How to Improve the Productivity of Crime Statistics

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Abstract. *Problem*. Police statistics are the most comprehensive continuous database on crime in most industrialized countries. They also form an important source for quantitative criminological research. They are produced primarily for administrative use and their definitions are closely connected with national legal systems. Because of this, they comprise only a selected and biased part of crime and their comparability across jurisdictions is usually poor. This also applies to their comparability with other information sources of crime, including victimization surveys.

Aim. In this article, we demonstrate that by including a few basic descriptive variables (referring to the main characteristics of each criminal case) in the existing police data collecting systems, we can hugely improve their information value and their comparability.

Method. We have used empirical data from Finland as an example. We have coded a randomized data sample of the assault offences reported to the police in 2005 by using two descriptive variables, proposed by the Expert Group on Violence, appointed by the Finnish National Council for Crime Prevention. After that, we have compared the results with those of the 2006 National Victimization Survey that referred to the same period and used similar descriptive variables.

Results. Even using just the few additional variables, the comparison of the two data sources gave amply new information of the measured characteristics, and in the process of both data sources. Some of the results were expected; for example, the comparison showed that violence recorded in police statistics was in terms of the injuries for men and women on average clearly more serious than the violence captured by the victimization survey. Similarly, partner violence by men had clearly been recorded in the police data more completely than partner violence by women. Some were, however, unexpected: according to our findings, for example, partner violence in private locations had the highest recording rate of the types of violence against women.

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Conclusions. We are proposing that national statistics authorities adopt a simple improvement that increases the usefulness of their police crime data. The only requirements are that the database is electronic and that it records crime as individual events. The improvement is done by adding a small number or descriptive variables to the already existing variables. The descriptive variables should be about the parties involved in the offence, their relationship, and some concrete circumstances of the crime. This proposal does not require a complex reorganization of the existing information systems of police forces. The reform would only mean that a few new standard variables are introduced. Most of the required information is already known to the police, it is just not coded by using standard codes.

This reform would greatly improve the usefulness of the police crime data for purposes of crime analysis. It would also allow much better interpretations of crime trends and of regional crime differences. A further advantage of this reform would be that police-recorded crime and victimization survey data become directly comparable if they contain identical variables that describe the crime events. Our approach is not restricted by criminal codes, since we are not suggesting any changes to the recording principles currently applied. We are only suggesting additional variables. We emphasize that our proposal is much simpler and much more easily introduced than the one being currently recommended by the United Nations (International Classification of Crime 2015).

Keywords. Crime statistics, variables, classification, victimization surveys, comparability.

1. INTRODUCTION

This paper discusses improvements to Finnish police crime statistics and the Finnish national crime victimization survey with regard to statistical descriptions of crimes of violence. The starting point is the proposal of the 2012-2014 Expert Group on Violence, appointed by the Finnish National Crime Prevention Council. Our empirical analysis is restricted to crimes of violence; however, the approach is equally applicable to any other crime category.

Eventually, for the improved statistical data to be useful, two requirements must be met: (1) there needs to be a sufficient pool of capable users, and (2) the data need to be widely accessible. The better quality, more detailed, and more up-to-date statistical data would be valuable for authorities, but also for any other regular users of the data, such as criminologists or the security branch. The database on which the statistics rests could also allow useful commercial applications – a new financing opportunity for those producing the statistical data, such as police, statistical institutes, universities and other research institutes as well as the organizers of national and international crime victimization surveys.

Our primary interest of knowledge is however not of a financial nature. Our main point is that the suggested improvements in the information contents of the crime data would be a profitable and valuable enterprise to the common good. This statistical information is in any case being systematically collected online and regards all cases reported to the police. With little effort, the quality of the data could be significantly improved through a small and low-cost innovation: only a few new descriptive variables need to be introduced into the system. The only system requirement is that the recording of crimes is event-based – and this is already the case in the Finnish as well as many other national crime data systems, in which each crime event, comprised in a crime report, is counted separately. Improvements of crime statistics are also required – apart from the national interests of knowledge – by the ratification of the Istanbul Convention and the increasingly detailed recommendations by the United Nations (see International Classification of Crime 2015) and other international and European cooperation bodies (see, e.g., Ruuskanen & Aromaa 2008).

This article recommends that some simple additions should be made to the data that are comprised in the database of the statistics on police-recorded crime. This improvement would contribute significantly to efforts for improved cross-national as well as national, regional and temporal comparability of police crime data. This is because it would help to liberate police crime data from the constraints of national criminal codes; police crime data are applying criminal codes as their starting point, and this causes a fundamental comparability dilemma: criminal codes are not identical across jurisdictions. Descriptive crime variables are not dependent on criminal codes. Therefore, they allow comparisons that are independent of legal systems. Our proposal does not require national legal systems or criminal codes to be altered or harmonized, and it is much simpler than other currently proposed improvements to (police) crime data recording.

In the second part of the article, we discuss how the innovation would help to make police statistics directly comparable with crime victimization surveys. Here again, as surveys are bound to apply common-sense crime event descriptions, it should be obvious that it would make sense if such event descriptions could be identical to those introduced as new descriptive variables into the police crime data information system.

2. CRIMES RECORDED BY THE POLICE

Police statistics, or the summary report on crimes reported to/ by the police, are the most comprehensive continuous databases on crime in Finland as well as in many other countries. In Finland, this information source has over time not been subject to significant reforms: it has remained, broadly speaking, intact since its introduction in 1927 (Vuorela 2014). The public interest of knowledge concerning this information source thus can hardly be seen as having been very strong.

Police statistics are essentially working statistics: the data are collected as a side product of the everyday work of the police. Thus, their primary use is administrative, and has traditionally been restricted to periodical summary reporting. Such summary reports allow crude assessments of the workload caused by crime and its regional and temporal variations, but not much more (European Sourcebook 2014, 15-29; von Hofer et al. 2012, 19-26).

Apart from its primary administrative use, police-recorded crime is also quite often used for the purpose of describing the social phenomenon called crime, despite the obvious shortcomings of this information source. Police statistics comprise only a significantly selected and much biased part of all events that correspond to the behaviors defined as crimes in any national Criminal Code. First of all, only a minor proportion of all relevant events come to the attention of the police. And furthermore, crimes that come to the attention of the police may be recorded incompletely or erroneously, or they may remain unrecorded (European Sourcebook 2014, 15-29; von Hofer et al. 2012, 19-26).

Despite these known problems, police statistics are often used by administrative professionals, research experts and the media for the purpose of describing crime and for understanding crime trends and changes in crime. It is true that police statistics are a valuable source for assessments of national and regional crime volumes and trends. This is, however, only true if it is plausible to assume that the selection of the recorded cases out of all possible cases has remained relatively constant over time and across regions. Overall, this, as any other data source, is the better applicable for the purposes of description and trend assessment, the more we know about its sources of error (European Sourcebook 2014, 15-29; von Hofer et al. 2012, 19-26).

2.1. Improving the Usefulness of Police Statistics

In terms of their interpretation, the usefulness of police statistics can be easily improved if a rather simple innovation is introduced. This is done by adding some concrete descriptive variables about the perpetrator, the victim (or the target), and the circumstances, and a few other characteristics of the offence where feasible.

The usefulness of police statistics (in terms of understanding what they mean) is currently hampered by three fundamental shortcomings.

First of all, the standard data recorded about crimes known to the police are mainly facts relevant for the crime investigation – the relevant criminal code category, personal data on the suspect, personal data of who reported the crime and who was involved as victim, complainant or witness, the time of the offence, the address of the crime scene, administrative information on who received the crime report and when this happened, and who the investigation of the case is assigned to. Information concerning the parties involved, their mutual relationship, the circumstances and target of the offence are not covered well or only sporadically, if at all. Even when they are recorded, this is usually done in a written verbal case description that is not coded as a standard variable.

Secondly, the database from which the statistics are derived is not readily available for users who are not part of the police administration. It is often even protected against free usage by insiders. Information related to victims and individual persons are not public, and information on ongoing crime investigations is also confidential. Both of these restrictions mean that there is a high threshold against the availability of these data to outsiders and even for inside analysis. Furthermore, non-standardized information on the offences are recorded in the form of non-standard verbal case descriptions. If such information is to be used for statistical analysis, this can only be done through a labor-intensive, manual or semi-manual data collection from the files. Therefore, relevant data are, as a rule, not readily available even for police staff and their crime analysts.

A third shortcoming in many countries including Finland is that police are often not investing sufficiently in crime analysis and competence in this field. This can be partly understood to emerge from the fact that their statistical databases currently comprise a very unsatisfactory array of detailed characteris-

tics of the offences, their parties and their circumstances that could be valuable for purposes of crime analysis. If the data could be made more concrete and if it would be easier to use, then its multi-purpose exploitation would also be more likely and more productive.

If the information contents of the police statistics database are improved, the most fundamental shortcoming concerning comparability over time and across jurisdictions would be eliminated. The new information contents should concern characteristics that are relevant for understanding and interpreting the statistics, both keeping in mind the overall understanding of the phenomenon and interests of crime prevention. This is not difficult: information on basic features of the offences is already abundantly available to the police officer receiving the crime report, and this information is expanded during the crime investigation. Thus, much of the required new information in fact already exists, and it is also often recorded into the crime information system. However, as already emphasized, this information is not recorded under systematic codes, but is instead written down as free text describing the offence. Therefore, if there was a need to use the current information for analytical purposes, expensive and labor-intensive manual work on the basic data would need to be done; this is quite unlikely, since the resources for such extra work are not readily available. In conclusion: the necessary information is in practice already in the police crime information system, and it only needs to be transformed into a more readily analyzable form, one of standard statistical variables.

2.2. The Data

In this report, we have demonstrated the value of the standard new variables proposed by the Expert Group on Violence, appointed by the Finnish National Council for Crime Prevention. We have done this as follows: we coded two of the proposed new variables into the data set on the assault offences reported to the police in 2005 in Finland. The crime data are a random sample from the Offence monitoring and analysis database, created by the Institute of Criminology and Legal Policy. The sample comprised 100 offences from each of the four main categories of assault offences (aggravated, simple and petty assault, as well as attempted homicide according with the Finnish Criminal Code). Each offence type was weighed according with their volume in the crimes recorded by the police in 2005.

The reason why we selected this particular dataset was pragmatic: the sample had already been drawn and coded for another earlier study and was therefore available without extra obstacles or costs. This particular year (2005) was also comparable to the 2006 national crime victimization survey, in which the reference period also is, broadly speaking, the year 2005. Since the sample had already been coded before the Expert Group on Violence published their recommendation, the concrete variables we have used cannot be fully identical with those proposed by the Expert Group. Also, the classifications used in the 2006 crime victimization survey are not fully comparable with the recommendations of the Expert Group. They are also partly different from those applied in the 2005 police-recorded crime report sample. We have adjusted the different variable classifications to correspond to each other as far as possible. Because of these inconsistencies, we have needed to use considerably less detailed classifications than those recommended by the Expert Group. Our present demonstration thus is only able to provide a pale reflection of the degree of detail that becomes available if the recommendation of the Expert Group could be fully implemented. This is true both for the police-recorded data on reported crimes and the national crime victimization survey.

2.3. Results

In accordance with the recommendation of the Expert Group, the data recorded about assault offences should be complemented by the introduction of new statistical variables. These would include descriptive details, such as the relationship between perpetrator and victim, characteristics of the scene of the offence, the modus operandi, the injuries caused by the offence, and the circumstances of the crime event. With our present data, we were only able to demonstrate what could be gained by the introduction of two of these variables: the perpetrator-victim relationship and the nature of the injuries. A much-improved picture of police-recorded violence emerges already when these two variables are combined with already existing coded variables, or the gender of perpetrator and victim, and the crime scene.[1]

[1] In Finland, the police-recorded crime reports already comprise a few standard variables constructed from the basic data. The most essential of these are the scene of the crime, such as a private apartment, other private place, public place, in a shopping mall, public event, other public place, restaurant, or not known, and the intoxication of the

TABLE No. 1. The victim-offender relationship in assault crimes[2] by gender of main suspect in the 2005 Finnish police statistics (%).

	Suspect male	Suspect female	All suspects
Partner	21.1	8.0	19.8
Other family member	2.6	0.1	2.4
Acquaintance	39.2	62.2	41.5
Unknown	37.1	29.7	36.4
n	24 062	2 652	26 714

In assaults and attempted homicides recorded by the police in 2005, 66 percent of the victims and 88 percent of the suspects were male. The violence by men as well as that by women was mainly directed against persons outside of the immediate family. This was even more accentuated when violence by women was concerned (Table No. 1). This finding may be a bit unexpected, and was clearly different from the one concerning homicides. Of homicides by women in the 2000s, two-thirds were partner violence; of homicides by men, only one out of three were partner-related (Lehti 2016).

There was a clear difference in the violence against men and against women also in terms of the victim-offender relationship. Nearly half of all assaults against women that came to the knowledge of the police were partner-related, while in one-half of the assaults against men, the perpetrator was someone not previously known to the victim. Of the male victims, 47 percent, but of the

perpetrator (alcohol, denaturated alcohol, alcohol and drugs, drugs, not known). The Expert Group on Violence suggested that both of these variables should be improved to the effect that violence that takes place in the victim's home from violence in other private places, and that a new category should be added to the intoxication data, to distinguish events in which the perpetrator was not under the influence (such cases are currently comprised in the category "not known," together with the cases in which there are no data). Furthermore, the crime report variables comprise standard questions on whether the case was family violence, a child case (the victim being a child) or a racist offence. The problem currently regarding these variables, however, is that it is completely up to the interpretation and discretion of the person completing the crime report form; therefore, the quality of the data is not very high.

[2] If not otherwise stated, assault crimes include in this article assaults, minor assaults, aggravated assaults and attempted homicides (Finnish Penal Code 21:1-3 (attempts only) and 5-7).

female victims 32 percent were victimized by an acquaintance who was not part of the family (Table No. 2).

TABLE No. 2. The victim-offender relationship in assault crimes by gender of victim in the 2005 Finnish police statistics (%).

	Male victims	Female victims	All victims
Partner	1.3	45.6	16.2
Other family member	2.4	2.1	2.3
Acquaintance	47.2	32.0	42.1
Unknown	49.1	20.3	39.4
n	21 900	11 107	33 007

Over 60 percent of the assault offences known to the police occurred between males, 30 percent were by males against women. Assaults by women against women (7%) were clearly more frequent than assaults by women against men (2%) (Figure No. 1). In most (75%) of recorded assaults, the crime report mentioned only one suspect; in 9 percent of the offences, there were more than one victim.

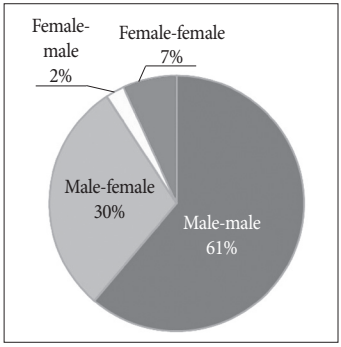

FIGURE NO. 1. The gender of the victim and of the main suspect in assault crimes in the Finnish police-recorded crimes in 2005 (Cleared offences, n = 27 777).

In Table No. 3, the information about the victim-offender relationship is combined with the crime scene and the gender. The Table shows that the most common form of assaults against women recorded by the police are partner violence in private homes (44% of female victims). Of assaults on male victims, the most common form was violence in public places that occurred between parties who were not acquainted before the event (44% of male victims). Since the total volume of violence against men in police-recorded assaults was twice the volume of violence against women, the male experience determined, or rather dominated, the average picture of violent crime. Thus, the largest categories of violent crimes recorded by the police were assaults in public places by strangers (35%) or acquaintances (20%). Also,

violence between acquaintances in private apartments (19%) had involved a larger volume of victims than partner violence (15%) (Table No. 3).

TABLE No. 3. Crime scene, gender of victim, and victim-offender relationship in assault crimes in the 2005 Finnish police statistics (%).

Male victims (N = 21 900)					
	Partner	Family member	Acquain-tance	Unknown	Total
Private	0.9	2.3	20.4	2.8	26.4
Public/semi-public	0.4	0.0	24.2	43.6	68.2
Other/not known	0.0	0.1	2.6	2.7	5.4
Female victims (N = 11 107)					
	Partner	Family member	Acquain-tance	Unknown	Total
Private	43.8	2.1	17.2	2.7	65.8
Public/semi-public	1.1	0.0	11.8	17.5	30.4
Other/not known	0.8	0.0	3.1	0.0	3.9
All victims (N = 33 007)					
	Partner	Family member	Acquain-tance	Unknown	Total
Private	15.3	2.2	19.3	2.8	39.6
Public/semi-public	0.6	0.0	20.0	34.9	55.5
Other/not known	0.3	0.1	2.7	1.8	4.9

Police-recorded violence against men was, by its consequences, on average clearly more serious than the violence against women. One out of five assaults against men caused no visible physical injury, while this was true for one out of three assaults against women. Considerable or serious injuries[3] had been

[3] For the injuries, the following classification was used: 1 = no injury, 2 = pain, without visible injury, 3-8 = swelling, 9-13 = scratch, 14-19 = bruise, 20 = bump, 21 = nose bleeding, 22 = split lip, 23-28 = superficial wound, 29 = damage to teeth, 30-34 = bone fracture, 35 = concussion, 36-41 = cut, 42-49 = stab wound, 50 = life-endangering injury to scull or internal organs, 51-56 = shooting wound, 57 = other injury. Categories 1-13 were denoted as no injury/minor injury, categories 14-29 and 57 as considerable injury, and categories 30-56 a serious injury.

caused by more than 70 percent of the assaults against men, while this percentage was less than 50 in assaults against women (Table No. 4). The violence in domestic cases, in particular those that did not involve partners, had less serious consequences than instances of non-family violence. Serious injuries had been caused in one-fifth of acquaintance assaults and in one-sixth of violence between persons previously unknown to each other. In cases of partner violence, the proportion was 9 percent, and 3 percent in other domestic violence cases. The proportion of events that did not result in physical injuries was one out of four in those cases that took place outside of the family or partners, and one out of three in other domestic violence (Table No. 4).

TABLE No. 4. The most serious injury caused by the assault, the gender of the victim, and the relationship between the parties in assault crimes in the 2005 Finnish police statistics (%).

Male victims					
	Partner	Family member	Acquaintance	Unknown	Total
No injury/minor injury	46.8	34.7	25.0	26.2	26.7
Considerable injury	11.1	60.6	52.2	54.0	53.3
Serious injury	42.1	4.6	22.8	19.8	20.0
n	190	521	9 893	9 888	20 492
Not known	46.8	0	4.4	8.1	6.4
n	280	521	10 344	10 755	21 900
Female victims					
	Partner	Family member	Acquaintance	Unknown	Total
No injury/minor injury	32.5	80.2	53.9	88.6	51.7
Considerable injury	59.5	18.5	40.0	9.1	42.5
Serious injury	8.0	1.2	6.1	2.2	5.8
n	4 682	229	3 010	2 251	10 172
Not known	7.6	0	15.4	0	8.4
n	5 069	229	3 558	2 251	11 107

On the other hand, combining data on the injury, gender and relationship, we could see that of the forms of violence directed at women, as far as police-recorded crimes are concerned, partner violence against women was more serious by its consequences as compared to other forms of violence. The proportion of assaults that resulted in a considerable or a serious injury was almost 70 percent in partner violence against women. In other domestic violence cases, this percentage was only 20, and it was 30 percent in non-family violence. For men, violence outside of the family was, in contrast, much more serious than violence in intimate relationships (Table No. 4).

2.4. Conclusions

Our recommendation on improving the police-recorded crime data may be met with criticism, arguing that it would cause an unacceptable amount of extra work to the police officers who are recording the data. This concern must be accepted, in particular since the resources made available for the core duties of police – crime investigation and service to the general public – have been seriously cut in recent years all over Europe. The concern is, however, exaggerated: the new variables that we have recommended already mostly exist and are recorded in the police crime information system. The only essential change to what is already being done is how the recording is done. In fact, standardized recording that uses simple classifications might even decrease the amount of work that the recording is consuming. It is likely that, once the reform has been carried out, police are themselves going to gain insight into the value of the new data. This does, however, also require that most police organizations invest a bit more in crime analysis. Automatic data processing is today already so cost-effective that an improved exploitation of existing data is now available for police as well as for other crime data users (the latter ones, of course, with the necessary user controls and permits). The potential users may not always be aware of this.

Descriptive standard variables are not really a novelty in police crime data. As already mentioned, for example, in Finland, the crime data recorded by the police have over time already been amended with the intoxication of the suspect, the crime scene, family violence, violence against children, and racist motives of the crime. Furthermore, burglaries have been specified in terms of the target, and the same has been done with motor vehicle theft, and the

system comprises also a few other descriptive features. The innovation is that we recommend that such features should be included in the data system as routinely coded, standard variables. This will allow significantly improved analysis of crime data.

In the current situation, the usefulness of the statistics has indeed been improved, but not very much. Nevertheless, the fact that descriptive features have been added in many European countries over time proves that, at certain times, specific new interests of knowledge have been recognized and articulated in police and/or statistics authorities, concerning certain features of police-recorded crimes. When new features have been added to the system, this has usually been triggered by law amendments, or, at times, ideological tendencies in crime or societal policy (both of these are, of course, in interaction). The amendments, as they stand, are a good illustration of the dilemma of the crime information system: when new information needs to somehow have been recognized and accepted to be serious enough, the information system has been amended by patchwork reforms that always only provide an answer to the acute dilemma.

Rather than continuing on the avenue of patchwork amendments, it would be more cost-effective to introduce a more basic change to the information system, to the effect that it would better be able to react to acute needs of descriptive information, whether these are needs of police or the overall society. This change is not radical; it only requires that the data system is open for descriptive variable amendments.

Crime reports and the related investigation data have already been recorded into an electronic database for more than twenty years in Finland. Thus, the material preconditions for the creation of a more effective information system have existed already for quite some time. It is about time that a systematic scrutiny of the information system is made, to the effect that also the producer of the information would start to take an active and innovative role when valuable and useful improvements to the system are concerned.

The reform recommended by the Expert Group of the Crime Prevention Council would represent a plausible new stage of improvements to police statistics. If the recommended improvements are carried out, this would finally open the door to all the multiple possibilities for analysis that the introduction of the electronic police crime data system has in principle – but not in practice – offered already for decades.

3. CRIME VICTIMIZATION SURVEYS

We are proposing reforms related to the information contents of police-recorded crime. This is, however, not sufficient enough for achieving an improved exploitation of police statistics. A second fundamental requirement is that we need to improve the understanding that concerns the sources of error related to the statistics. Crime victimization surveys provide information that serve this purpose. In our current discussion, crime victimization surveys can be seen as an alternative and complementary approach to measuring and interpreting crime.

The basic idea of crime victimization surveys is that a representative population sample is asked whether they have experienced certain events that are described in the interview questions. The questions usually make reference to given period of time (often the last year), and also ask how often this has happened during that time period. In this way, we can get an idea of how frequent it is in the average population that people have (subjectively speaking) been victims of different crimes. Apart from this, we can find out descriptive characteristics of the victimization incidents. Also, we can find out how often the victimization experiences are reported to the police. Crime victimization surveys are of course not unproblematic; some of the problems are going to be discussed later, but there is a vast amount of literature that deals with those issues (van Dijk et al. 2007; Manual on Victimisation Surveys 2010; Aromaa 2012).

Police statistics and crime victimization surveys are in effect parallel, mutually complementary information sources on crime, and this is how they should also be exploited. Combining these, the methodological problems related to each of them can be minimized. For this, however, both crime monitoring instruments need to be improved from their current level. This is done if their core concepts and variables are standardized much more than what is currently the case (Manual on Victimisation Surveys 2010; Aromaa 2012).

In this respect, some of the recent developments in Finland have been backward or counterproductive. If data are to be comparable, each data system should comprise the same core variables, and they should be coded in an identical fashion. In the current police statistics, the required variables are mostly not available at all, but many of them have also been deleted from the national crime victimization survey when the survey was redrafted in 2012 (Sirén 2011;

Danielsson & Kääriäinen 2016). In this redrafting, variables have been lost and the classifications of many variables have been altered to the effect that the comparability with the police information system has been hampered.

If the comparability of our two central crime indicator systems is to be improved, and if the information derived from them is to be developed, new variables need to be added to the police crime information system. Parallel to this, however, the variables in the current national crime victimization survey also need to be improved.

In comparison with police statistics, crime victimization surveys are usually considered to yield more comprehensive and better information on total crime (of course, only of crime with victims). This is because the dark number, or the volume of events not recorded in police crime data, is in most crime types considerably larger than the volume of recorded crime. An important weakness of crime victimization data is that they need to be collected by repeated surveys that consume much expert input and also cost quite a lot of money. This is true even in the case that the data is collected by cost-effective web or postal surveys rather than by face-to-face or telephone interviews. A second problem of crime victimization surveys is their social bias. They are rather good at measuring experiences and sentiments related to crime in the normal population, but population groups living in the margins remain, to a considerable degree, beyond their reach. It is, however, those exact population groups that comprise a large proportion of the victims and perpetrators of conventional property and violent crimes. In particular, the most serious part of violent crime is much concentrated on population groups in the social margins, and victimization surveys grasp them only to a very limited extent (Manual on Victimisation Surveys 2010; Aromaa 2012; von Hofer et al. 2012, 6-8).

Furthermore, the national crime victimization surveys are restricted to experiences of the adult (or the at least 15-year-old) population only. Albeit that separate victimization surveys concerning children and juveniles have been carried out in Finland, crimes against children remain to a large degree beyond the reach of crime victimization surveys. In contrast, police crime statistics are created continuously as a side product of authority work, and it is practically fully up-to-date. It is also comprehensive total data, not based on population or crime samples, as is the case with crime victimization surveys. And finally, police crime data also comprise information about the suspected

perpetrators of the crimes, while such information is quite limited in crime victimization surveys.

It is still true that people living in the social margins who suffer from crime are often not grasped by the police data system, because many of them do not tend to rely on police in crime issues, and many of them have good reasons not to report their victimization experiences to the police. It is, however, also true that the same people are extraordinarily often victimized to traditional person and property crime, and such victimizations are often found out in crime investigations (Aromaa 2012).

In conclusion, it would thus be very useful, if there would be a way of creating a "bridge" between police crime data and crime victimization surveys. Such a bridge is created if both data sets are improved by adding comparable descriptive variables of the kind we explained above. When these new variables are defined in a way that makes them identical as far as possible, we arrive, for the first time, to a situation in which it is possible to analyze how the events found in crime victimization surveys differ from those recorded in police crime data. Because the volume of the events found in crime victimization surveys is much larger than the volume of police-recorded crime, the comparison allows us to find out what part of the events found by the victimization survey remains beyond the knowledge of the police. It is true that this question has already been partially answered, because victimization surveys usually also ask if the event experienced by the respondent came to the attention of the police. This piece of information has implied that many relatively non-serious events, as well as many events that take place in the intimate sphere, are less likely to be reported to the police. The overall picture that this circumstance yields is, however, quite rough and, in part, also unreliable (Aromaa 2012).[4]

[4] From the very beginning, victimization surveys have also attempted to find out whether the victims had reported their experiences to the police. Earlier, the Finnish national victimization survey comprised two questions about this: one was about whether the three most recent events were reported or came to the attention of the police, the other one asked specifically if a crime report was made. After 2009, the national crime victimization survey only asks if one of the violence or property offences that occurred over the last year have been reported to the police. The question does not make reference to any specific event. Each of these questions suffer from problems. It is, for instance, unclear how well the respondent is able to recall, and what he/she means by reporting to the police. A further problem is related to the representative gaps of the victimization survey. The

3.1. The Data

In the following analysis, we have used the database of the 2006 Finnish National Crime Victimisation Survey, available at the Institute of Criminology and Legal Policy. This was done because the reference period of this database is practically the same as the reference period of our police crime data. In the 2006 crime victimization survey, the respondents were asked about crimes they had experienced over the last year, which, in practice, is mainly the year 2005.5 Our choice of data was also influenced by the fact that after 2009, significant changes were introduced to the national crime victimization survey. The last national victimization survey that followed the old pattern was carried out in 2009. In the national crime victimization surveys as of 2012, there is a smaller array of descriptive variables, and also less accurate crime definitions have been adopted (Sirén 2011; Danielsson & Kääriäinen 2016). Because of this, it is not any more possible to distinguish violence related to sexual and property offences, or purely verbal violence from assault offences as accurately as before, since important descriptive questions have not been asked any more. The changes made in 2012 were conscious and well-argued (Sirén 2011). Nevertheless, the consequence of these has been that we have lost important possibilities for comparing crime victimization survey data with police crime data. In the 2006 crime victimization survey data, we have excluded events related to verbal violence, sexual violence and robberies. Thus, our findings are only about physical violence that was not related to rapes or property crimes.

3.2. Comparing crime victimization surveys and police crime data

According to the 2006 National crime victimization survey, 48 percent of the victims of violence over the preceding year were male, and 85 percent of

population segments that are criminally most active, whether we speak of those victimized or those mass-producing crime, remain beyond the reach of surveys. In these population segments, the degree of reporting may remain substantially below the one of the average population.

5 The 2006 National crime victimization survey was carried out with computer assisted phone interviews. The targeted sample size was a total of 10 097 people, ranging from 15 to 74-year-old persons resident in Finland; with a response rate of 76.4%, the achieved sample size was 7 715 persons (Sirén et al. 2007, 31-32).

the assailants were male. The share of female violence victims was considerably larger than the one in the police data, while the gender distribution of the assailants was identical in both data sets. Violence against women, therefore, seems to become known to the police – or at least is recorded as a crime – clearly less likely than violence against men.

TABLE NO. 5. The relationship between the victim-offender relationship, by gender of the main suspect in assault crimes in Finland, 2005/2006. National crime victimization survey and police statistics data (%).

The victim was the perpetrator's	Male	Female	Total	Police data
Partner	11.3	14.8	11.7	19.8
Other family member	3.3	1.9	3.1	2.4
Acquaintance	32.8	53.7	35.3	42.1
Unknown	52.6	29.6	49.9	39.4
N	399	54	453	
No data	7.4	20.6	9.2	
N	431	68	499	

The total distributions regarding the victim-offender relationship were quite similar in both data sets. In the police data, partner violence was more common than in the victimization data; correspondingly, the violence by unknown assailants was less common in the police data than in the survey data. This is logical, since the distributions of the police crime data are based on cleared offences. It is likely that there is an excess of unknown perpetrators in the uncleared assaults.

Looking at the gender of the main perpetrator, partner violence by men was much more common in police crime data than in the victimization survey. For the female suspects, the situation was different: the share of partner violence by women was much larger in the victimization data than it was in police crime data. The conclusion is that partner violence by men has been recorded in the police data clearly more likely than partner violence by women.

The analysis by gender of victim supports the above conclusion, in particular regarding partner violence against women. Of the assaults against women recorded by the police, 46 percent were partner violence, while only 20 percent of the assaults against women found in the victimization survey were partner

violence. This bias is further enhanced by the fact that the victimization survey is only about the adult population. Therefore, the proportion of partner violence should be larger in the victimization survey than in the police data, as the latter also comprises violence against children. A second significant feature of the findings is that stranger assaults against women were particularly unlikely to come to the attention of the police.

TABLE NO. 6. The victim-offender relationship, by gender of victim in assault crimes in Finland, 2005/2006. National crime victimization survey and police statistics data (%).

The victim was the perpetrator's	Male	Female	Total	Police data
Partner	3.4	20.3	11.6	16.2
Other family member	3.4	2.7	3.1	2.3
Acquaintance	36.9	33.3	35.2	42.1
Unknown	56.2	43.7	50.1	39.4
N	233	222	455	
No data	2.9	15.3	9.4	
N	240	262	502	

Of assaults found in crime victimization surveys, 45 percent were male-male events, and 43 percent were perpetrated by males against women. The main perpetrator was a woman in 14 percent of all events (11 percent of women attacking women, and 3 percent of women attacking men). Again, when interpreting these victimization survey findings, it should be kept in mind that the survey only comprises the adult population. The national crime victimization surveys do not provide information about crimes against children. This can be expected to decrease the proportion of women among the perpetrators, since a significant share of violence by women is directed against the perpetrator's own small children. The effect is probably smaller but equally problematic when the gender distribution of the victims of female assailants is concerned: these are often male partners, but also often male or female children.

The differences of the crime scene distributions corresponded logically with those found with regard to the relationship distributions. In police statistics, the proportion of assaults that occurred in private apartments was clearly larger for both male and female victims. The difference was largest for female victims: according to the victimization survey, 73 percent of them had been

victimized in public or semi-public places, while in the police statistics, 66 percent of the female victims had been victimized in private apartments.

TABLE No. 7. Type of location of the event, by gender of victim and the victim-offender relationship in assault crimes in Finland, 2005/2006. National crime victimization survey and police statistics data (%).

Male victim (n = 240)						
	Partner	Family member	Acquain-tance	Stranger	Total	Police
Private	3.0	3.4	6.0	0.9	12.9	26.4
Public/semi-public	0.4	0.0	29.2	53.2	83.0	68.2
Other/not known	0.0	0.0	1.7	2.1	4.6	5.4
Female victim (n = 262)						
	Partner	Family member	Acquain-tance	Stranger	Total	Police
Private	17.6	2.3	5.4	2.7	23.7	65.8
Public/semi-public	2.7	0.5	26.6	40.5	73.3	30.4
Other/not known	0.0	0.0	1.4	0.5	3.1	3.9
All Victims (n = 502)						
	Partner	Family member	Acquain-tance	Stranger	Total	Police
Private	10.1	2.9	5.7	1.8	18.5	39.6
Public/semi-public	1.5	0.2	27.9	47.0	77.7	55.5
Other/not known	0.0	0.0	1.5	1.3	3.8	4.9

Also, the analysis combining the seriousness of the injury and the victim-offender relationship revealed clear differences between the assaults recorded by the police and those found in the victimization survey. Of the assaults against men, as grasped by the victimization survey, 71 percent occurred outside of the family domain. In contrast, of police-recorded assaults directed against men, 73 percent were moderate or serious.

Of the assaults against women as depicted by the victimization survey, 59 percent were low injury or no injury events that occurred outside of the family domain, and 9 percent were intimate relationship violence with serious or moderate injury. In contrast, in the police statistics, the percentage of the first mentioned category was 35, and of the latter category 32 percent.

TABLE No. 8. The most serious injury resulting from the assault, by gender of victim and the victim-offender relationship in assault crimes in Finland, 2005/2006. National victimization survey and police statistics data (%).

Male (n = 235)							
	Partner	Family member	Acquaintance	Stranger	Other/ not known	Total	Police
No injury/lenient injury	2.1	3.0	26.0	43.0	1.7	75.7	26.7
Moderate injury	1.3	0.4	7.2	10.2	0.9	20.0	53.3
Serious injury	0.0	0.0	2.1	2.1	0.0	4.3	20.0
Female (n = 255)							
	Partner	Family member	Acquaintance	Stranger	Other/ not known	Total	Police
No injury/lenient injury	9.0	2.0	20.0	29.4	9.4	69.8	51.7
Moderate injury	7.1	0.4	5.5	7.1	6.3	26.3	42.5
Serious injury	1.2	0.0	2.0	0.8	0.0	3.9	5.8

The conclusion is that the violence recorded in police statistics, in terms of the injuries, was for men, as well as for women, on average clearly more serious than the violence captured by the victimization survey. The difference was particularly large for violence against men: for these events, the injury distributions of police data vs. survey data were almost mirror images of each other. The non-serious violence directed against women came markedly more often to the attention of the police than was the case for violence against men with the same damage level.

The counting unit in victimization surveys is the person who has become a victim, while the police statistics are counting crimes. In the police statistics published by Statistics Finland, the counting unit regarding the suspects is the number of suspects multiplied by the number of the criminal acts. Statistics Finland also publishes separate statistics on suspects according with the most serious offence.

Thus, there are several problems in comparing victimization surveys and police statistics. First, the concepts and variables must be comparable. Yet after these issues have been resolved, the core problem is how to transform the

person-based data into event (or offence) -based data. Data from the "old" national victimization survey allowed for several options. The survey had a separate question about the total number of events experienced by the respondent over the last year. Furthermore, details were asked about the three most recent events. The variable from the first question on the total number of events could also be modified by applying different cutting points in order to restrict the statistically unreasonable impact of very large event numbers (some of these may exceed hundreds). By applying different counting rules, the total number of violent events as measured in the victimization survey in 2005 was 260 000-750 000. The variance is thus quite large; this, of course, depends on what cutting points are applied.

The number of crimes recorded in the police statistic was 30 830. After all, it does not matter very much which number of offences, as estimated from the National crime victimization survey, is "correct" or most accurate. Whether the number is 260 000 or 750 000, the overall picture of which forms of violence were more likely to come to the attention of the police and which forms did not did not change much. This was also true regarding the forms of the crime. Thus, transforming the victimization survey data into crime numbers is an interesting theoretical issue, but it does not seem to be particularly central in terms of the differences between the two central measurement instruments, as far as the structure of the offences is concerned.

4. FINAL REMARKS

We have used very few, very crude, basic variables – and the variables we have used above have been very much simplified when compared to those proposed by the Violence expert group – to demonstrate our basic argument: adding just a small number of basic, crude descriptive variables, the descriptive and analytic value of the data on police-recorded crime, as well as the data from crime victimization surveys, is essentially improved.

All of this has a high value in terms of crime prevention resources and related resources. No doubt local police, while working in the field, are mostly having a good understanding of what is going on in the area. However, it is less likely that current information systems are able to provide such an understanding on higher organizational levels, or even on the national level. Through the

innovation of introducing standard descriptive variables in the crime information systems, the crime situation could be monitored in concrete terms on a real-time basis. The same is true when we consider information production for the needs of public decision-making, criminological research, and even the citizen in the street. In this report, we have only discussed assault offences, but the same approach can easily be applied if there is a wish to improve the data concerning any other crime category, including property crimes.

If we could combine the information provided by police crime reports with that provided by crime victimization surveys, our understanding of the reliability and the quality of crime data would reach a genuinely new level. This innovation would improve our understanding concerning the shortcomings of the current information systems, and it would also open new opportunities for developing these systems as well as analyzing the data provided by them.

This does, however, require that the relevant variables and concepts, as used in police statistics and in crime victimization surveys, be reasonably well-harmonized. Concerning the police statistics, this can be done by adopting the proposals made by the Crime Prevention Council. Concerning the crime victimization surveys, the current national victimization survey would not need to be radically altered; instead, the innovation could be introduced by adding a specific violence module periodically (e.g., every five years), together with questions about details of the three most recent violence incidents, in a similar way as this was done in earlier (before 2009) national crime victimization surveys. The same approach could then also be applied to property crimes against individuals and, eventually, to any other crimes. Data on crimes against legal entities could be collected by regularly repeated business victimization surveys by applying specifically-designed descriptive variables that should, of course, then also be adopted in police data collection.

Improving the information contents of our crime-related statistics would be a profitable and generally useful and valuable endeavor. Since statistical data are collected all the time in any case, it would make sense if these data could be used more effectively than what is currently being the case. The improvements needed for this are small, but they could have major consequences.

REFERENCES

Aromaa, Kauko (2012). Victimisation surveys – what are they good for? Temida, June 2012, 85–94.

Danielsson, Petri & Kääriäinen, Juha (2016). Suomalaiset väkivallan ja omaisuusrikosten kohteena 2015. Kansallisen rikosuhritutkimuksen tuloksia. Kriminologian ja oikeuspolitiikan instituutin katsauksia 13/2016. Helsinki: Krimo. https://helda.helsinki.fi/handle/10138/161960

van Dijk, Jan & van Kesteren, John & Smit, Paul (2007). Criminal Victimisation in International Perspective. Key findings from the 2004-05 ICVS and EU ICS. WODC Onderzoek en beleid 257. Den Haag: WODC.

European Sourcebook of Crime and Criminal Justice Statistics 2014 (2014). Fifth edition. HEUNI Publication Series no 80. Helsinki: HEUNI.

Finnish National Council for Crime Prevention (2013). Recommendation on improving crime data collection, the 2012-2014 Expert Group on the Prevention of Violence. Unpublished public government document, available at the Institute of Criminology and Legal Policy, University of Helsinki.

Finnish National Crime Victimisation Survey 2006. Data and questionnaire available at the Institute of Criminology and Legal Policy, University of Helsinki.

von Hofer, Hanns & Lappi-Seppälä, Tapio & Westfelt, Lars (2012). Nordic Criminal Statistics. 8th revised edition. Kriminologiska institutionens rapport 2012:2. Stockholm: Stockholms universitet.

International Classification of Crime for Statistical Purposes (ICCS) (2015). Version 1.0. March 2015. Vienna: United Nations Office on Drugs and Crime.

Istanbul Convention. Council of Europe Convention on preventing and combating violence against women and domestic violence. Opened for ratification 11.05.2011 in Istanbul.

Lehti, Martti (2016). Henkirikoskatsaus 2016. Kriminologian ja oikeuspolitiikan instituutin katsauksia 10/2016. Helsinki: Krimo. https://helda.helsinki.fi/handle/10138/160000

Manual on Victimisation Surveys (2010). Geneva: United Nations.

Ruuskanen, Elina & Aromaa, Kauko (2008). Administrative data collection on domestic violence in Council of Europe member states. European Institute for Crime Prevention and Control, affiliated with the United Nations (HEUNI); Directorate General of Human Rights and Legal Affairs, Council of Europe, Strasbourg.

Sirén, Reino (2011). Uuden rikosuhritutkimuksen kehittäminen. Oikeuspoliittisen tutkimuslaitoksen tutkimustiedonantoja 109. Helsinki: Oikeuspoliittinen tutkimuslaitos. https://helda.helsinki.fi/handle/10138/152504

Sirén, Reino & Kivivuori, Janne & Kääriäinen, Juha & Aaltonen, Mikko (2007). Suomalaisten kokema väkivalta 1980–2006. Oikeuspoliittisen tutkimuslaitoksen tutkimustiedonantoja 74. Helsinki: Oikeuspoliittinen tutkimuslaitos. https://helda.helsinki.fi/handle/10138/152543

Vuorela, Miikka (2014). Rikoksesta ja rangaistuksesta 1800-luvun Suomessa. Prokuraattorin kertomukset kriminologian lähteenä. Oikeuspoliittisen tutkimuslaitoksen tutkimustiedonantoja 127. Helsinki: Oikeuspoliittinen tutkimuslaitos. https://helda.helsinki.fi/handle/10138/161218