavior be*

[7.3] The present study did not use a true multi-method approach, as this would have required multiple research methods.

explained by the contexts in which crimes and victims are nested, while controlling for the effects of crime incident and victim characteristics)?

Victims' reporting behavior was found to be influenced by various factors composing the three contexts that have been studied in this book, in addition to the influence of crime incident and victim characteristics. To be more precise, factors constituting the context in which crime incidents take place, as well as factors composing the neighborhood context and – to a lesser extent – the country context in which victims reside, were found to play a role in victims' decision (not) to report. Even though several of the effects found were relatively moderate when compared to the effects of factors related to the seriousness of crimes, contextual factors were proven to be important to further the understanding of reporting behavior by crime victims. Hence, it can be concluded that *social contexts in which crimes and victims are nested are relevant for explaining the reporting behavior of crime victims*.

7.3.2 Socio-ecological model

The assumption made in the socio-ecological model that various factors at different aggregation levels simultaneously play a role in crime victims' decision (not) to report to the police is confirmed by the empirical studies presented in this book. Evidence shows that the level of the crime incident, the victim, the context in which crimes take place, and the meso- and macro-level context in which victims reside, are all important.

The socio-ecological model also proposes that the decision-making is the result of a cost-benefit calculation, a normative decision, or a combination of both. The specific factors for which hypotheses have been tested in the empirical studies described in this book were all assumed to trigger one or both of these processes (see Table 7.1). The different empirical analyses presented in this thesis suggest that the *cost-benefit process* is a strong determinant of victims' decision-making. As in virtually all studies on crime reporting, factors related to the objective and perceived crime seriousness were found to be strongly related to reporting behavior. However, not only the seriousness of the crime incident was found to be of importance, as is often concluded in studies using the economic model of reporting. The type of location in which the crime takes place and the interaction of this factor with the degree to which the offender is known – of which hypothesized effects have been assumed to be caused by a cost-benefit process – also were found to predict reporting behavior. The same is true for the social cohesion at neighborhood level.

The *normative process* also seems to be important, but less so than the cost-benefit process. Effects of the normative process have been tested predominantly for the context in which victims are embedded. Of the three factors that were

mainly thought to influence reporting by a normative process (the socioeconomic disadvantage in a neighborhood, and the institutionalization of insurance and conformity norm in a country) only the neighborhood socioeconomic disadvantage was found significant for reporting. However, it has to be noted that most country-level factors studied were not significant anyway and that other variables that play a role in normative processes might be of greater importance. The specific factors studied in this thesis that were assumed to play a role within the two processes (and at certain contextual levels) are just some of the possible factors that could play a role. Therefore, some caution should be taken when drawing conclusions about the relevance of the different processes for reporting. It might be that other factors are more relevant than the factors that were studied in this thesis. That would give the respective process(es) and level(s) of aggregation a different complexion. Additional research is needed to come up with more definite answers regarding the importance of both processes in crime victims' decision-making.

In conclusion, the economic model, the psychological model and the sociological model (discussed in Section 1.3) are too limited to sufficiently explain the reporting behavior of crime victims. Each of these models explains reporting behavior at a single level of aggregation and focuses on a specific type of process. The socio-ecological model integrates the three original models in a single framework of reporting, thereby increasing the understanding of victims' decision (not) to report. Thus, the socio-ecological model has proven to be a useful model for the explanation of victims' reporting behavior. This is in concordance with the findings of Ménard (2003), who was the first to explicitly use a similar framework to explain reporting behavior and who concluded that victims' decisions are not made in a vacuum, but are part of a dynamic interaction with the social environment.

7.3.3 Future Research

Further tests of the socio-ecological model

The socio-ecological model used in this book has proven fruitful for studying the effect of social contexts in which crimes take place and in which victims live on individuals' reporting behavior. Therefore, this model could very well be used in future studies as well.

The present research has highlighted the value of examining contextual effects on reporting behavior, but many questions remain largely unexplored. As mentioned in Section 1.5, there are, most likely, other relevant factors that should be included in future extensions of the socio-ecological model. The different cells in Table 1.1 should be filled, then, with additional factors that were not studied in this thesis – and with empirical outcomes. In doing so, the table would gradually be completed.

One path to explore in a future study is the role of the victims' social network (a meso-level context). The present study did not give attention to the influence of talking to or consulting others after victimization on victims' reporting behavior. Consulting others could influence the outcome of cost-benefit processes as well as normative processes. For example, if victims talk with others about what happened to them, these others could react by saying that they think the crime is very serious. This could, in turn, increase the victim's perception of the seriousness. Consulting others would then influence the cost-benefit process. They could also tell the victim that crimes like that need to be reported to the police. It would then influence the normative process: the victim would be reminded of normative standards on how to react to crime victimization. One way in which one could study the effects of attitudes and advice from others is through experimental research. Greenberg and Ruback (1992) previously performed a series of experiments in which participants thought they were participating in a study on work efficiency, but in reality their willingness to call the police was measured after they discovered that they had been victimized.[7.4] One of the factors they manipulated in this study was the type of bystander advice (pro-reporting, against reporting or no advice). Differences in the type of advice turned out to have a significant influence on victims' decision to report. Additional research of this kind could increase our understanding of reporting behavior.

Another path that needs to be explored further is the influence of policymaking and police behavior at community or country level. In the present thesis, the effects of how residents perceive the police were examined at neighborhood and country level, but it would be interesting to test whether or not more objective measures of policies and of police functioning influence the reporting behavior of crime victims. For example, it could be hypothesized that if a police region, or a country, does well in solving crimes compared to other regions or countries, this would increase the probability that victims who live in that region or country would report a crime to the police. In addition, the role of the victim in the criminal justice process has changed a lot over the past decades in the Netherlands as well as in many other countries. In the Netherlands, the implementation of the so-called *Terwee Act* (1 April 1995) has strengthened the legal role of crime victims. Nowadays, crime victims are

[7.4] Participants were placed in a room with two confederates. All three had to do a clerical task. The results would be compared with the 'norms' of their age groups. If they did well they would earn money, but if they did poorly they would have to pay money (which they had earned earlier in the study). During the performance of the task, one of the confederates 'stole' part of the participants' completed work. As a result of this theft, participants had to turn over most of the money they had earned earlier to the thief. After the thief had left, but with the other confederate (the 'bystander') still there, participants were given information that helped them discover their victimization.

recognized as independent actors within the criminal procedure. Moreover, a crime victim can turn to a victim support agency at any point for emotional and practical guidance and to a legal aid centre for legal support. Although these improvements in the procedural and material position of crime victims do not seem to have had a major impact on crime victims' reporting behavior at first glance (see Figure 2.1), these developments do deserve attention in research on crime victims' reporting behavior. It would be useful, for example, to include the position of the victim in the criminal justice process as a predictor of victims' reporting behavior in a cross-national study.

A third suggestion is to test for interactions between effects at different levels of aggregation (cross-level interactions). Ménard (2003), for example, tested the hypothesis that the county type (rural versus urban) acts as an intermediate in the effect of the victim-offender relationship on rape victims' decision to contact the police. Her reasoning behind this was that rural areas are characterized by a greater concern for privacy (especially relating to personal problems), greater mistrust of the government, greater physical isolation, and greater use of informal social control, and that these characteristics in turn would affect the labeling, determination of seriousness, and decision to contact the police for crimes committed by known offenders but not for crimes committed by strangers. In urban areas, the victim-offender relationship was still expected to be important, but less so than in rural areas (pp. 61-62). Ménard did indeed find the hypothesized interaction between county type and victim-offender relationship. In the present study, no cross-level interactions were examined, but doing so could further the understanding of the mechanisms underlying different factors of the socio-ecological model.

Methodological issues

Apart from testing the effects of additional factors on the reporting behavior of crime victims to complete the schematic overview of the socio-ecological model given in Table 1.1, some suggestions can be made with regard to methodological issues.

One of the choices made in this book was to test the effects of different contextual factors for different types of crime in one model.[7.5] In all chapters that describe the modeling of survey data, the type of crime was included as a control variable, and in Chapters 3 and 6 even separate models were used for violent and property crimes, but still it was hard to disentangle possible different effects for different crime types. For example, it might be the case that different contextual

[7.5] Except for the vignette study (Chapter 4), in which only effects on one type of crime (assault) were studied.

effects play a role for sexual and non-sexual violence. The reason that it was decided to combine the different types of crimes is that this resulted in larger data sets and therefore would give more stable results. Furthermore, the aim of this book was to test contextual effects on victims' reporting behavior in general and not for specific types of crime only. Still, distinguishing between types of crimes in future studies could further the understanding of the effects of social contexts on crime victims' reporting behavior.

A second suggestion for future research related to methodological issues is to use longitudinal instead of cross-sectional data. Using longitudinal data would not only increase the reliability regarding the causality of effects, but would also make it possible to examine factors that cannot be examined with cross-sectional data. For example, it would be interesting to study whether previous victimization and (the quality of) previous contacts with the police influence later reporting behavior. As far as is known, Conaway and Lohr (1994) are the only researchers to have examined such a relationship. Using data from the American National Crime Victimization Survey (NCVS), they found that victims are more likely to report a violent crime to the police if the previous victimization in their household had been reported to the police, and if the police had done routine follow-up activity or if police activity on the previous victimization had resulted in an arrest or in recovery of property. It would be interesting to see whether these effects can be generalized and apply to other countries as well. Unfortunately, however, most survey data are cross-sectional and can therefore not be used to test similar hypotheses.

Almost all studies on reporting behavior make use of survey data (for an exception, see Greenberg & Ruback, 1992). One of the problems with these types of data is that they are retrospective self-reports and may therefore be biased due to recall problems and socially desirable answering (see Section 1.6.1 for more limitations of victimization surveys). Observational research does not have these problems, but as crime victimization (luckily) is not a high prevalence event, carrying out this type of research does not seem to be an option. Therefore, a third methodological suggestion for future research is to carry out experimental studies (like the vignette study described in this book) to further test the socio-ecological model of reporting. Experiments, like the ones carried out by Greenberg and Ruback (1992), are more expensive, time-consuming and are ethically complicated, but they have the great advantage over vignette experiments in that they do not depend on self-reports and they study real behavior. Using other research methods in addition to survey research (methodological triangulation) is a good thing in itself, because it reduces the likelihood of method bias and therefore allows for greater confidence in the results.

On a final note, the results of this study have implications for crime research that uses data based on crimes reported to the police. This type of research generally assumes implicitly that crime reporting (and crime recording) is uncorrelated with community characteristics, including socioeconomic disadvantage and social cohesion. In other words, it is assumed that police registrations of the nature and extent of crime in a certain neighborhood are not affected by neighborhood characteristics. However, the present research suggests that this assumption might not be valid. More specifically, the study on neighborhood effects (Chapter 5) shows that the probability that a victim will report the incident to the police is lower if he or she lives in a neighborhood with weak social cohesion and strong socioeconomic disadvantage – even after controlling for effects of crime and victim characteristics. This implies that in these neighborhoods, the number of hidden crimes is higher than in less socially disorganized neighborhoods. At the same time, it is known that neighborhoods with high levels of social disorganization also experience relatively high crime prevalence (e.g. Van Wilsem, 2003). This means that the influence of socioeconomic disadvantage on crime prevalence is presumably underestimated in research using police registration data. Therefore, studies on the spatial distribution of crime especially should use additional data sources, e.g. data from population surveys on victimization.

7.4 References

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SAMENVATTING (SUMMARY IN DUTCH)

Het bestrijden van criminaliteit is een van de hoofdtaken van de overheid. Om dit mogelijk te maken, is het noodzakelijk dat gepleegde delicten bekend zijn bij het justitiële systeem. Aangezien aangiftes door slachtoffers verreweg de belangrijkste informatiebron zijn voor de politie over het vóórkomen en de spreiding van criminaliteit, is het cruciaal dat slachtoffers melding maken van de delicten die hen zijn overkomen. Echter, veel slachtofferschap wordt niet bij de politie gemeld en mede hierdoor komen daders vaak ongestraft weg.

De kans dat slachtoffers delicten melden bij de politie varieert over typen delicten en over slachtoffers, maar ook over soorten delictlocaties en geografische gebieden. Met name over de oorzaken van deze variatie over delictlocaties en geografische gebieden is nog bijzonder weinig bekend. In dit proefschrift wordt ernaar gestreefd hier meer zicht op te krijgen door de volgende vraag centraal te stellen: In hoeverre kan de kans dat slachtoffers delicten bij de politie melden worden verklaard uit contextuele verschillen tussen delictlocaties en geografische gebieden waarin slachtoffers wonen, wanneer rekening wordt gehouden met effecten van delict- en slachtofferkenmerken?

Hoewel wetenschappers zich al lang geleden voor het eerst hebben gebogen over de vraag wanneer slachtoffers delicten wel of juist niet bij de politie melden, dateren de eerste empirische studies naar determinanten van aangiftegedrag uit de jaren zeventig, toen bevolkingsonderzoeken naar slachtofferschap in zwang raakten.

In empirisch onderzoek naar aangiftegedrag van slachtoffers kunnen grofweg drie verklaringsmodellen worden onderscheiden – elk gericht op een verschillend mechanisme: het economisch, het psychologisch en het sociologisch model. Het economisch model is verreweg het meest gebruikt in empirisch onderzoek. Het is een eenvoudig model waarin wordt verondersteld dat het besluit wel of geen aangifte te doen de resultante is van een (al dan niet bewuste) kosten-baten afweging die het slachtoffer maakt om te bepalen of aangifte doen de moeite waard is. Als de verwachte kosten van het doen van aangifte hoger zijn dan de verwachte opbrengsten, zal het slachtoffer geen aangifte doen bij de politie en vice versa. Volgens dit verklaringsmodel zullen delicten die weinig of geen financiële schade of fysiek letsel tot gevolg hebben niet vaak gemeld worden bij de politie. Aan het doen van aangifte is namelijk altijd een minimale hoeveelheid kosten verbonden (het kost tijd), terwijl de verwachte baten in een dergelijk geval laag zijn: het lijkt onwaarschijnlijk dat de politie de zaak serieus neemt, laat staan dat ze moeite zal doen een oplossing te

vinden. De (door het slachtoffer gepercipieerde) ernst van het delict speelt volgens dit model dus een grote rol bij de beslissing van het slachtoffer om al dan niet aangifte te doen: men doet pas aangifte bij een zekere mate van ernst. Uit empirisch onderzoek blijkt dat de ernst van het delict inderdaad veel invloed heeft op de kans dat slachtoffers aangifte doen, maar dit model geeft geen bevredigende verklaring voor verschillen in aangifte over typen delictlocaties en geografische gebieden.

Daarvoor zijn het psychologisch en sociologisch model meer geëigend. Volgens het psychologisch model maken slachtoffers wel een kosten-baten afweging, maar zijn ze soms te geëmotioneerd of te angstig om een rationeel besluit te kunnen nemen. Analoog aan het economisch model, wordt volgens dit verklaringsmodel verwacht dat ernstige delicten vaker bij de politie worden gemeld dan minder ernstige delicten. Dit effect wordt echter indirect verondersteld: de mate van ernst beïnvloedt de affectieve reactie (angst, stress), wat op haar beurt de besluitvorming beïnvloedt. De houding tegenover de politie van het slachtoffer zelf en eventuele eerdere ervaringen met het doen van aangifte zijn volgens dit model ook van belang. Bovendien wordt invloed verondersteld van de directe sociale omgeving van het slachtoffer op de kans op aangifte. Als naasten bijvoorbeeld kunnen helpen bij een private oplossing, zal de kans dat het slachtoffer naar de politie stapt afnemen. Of als in de sociale omgeving van het slachtoffer de norm heerst dat men altijd aangifte behoort te doen van criminaliteit, zal het slachtoffer juist eerder aangifte doen. Het psychologisch model veronderstelt dus niet alleen invloed van delictkenmerken maar ook van slachtofferkenmerken en van de directe sociale omgeving van slachtoffers op de kans dat men aangifte doet.

Het derde model dat men tegenkomt in onderzoek naar aangiftegedrag – en dat een verklaring geeft voor verschillen in aangifte tussen typen locaties en geografische gebieden – is een (macro-)sociologisch model. Dit model gaat ervan uit dat de kans dat misdrijven aangegeven worden een functie is van sociale structuren in de maatschappij waarin slachtoffers en daders leven. Zo wordt bijvoorbeeld verondersteld dat de mate van stratificatie (ongelijke welvaartsverdeling) en de mate van informele sociale controle in een samenleving samenhangen met de mate waarin aangifte wordt gedaan. Dit model verschilt sterk van de andere twee modellen aangezien het zich niet richt op individuele besluitvorming, maar op de invloed van contextuele variabelen op de mate waarin aangifte wordt gedaan. Het is een verklaring op macroniveau en geeft niet of nauwelijks aandacht aan directe of interveniërende effecten van unieke kenmerken van het ondervonden delict of het slachtoffer.

Tot op heden is in de meeste empirische studies naar aangiftegedrag uitgegaan van het economisch model en – in mindere mate – van het psychologisch en sociologisch model. Daarbij richten deze studies zich doorgaans slechts op één

aggregatieniveau (delict-, slachtoffer- of contextueel niveau). Verscheidene sociaal wetenschappers hebben echter benadrukt dat het van belang is om invloeden op meerdere niveaus tegelijk te bestuderen om het inzicht in menselijk gedrag te vergroten. Verondersteld wordt dat beslissingen niet in een vacuüm worden genomen, maar dat ze het gevolg zijn van een dynamische interactie met de sociale omgeving waarin besluitvormers zich bevinden. Terwijl deze oriëntatie op het ontwikkelen van transdisciplinaire, multilevel modellen van besluitvorming geaccepteerd is in de meeste sociale wetenschappen en ook in de criminologie, komt men het nauwelijks tegen in onderzoek naar aangiftegedrag.

In dit proefschrift wordt beargumenteerd dat het in onderzoek naar aangiftegedrag, en meer specifiek naar contextuele verschillen in aangiftegedrag, niet voldoende is de aandacht enkel te richten op micro-, meso- of macrovariabelen, maar dat de effecten van factoren op de verschillende aggregatieniveaus gelijktijdig bestudeerd moeten worden. Een nieuw socio-ecologisch model wordt geïntroduceerd, dat een integratie is van de drie hierboven besproken modellen. Dit socio-ecologisch model veronderstelt dat de kans dat slachtoffers van een delict aangifte doen bij de politie wordt beïnvloed door verscheidene factoren die op verschillende 'niveaus' opereren. Deze (aggregatie)niveaus zijn het delictniveau, het slachtofferniveau, de context waarbinnen delicten plaatsvinden (bijvoorbeeld binnen een organisatie of in het private domein) en de meso- en macroniveaucontext waarin slachtoffers zijn ingebed (bijvoorbeeld het sociale netwerk van slachtoffers en de buurt of het land waarin men woont).

Daarnaast wordt in het socio-ecologisch model verondersteld dat slachtoffers zowel een kosten-baten als een normatieve afweging maken wanneer ze besluiten al dan niet aangifte te doen, en dat de factoren die op de verschillende niveaus van belang zijn voor de besluitvorming beide processen kunnen beïnvloeden. Het idee dat slachtoffers een kosten-baten afweging maken wanneer ze besluiten of ze aangifte zullen doen staat centraal in het eerder besproken economisch model en ook in het psychologisch model wordt verondersteld dat slachtoffers een dergelijke afweging maken. Het socio-ecologisch model gaat hier echter een stap verder dan voorgaande modellen, omdat verondersteld wordt dat de kosten-baten afweging niet alleen wordt beïnvloed door kenmerken van het delict, maar ook door contextuele factoren. Een voorbeeld van een dergelijke factor is de mate van informele sociale controle in een buurt. In buurten met een lage informele sociale controle (bijvoorbeeld in stadscentra) zijn bewoners meer afhankelijk van formele politie controle om de orde te handhaven en criminaliteit te bestrijden dan in buurten met een hoge informele sociale controle. Slachtoffers die in een buurt wonen waar de informele sociale controle hoog is kunnen dus lagere baten verwachten van het doen van aangifte bij de politie. Normatieve afwegingen worden niet direct gestuurd door de verwachte

kosten en baten, maar door normen die, bijvoorbeeld, in de sociale omgeving van het slachtoffer bestaan. Het kan bijvoorbeeld een norm zijn in de directe sociale omgeving van het slachtoffer dat bepaalde delicten niet bij de politie gemeld behoren te worden, maar dat men informeel naar een oplossing zoekt. Dergelijke normen kunnen ook op hogere aggregatieniveaus (bijvoorbeeld tussen landen) verschillen en invloed hebben op de besluitvorming van het slachtoffer.

Het socio-ecologisch model wordt in de verschillende empirische studies in dit boek getoetst. De centrale onderzoeksvraag daarbij luidt: *In welke mate kan het aangiftegedrag van slachtoffers worden verklaard uit de context waarin delicten en slachtoffers zijn ingebed, wanneer wordt gecontroleerd voor effecten van kenmerken van delicten en slachtoffers*? Voor het beantwoorden van deze vraag worden verscheidene hypothesen over de invloed van contextuele factoren afgeleid van het socio-ecologisch model en getoetst. Daarbij zijn de effecten van kenmerken op drie contextuele niveaus onderzocht die in de literatuur van speciaal belang worden geacht: de locatie waarop delicten plaatsvinden en de buurt en het land waarin slachtoffers wonen.

De invloed van de delictlocatie op het aangiftegedrag van slachtoffers van geweldsdelicten is in twee empirische studies onderzocht. In hoofdstuk 3 is gebruik gemaakt van de Nederlandse Survey Criminaliteit en Rechtshandhaving 1996 en in hoofdstuk 4 is een vignettenexperiment uitgevoerd onder middelbare scholieren. Uit beide studies blijkt dat kenmerken van de locatie (naast kenmerken van het delict en het slachtoffer) belangrijke voorspellers zijn voor de kans op aangifte van geweldsdelicten. Meer specifiek is de kans op aangifte lager bij geweldpleging in (semi-)publieke dan in (semi-)private locaties en tevens lager bij geweldpleging binnen organisaties dan in strikt publieke of private locaties. Bovendien is er een interactie met daderbekendheid: de kans op aangifte is extra hoog wanneer het geweld plaatsvindt in een (semi-)private locatie én de dader een onbekende is. Een mogelijke varklaring voor dit effect is dat een onbekende dader die binnendringt in een private omgeving (vgl. publieke omgeving) sterkere gevoelens van aangedaan onrecht en kwetsbaarheid veroorzaakt dan een bekende dader. Daarnaast is de kans op aangifte extra laag wanneer het geweld plaatsvindt binnen de organisatie waartoe het slachtoffer behoort (bijvoorbeeld school of werk) én de dader is iemand die ook tot deze organisatie behoort. Men kiest er in dergelijke gevallen vaker voor het gebeurde te melden bij een medewerker van de organisatie; de meerwaarde van aangifte doen is dan lager.

In hoofdstuk 5 zijn effecten op aangiftegedrag onderzocht van drie kenmerken op het niveau van de buurt waarin men woont met behulp van de Nederlandse Politiemonitor Bevolking 1995-2001. Deze drie buurtkenmerken zijn de mate van sociale cohesie, het vertrouwen in de effectiviteit van de politie en de mate van

sociaal-economische achterstand. Verondersteld werd onder meer dat – na controle voor effecten van delict- en slachtofferkenmerken – een sterkere sociale cohesie in de buurt samengaat met een grotere kans op aangifte. Deze hypothese is bevestigd. Bovendien is gevonden dat de kans op aangifte lager is in buurten met een grotere sociaal-economische achterstand. Er is geen effect gevonden van het vertrouwen in de politie-effectiviteit in de buurt op het aangiftegedrag van slachtoffers.

In hoofdstuk 6 is de invloed van kenmerken van het land waarin men woont op aangiftegedrag bestudeerd. Hiertoe is gebruik gemaakt van de *International Crime Victims Survey* 1992-2000. De effecten van vier factoren op landniveau zijn onderzocht: de gepercipieerde competentie van de politie, de institutionalisering van het verzekeringswezen, de norm tot conformiteit en de mate van individualisme. Ook hier is gecontroleerd voor effecten van delict- en slachtofferkenmerken. Alle vier factoren werden verondersteld positief samen te hangen met de kans op aangifte. Er is echter slechts gedeeltelijk bevestiging gevonden voor de geformuleerde hypothesen: alleen de gepercipieerde competentie van de politie blijkt samen te hangen met de kans dat vermogensdelicten aangegeven worden.

Samenvattend kan gesteld worden dat de assumptie van het socio-ecologisch model dat factoren op verschillende aggregatieniveaus invloed uitoefenen op het besluit van slachtoffers om al dan niet aangifte te doen wordt bevestigd door de empirische studies in dit proefschrift. Het integreren van de drie originele modellen (economisch, psychologisch en sociologisch) in één socio-ecologisch model lijkt dus een vruchtbare stap op weg naar het vergroten van het inzicht in aangiftegedrag. De onderzoeksresultaten laten zien dat de kans dat slachtoffers de hen overkomen delicten bij de politie melden door verscheidene factoren wordt beïnvloedt op zowel het niveau van het delict en het slachtoffer, alsook op het niveau van de context waarin het delict plaatsvindt en de context waarin slachtoffers zijn ingebed. Ook al blijkt de invloed van een aantal van de onderzochte factoren op de kans dat slachtoffers van criminaliteit aangifte doen relatief bescheiden wanneer het wordt vergeleken met de invloed van de (door het slachtoffer gepercipieerde) ernst van het delict, is het, voor een beter begrip van het aangiftegedrag van slachtoffers, noodzakelijk om rekening te houden met contextuele factoren.

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CURRICULUM VITAE

Heike Goudriaan was born on February 8, 1977 in Assen (the Netherlands). After completing her secondary education in 1995, she lived and worked in London (UK) for a year. Between 1996 and 2001, she studied Social Psychology and Research Methodology at the University of Groningen. In 2000 and 2001, she also worked at the *Methodologiewinkel* (Methodology service desk) of the Faculty of Psychology, Education and Sociological Sciences at this university. In 2001, as a PhD candidate at the Netherlands Institute for the Study of Crime and Law Enforcement (NSCR) in Leiden, she began a quantitative study regarding contextual effects on crime victims' reporting behavior, which has resulted in this dissertation. Since September 2005, she has been employed as an Assistant Professor by the Department of Criminal Law and Criminology at Leiden University.