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Introduction

Do guns cause more violence, and especially more homicide? This question has been a subject of debate over decades, particularly in the United States. It is not the purpose of this chapter to review the evidence assembled in the context of this debate. The problem is that, despite differences in homicide and gun ownership rates across American regions, guns are relatively widespread throughout America and homicide rates are fairly high. Thus, the critical test of the relationship between gun availability and homicide comes from regions of the World where both variables vary considerably more than within America, that is from samples of countries that include nations with a near-zero gun ownership rate and with homicide rates that are just a fraction of American numbers – even after the crime drop. Given the large number of studies that have addressed this issue within the United States, this essay will focus on firearms and violence in the European context to which this volume is dedicated.

Some correlations between gun ownership and homicide will be presented in the first part of this chapter. The second part will be devoted to national databases of homicide. Particularly in Europe where nations all have limited numbers of homicide cases in any given year, the possibilities

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for more differentiated analyses are limited due to insufficient frequencies unless data on homicides are collected and integrated into databases that cover many details on events, offenders and victims over several years. A few European countries have established such homicide databases, namely England, the Netherlands, Finland and Switzerland. We shall look at the role of guns in homicide and suicide more in detail in these four countries. For the study of the impact of guns on homicide, the database in Switzerland is particularly helpful because guns are far more frequently owned by private households and they are far more often used in fatal events in that country. The case of Switzerland is also interesting because it allows assessing possible effects of changing gun ownership rates, especially given the downsizing of the Swiss army and the reduction of army weapons in the general population between 1995 and 2005.

International Correlations of Gun Ownership and Fatal Events

The International Crime Victimization Surveys (ICVS), conducted for the first time in 1989 in 14 countries (van Dijk, Mayhew, & Killias, 1990), offered for the very first time the opportunity to collect, through appropriate survey questions, data on the availability of guns in private households. Unlike crude and notoriously unreliable estimates on the number of guns in circulation in

several countries, these estimates measure what actually is the critical variable, namely how many households (and individuals) in any given country have access to at least one gun - one indeed is sufficient to kill. These data turned out to be correlated with homicide and suicide in seven countries for which, at that time, data on homicide and suicide committed with a gun were also available (Killias, 1991). Over the following years, data on gun ownership continued being collected through the waves of the ICVS of 1992, 1996, 2000 and 2005. Over these waves, the number of participating countries increased. Today, data on gun ownership are available for more than 30 countries (van Dijk, van Kesteren, & Smit, 2007). Unfortunately, no further ICVS has been realized since 2005, and attempts at establishing a permanent European Union crime victimization survey have not been successful so far. It is also unfortunate that the WHO database on homicide and suicide by cause of death has not been regularly updated. Therefore, the last efforts at looking at international correlations of homicide with gun ownership date back to data for the 1990s.

Killias, van Kesteren and Rindlisbacher (2001) have correlated data from the 1989 to 1996 ICVS waves on gun ownership in private households with firearm-related and other fatal events (homicide and suicide) according to WHO statistics for the years 1989–1997, as well as with rates of robbery and assault committed with guns (according to ICVS data for the same years). The results for 19-21 countries showed substantial correlations between gun ownership among private households and suicide and homicide of women committed with firearms (r=0.85 and r=0.61, respectively). Interestingly, the correlations with gun homicide among men were far weaker (0.21), though relatively high and significant were correlations (r) with gun-related assault and robbery (0.72 and 0.48). Further, differentiating handguns from long rifles and other types of guns did not change the correlations substantially. Unfortunately, these data cannot be updated without substantial investment since WHO rates for both sexes are not published for more recent years.

Hemenway, Shinoda-Tagawa and Miller (2002) analyzed correlations with homicide in 25 countries using the percentage of suicide victims killed through gun-shots as an indicator for gun ownership. The data they used were for the years 1994-1999. Using unweighted data they have very strong correlation (r=0.87) between their measure of gun ownership and female firearm homicide rates. When the United States (as an extreme outlier) was excluded, the correlation was still very substantial (r=0.66). The same was true when they used data weighted for each country's female population (r=0.84, without the United States). However, there was no significant correlation between their measure of gun availability and non-gun female homicide rates once the United States was excluded, either using weighted (r=0.19) or unweighted data (r=0.02). The results did not change either when urbanization and income inequality were introduced as control variables. In sum, the results of Hemenway et al. (2002) are consistent with those found by Killias et al. (2001) in the sense that both studies observed that gun availability is highly correlated female firearm homicide. However. Hemenway et al. (2002) found that there is no correlation with female homicides committed with other means, whereas according to Killias et al. (2001), there is no such correlation with male homicide. Both studies concur, therefore, that female homicide is far more strongly correlated with the availability of guns than male homicide. The similarity of correlations between gun-related female homicide and suicide (of men or in general) may, as the authors of both studies assume, be explained by the obvious fact that guns are usually kept at home where personal and family crises are more likely to occur. Non-gun female homicide may be unrelated to gun availability since the presence of other potentially lethal means is probably unrelated to the presence of guns. Male homicides are more likely to occur in public places where guns may not be readily available when conflicts escalate. Whether these assumptions hold will be examined in a later section of this study, using data from the available databases on homicide.

Profile of Gun Owners

In a further analysis of ICVS data on guns and several violent offences, van Kesteren (forthcoming) concluded that at the individual level gun ownership is associated with increased rates of victimization through theft and offences against the person (especially robbery). This may be due to the fact that having a gun is correlated with a more risky lifestyle. Using data from the 1997 Swiss Army recruit survey (with more than 21,000 male respondents aged 20), Killias and Haas (2002) found that owners of (private) handguns were far more likely to have experienced violent victimisations and to be involved in (selfreported) violent crime (including use of guns in violent encounters) than non-owners. Handgun owners displayed also far more serious psychiatric symptoms during the interviews. The same was true for owners of other weapons that are frequently used for criminal purposes, such as chains, baseball bats and iron bars. On the contrary, and consistent with what Lizotte, Tesoriero, Thornberry and Krohn (1994) observed for recreational (as opposed to "self-protecting") gun owners, long rifles are typically used (and owned) by young men who are practicing target shooting or hunting. Their owners are more similar to young men who do not own guns than to handgun owners. Overall, the studies by van Kesteren (forthcoming) and Killias and Haas (2002) leave the impression that owners of handguns are disproportionately involved in violent victimization and have a higher prevalence of psychiatric symptoms and self-reported violence, suggesting that owning handguns (as well as chains and other "criminal" weapons) is more related to risky or even violent lifestyles. To the extent gun ownership is motivated by their needs for "protection" among these respondents, one may reasonably assume that much of these needs are indeed selfinduced. Guns in the hands of young men with such profiles may increase the likelihood of fatal outcomes, suggesting that monitoring gun owners' backgrounds may be a promising strategy to reduce such risks. The finding by Killias and

Haas (2002) that 53% of the seriously violent gun owners had experienced police *and* court contacts during the preceding 12 months before the interview, when compared with only 8% among all other respondents, illustrates the feasibility of more careful screening of gun owners' backgrounds. Such attempts have been implemented in several European countries over recent years, such as England and Wales and Switzerland, though no evaluations of these policies have been undertaken so far.

Homicide Constellations Across Nations

Studying the role of guns in violent crime can be greatly promoted by large surveillance systems of fatal events that have been set up in several countries. In Europe, such databases are now available for Finland, England and Wales, the Netherlands and Switzerland. They allow comparing homicide patterns cross-nationally in a number of significant ways. Table 16.1 gives an overview of selected characteristics of homicide events, offenders and victims, based on national publications regarding these data collections. The table includes data from the ICVS on gun ownership (in 2000, the more recent data being less complete) and from the European Sourcebook of Crime and Criminal Justice Statistics (2010). As the data reveal, gun ownership rates are very high in Switzerland and extremely low in the Netherlands and in England and Wales. Regarding the reason for keeping one or several guns at home, respondents in Finland indicated mostly hunting and sports (note that the sum exceeds 100% because of the ability to select multiple reasons), whereas the dominant reason among the Swiss is having the gun as part of military equipment. In all four countries, only a small minority of gun owners stated that they keep a gun in the home for self-protection. The general murder rate is also relatively variable across the four countries: the Finnish rate is 2.6 per 100,000 (which is about half the current American rate),

Table 16.1 Homicide constellations across four countries, by role of firearms

		[] []	The Motherstone	Declared and Woles	Cariferon	Switzerland,% of
;		rillianu	THE INCUICITATION	Eligialiu aliu wales	3witzerianu	gun myonyement
Years		2002-2006	1992–2001	2008/2009	1980–2004	1980–2004
Households owning one gun		30	4	5	36	
at least (source: ICVS 2000)						
For hunting		59	111	29	33	
For sports		44	43	46	13	
For protection		1	7	2	4	
Military guns only					63	
Homicide rate (source: ESB 2010, completed homicide 2006)		2.6	6.0	1.4	8.0	
Victim was shot	Male		48	8	53	
	Female		17	2	37	
	All	15	39		46	
Type of gun	Private gun				33	
	Military gun				22	
	Illegal gun	>54			38	
	Unspecified				7	
	Handguns	9				
Victim was female (all homicides)		30	29	29	44	
Victim-offender relationship	Intimate (ex-)partner	ĸ		7	7	38
(all homicides, male victims)	Other family	10		8	15	49
	Stranger	15		37	17	61
	Unknown offender			13	21	50
Victim-offender relationship	Intimate (ex-)partner	63		53	53	44
(all homicides, female victims)	Other family	17		15	16	47
	Stranger	4		12	9	46
	Unknown offender			12	10	21
Victim-offender relationship	Intimate (ex-)partner	22	19		27	43
(all homicides, all victims)	Other family	13	10		15	48
	Stranger	12			13	51
	Unknown offender		20		16	42

Type of murder (all homicides)	Intimate (ex)partner	19		27	7	40
	Other family	10		19	6	64
	Criminal world	11		5	6	70
	Robbery murder	7	7	7	7	43
	Other arguments	20		18	~	49
	Sexual murder	4		3	3	9
	Other, unclassified	10		5	16	
	Unsolved murder	20		12	2	43
Type of murder	Intimate (ex)partner	27		40	0	
(firearm homicides)	Other family	39		64	4	
	Criminal world	89		70	0	
	Robbery murder	28		43	3	
	Other arguments	32		49	6	
	Sexual murder	6		9	2	
	Other, unclassified					
	Unsolved murder			43	3	
Offender profile	Convicted of any offence	43	e89	38	8	38
(all homicides, men only)	Convicted of a criminal code	69		29	6	35
	offence					
	Previously in prison	37		12	2	42
	Persistent offender	28				
	Violent tendencies			28	8	39
	Known to behave aggressively under the influence of alcohol	7.1				
	Alcoholic	53 7				
	Drug user	28 19		21		31

contined)

Table 16.1 (contined)

		Finland	The Netherlands	England and Wales	Switzerland	Switzerland,% of
Years		2002-2006	1992–2001	2008/2009	1980–2004	1980–2004
Offender profile (all events, both genders)	Non-national	7	44		53	38
Event characteristics (all homicides)	At private home	82 (fem) 67 (men)	47	46.4 ^b	58	39
	Victim drunk	71	15		23	33
	Offender drunk		19		24	40
	Victim was violent to offender prior to act	34				
	Offender was violent to victim prior to act	47				
	More then one victim	3	5		7	69
Mental health history of offender	Offender				22	35
Suicidal tendencies of the offender (all homicides)	Attempted suicide following act				4	40
	Committed suicide after act	7	4°	3	6	79
	Multiple murder followed by suicide				2	78

Sources (unless otherwise indicated): Finland: Kivivuori, Lehti, and Aaltonen (2007); The Netherlands: Leistra and Nieuwbeerta (2003); England & Wales: Smith et al. (2010); Switzerland: Swiss Homicide Database

^a Data from Soothill, Francis, Ackerley, and Fligelstone (2002) ^b Data from Soothill and Francis (2012) ^c In percent of cases. Source: Liem, Postulart, and Nieuwbeerta (2009)

with rates in the Netherlands and Switzerland of 0.9 and 0.8, respectively, and England and Wales it is 1.4. Since the Swiss database contains far more detailed information on cases involving guns and those where the homicide was committed with other means, the last column of the table gives the corresponding rate for the cases where a gun was used only.

As the characteristics of homicide offenders and victims in four European countries reveal, lethal violence has many faces. In Finland, homicide is first of all related to binge-drinking. As a result, homicide is predominantly a matter of people - victims and offenders - who had abusively consumed large quantities of alcohol prior to the act. A large proportion of the offenders (53%) were described as "alcoholic", and many were previously known to act violently under the influence of alcohol (28%). In many cases (34%), the murder was victim-precipitated, in the sense that the offender was disturbed or attacked by the victim before the homicide. Although the information for the other countries is not directly comparable, the indications given in Table 16.1 show that the role of alcohol is far less prominent in the Netherlands and in Switzerland. Offenders (and victims) in Finland had a criminal record more than in any other country: 69% had been convicted previously, 28% were described as "persistent offenders" and 37% had spent some time in prison. In England and Wales, a high proportion (68%) of murderers is reported having been previously convicted of any crime (Soothill et al., 2002), whereas previous conviction rates among offenders of homicide in Switzerland are closer to the prevalence of criminal records in the general male population (of approximately 30%). In line with these observations, many offenders in Switzerland had a history of mental health problems, including suicidal tendencies. A relatively high percentage of offenders commit suicide immediately after the act (9% of the offenders, but 13% of the victims were killed by an offender who committed suicide afterwards). Another 4% attempted to commit suicide. In the Netherlands and in England and Wales, these rates are far lower, 4% and 3%; closest comes Finland with 7% of offenders committing suicide after the event.

In sum, murder seems to be mostly related to alcohol abuse among generally violent people in Finland and to persons with a criminal history in England and the Netherlands, whereas Swiss offenders tend to have a more "normal" profile in these respects. In the Netherlands, homicide seems to be more frequent in criminal contexts, as the far higher rate of unsolved or unclassifiable cases (30% when combined) indicates. The low prevalence of criminal records and presumably also other obvious pathologies (including alcohol abuse) among Swiss offenders is probably related to the high prevalence of intra-family murder. Indeed, 46% of all homicides in Switzerland have as victims intimate partners or other family members (mostly children), which is substantially more than in the Netherlands (29%) and in Finland (35%). In Finland, most of the victims are known to the offender (presumably, often people they meet at drinking occasions), but do not belong to the offender's family. In line with these different frameworks of murder, victims were less often women in Finland (30%), in the Netherlands (29%) and in England and Wales (29%) than in Switzerland (44%).

The proportion of victims killed with a firearm is relatively modest in Finland (15%) when assessed in light of a relatively high percentage (30%) of guns (mostly hunting rifles) owned by Finnish households and this country's comparatively high murder rate (the highest in Western Europe). This low percentage seems even more striking given that many guns used in homicide were, according to police sources, kept illegally (more than 54%). Possible explanations may be that most guns are, according to owners' indications during interviews, used for hunting (and perhaps being kept in a cottage) and that they may be less available (and less suitable) to be used in alcohol-induced violent encounters. In contrast and compared with its low gun ownership rate in the general population (4%), the percentage of Dutch victims who were killed with a firearm (men 48%, women 17%) seems surprisingly high. In this context, it must be kept in mind that a substantial fraction of homicides in the Netherlands remains unclassified (10%) or even unsolved (20%) and is possibly related to organized crime. Among firearm homicides, 68% are described as being linked to the "criminal world", 28% concern robberies with murder and 32% result from "arguments". It can be speculated, therefore, that many firearms used in homicides in the Netherlands are actually kept illegally. This would explain why particularly the proportion of male firearm victims is out of line with the general (legal) gun ownership rate in that country. It is true, however, that the distribution of firearm homicide constellations is almost identical in Switzerland – obviously guns are more generally used in connection with other crimes. However, given the far higher prevalence of robberies and other street crimes in the Netherlands (compared with other European countries in general including Switzerland), according to police as well as survey measures (European Sourcebook, 2010) it is plausible that such homicide constellations are more frequent there. Among the cases recorded in the Swiss database, illegal guns were used in 30% of domestic homicides and in 86% of robbery homicides. Thus, guns used in street crime were almost always kept illegally. It is likely that the same pattern applies in the Netherlands.

In England and Wales, men and women were far less often killed with firearms. Only 8% of men and 2% of women were shot, though the proportion of homicide committed by a current or former partner is relatively high (53%). The rare use of firearms reflects the fact that, due to strict legislation concerning acquisition and ownership of guns, these devices are rarely kept in British households, and illegal firearms may be less available and less often used in street crime.

The Role of Guns in Fatal Events

Compared with the other three countries, the role of firearms is, in relation to the several homicide constellations, better documented in Switzerland. The first reason for this is that firearms play a far more prominent role in lethal events (including suicide) in that country, so that the number of cases to analyse is far higher. For this reason, we

shall look at the role of firearms more in detail using data from the Swiss homicide database.

Compared with knives and other potentially lethal instruments guns have a few characteristics that make them particularly suitable in certain homicide constellations where it is rare for them to be replaced by other means. Guns allow (1) overcoming resistance from the victim, (2) killing several people simultaneously, (3) killing without blatant brutality, that is inflicting major injuries on the victim swiftly and without leaving the victim the chance to scream and to implore pity, thus (4) making it easy to kill for persons without a history of previous violence or personality disorders and finally (5) guns offer the offender the possibility of committing suicide immediately following the homicide. These characteristics explain why the proportion of firearm homicide greatly varies across constellations of the characteristics of homicide victims, offenders and events. In events with more than one victim followed by the actual or planned suicide of the offender, 80% of the victims who lost their lives under such circumstances were shot. The proportion was 59% of the victims (and 69% of the offenders) if the offender killed more than one victim but without having in mind to end his life immediately afterwards. In cases with one victim only, 38% of the victims were shot (and 30% of offenders used a firearm). In cases of homicide in connection with robbery, the proportion of guns is relatively high, but this obviously reflects the fact that robbers usually do not plan to kill their victims. Whenever they do, the offender's robbery plan probably failed in some critical respect. According to Swiss police statistics, guns were involved in just 12% of all recorded robberies. If a gun was used in 43% of all homicides with robbery, this certainly can be attributed to the fact that guns are far more lethal than any other weapons. Hospital data offer some interesting results in this respect: among all victims of serious violence that were shot, only 16% actually survived, whereas this proportion was 51% in cases where the assailant used an other weapon. In cases of suicide attempts, only 2% of victims survived gun shots, but 43% of victims using other lethal means survived the suicide attempt (Killias & Haas, 2001).

Do Changing Gun Ownership Rates Affect the Frequency of Fatal Events?

Given the dramatic proportions of gun involvement in certain homicide constellations, the question arises whether or not any change in the availability of guns in private homes could affect the occurrence of family killings and female homicide. In this connection, policies regarding the availability of guns to private citizens have seen a number of significant developments, though more in practice than in law. The largest effect was the downsizing of the Swiss Army. With more than 625,000 men in its ranks, the Swiss Army was the largest army in Western Europe in the early 1990s. Following the end of the cold war, the size of the army was reduced – by lowering the upper age-limit of compulsory service from 50 to 42 (in 1995) and finally to 30 (in 2004) – to some 400,000 after 1996 and to some 220,000 in 2004 (Federal Council, 2010). These changes reduced substantially the number of citizens who kept army weapons in their homes as part of their military equipment – private gun ownership dropped, according to ICVS, from 36 to 28% in 2005. Although former soldiers in good standing are still allowed to keep their guns after completing their service, less and less wish to do so: from nearly 90%, the rate dropped to 43% in 2004 and 23% in 2007 (Defence Ministry, 2008).

The frequency of firearm homicide in Switzerland, with about 55 cases per year (in 2009), is too low to assess trends following these recent changes. However, suicide rates offer a far better chance to monitor such effects, given the far higher frequency of these events that, to a large extent, occur equally in the homes. Reisch (2011) has analyzed, based on data provided by the Swiss Office of Federal Statistics, the effects of the downsizing of the army on gun suicide. Using these same data, we show that the effect was particularly large in the age-group of 20-49 that was mostly affected by the reduction of the maximum-age of military duty from 50 to 30. In 1995, which was shortly before the first reduction started to be implemented, 187 (or 38% of all suicides by men aged 20-49) committed suicide with a firearm, and 311 (or 62%) did so using some other method. By 2000, the number of firearm suicide had dropped among men aged 20-49 to 170 (36%), whereas other suicide methods remained at 300 (or 64%). In 2004, the year following the second downsizing of the army was enacted, the number of firearm suicides dropped to 116 (or 33%), and other suicides remained at 232 (67%). In 2008 (the last year for which detailed data are available), gun-related suicides had dropped to 76 (or 24%), whereas other suicides remained again fairly stable in this agegroup (245, or 76%). Thus and over the entire period, firearm suicides decreased among men aged 20-49 by 59%, whereas other suicide methods decreased by 21%. In other words, there was no switch of suicide methods from firearms to other means in this age-group. The situation is remarkably different with respect to men 50 and older who were not affected by the reduction of the maximum-age of military duty. Among men of 50 or beyond, 175 had committed suicide using a firearm in 1995; in 2008, this number was 151 (or 14% less than in 1995). Thus, the downsizing of the army and the reduced availability of firearms in the general population affected less those who, at the beginning of the series, were already beyond the maximum-age of military duty. Other suicide methods increased from 1995 to 2008 among men older than 50 from 311 to 364 in 2008 (or by 17%). These trends reflect other changes in suicide patterns in Switzerland over this period, namely the better management of serious depressions through medication and other therapeutic approaches (which reduced suicide among younger people in particular) on the one hand, and the increasing acceptance of assisted suicide (through poisoning) among elderly people in Switzerland, on the other hand. Assisted suicide has become increasingly available to elderly persons with serious health problems over recent years.

The impact of the downsizing of the army and the reduced availability of firearms among the general population on suicide patterns is consistent with other studies on suicide prevention through redesigning the environment. The first and probably most famous example was the British experience with detoxification of domestic gas during the 1960s (Clarke & Mayhew, 1988). This measure eliminated the most prominent way to commit suicide (used by about one suicidal person in two up to that point), with only very partial increase of other suicide methods. It ended with a substantial reduction in overall suicides in a period of generally increasing suicide rates in Europe. Similar effects were observed once balustrades on high bridges that often were the scene of suicides were reconstructed in a way that made it more difficult for people to jump from them (Maire, 2007; Reisch, Schuster, Jenny & Michel, 2006), or following other methods of prevention such as better control of medications (Hawton et al., 2009) or the elimination of carbon monoxide from automobile exhaust gas (Levi et al., 2003). Regarding suicide and gun ownership, a comparative study suggested similar effects as those found here (Ajdacic-Gross et al., 2006). It is unfortunate that no detailed data on homicide are available yet to assess whether the downsizing of the Army had similar effects, particularly on those types of homicide that occur at home and that are intuitively most likely to be affected by the number of firearms kept at home.

Guns and Self-Defence

An often fiercely debated issue concerns the role of firearms in self-defence. Continental laws are usually somewhat more restrictive regarding the admission of self-defence as a legal defence in case of homicide (Killias, Kuhn, Dongois, & Aebi, 2009). In this respect, Swiss criminal law is probably more similar to American than to English legal principles, thus allowing one to draw some conclusions as to the prevalence of self-defence in a comparative perspective.

According to the Swiss national database on homicide, the "reason" of the homicide was recorded in 1,276 out of 1,464 cases. In 23 cases, the offender successfully claimed to have acted (killed the victim) in self-defence or duress

(3 cases). These 23 cases represent 1.6% of all homicide offenders whose "reasons" for killing have been recorded. In 15 of these cases, a firearm was used. In 8 cases, the homicide was committed with a knife. In 9 out of the 15 cases of legitimate firearm use, a police gun was used by a police officer on duty. In the remaining six cases, three were legally owned by the person who claimed having acted in self-defence - these were the only cases of legitimate gun use by a private citizen. In other words, and considering that the database includes cases from over 20 years, it can fairly be said that guns kept in Swiss households were virtually never legitimately used to kill an assailant. During the Swiss crime victimization surveys of 1998 and 2000, owners of firearms were asked whether they ever experienced, during their lifetime (1998) or over the last 5 years (2000), a situation where they used (although not necessarily shot) their gun in selfdefence. Only 18 (in 1998 and out of a sample of 3,041 or 926 gun owners) and 15 (in 2000, out of which 6 at home and 6 out of home in a sample of 4,234 or 902 owners) admitted having used their gun. In this connection, it must be kept in mind that many of these instances likely concerned cases of illegitimate use of or threat with a firearm, as violent offenders regularly claim and self-report surveys confirm (Killias & Haas, 2002; Lizotte et al., 1994) that they "need" (and occasionally use) their weapons in self-defence. In other words, legitimate self-defence with a firearm is extremely rare in Switzerland and presumably in continental Europe in general. The main reason may be that burglars almost never enter private premises without having ascertained that the occupants are not at home. Given the far lower rates of (lethal and non-lethal) violence in Europe, it is plausible that self-defence situations are not as widespread in the general population as in America. In line with this state of affairs, a large majority of gun owners regularly respond, during crime victimization surveys, keeping one or several guns in their homes for reasons unrelated to self-protection, such as hunting, military duty, target shooting or other recreational activities (see Table 16.1).

Conclusions

As stated at the beginning of this chapter, private gun ownership is strongly correlated with female firearm homicide and firearm suicide (of both genders), but not of male firearm homicide. It has been argued that this pattern is largely explainable by the fact that guns are usually kept at home and that, unlike male homicide, suicide and female homicide predominantly occur in a private home. The data collected on large numbers of homicide events in four European countries largely confirm that the characteristics of homicide victims, offenders and events differ across nations and that the role played by guns widely varies across these constellations. The data suggest that guns are not equally dangerous in all homicide constellations, but that they are so in fatal conflicts that occur at home, where multiple victims are involved and where the offender plans, from the onset, to commit suicide after the killing. In such types of homicide, there is obviously little room for possible displacement effects given the specific characteristics of guns that allow to kill several persons at once and to commit suicide immediately following the act. The effects of changing gun ownership rates cannot be assessed, for the time being, on various types of homicide, but suicide data strongly suggest that reduced availability of guns has a substantial effect on firearm suicide without producing major shifts to other methods. This result is largely in line with research on suicide prevention. Finally, guns do not play a major role in self-defence, according to data from Switzerland (which is the only country to have relevant information on this issue at this moment). Whether Switzerland's high prevalence of guns in private homes is a "cause" of frequent homicides of women, children and generally of events related to domestic conflicts, is hard to assess on the basis of four countries. However, it is obvious from the analyses of several constellations that guns are disproportionately involved in such events, especially if the offender plans to commit suicide. The least one can say is that the data do not contradict the assumption that the widespread availability of guns favours lethal outcomes of such conflicts. Contrary to other countries, Switzerland's homicide offenders have a relatively "normal" profile and may, thus, be induced into deadly force by the easy availability of deadly weapons. Again in comparison to other (including Nordic) countries, Switzerland has one of the lowest rates of domestic violence in the Western World (Johnson, Ollus, & Nevala, 2008). In sum, nothing would predispose the country to have, among all countries with comparable data, the highest percentage of domestic murder and suicide-homicide¹ – if not the availability of guns in so many private homes.

Given the empirical evidence, the major conclusion is that comprehensive surveillance systems with standardized data should be further developed and extended to other countries. Given the high heterogeneity of homicide and the variable role of firearms in these crimes, it is critical that detailed information beyond crude general rates becomes available to the scientific community and the public at large.

References

Ajdacic-Gross, V., Killias, M., Hepp, U., Gadola, E., Bopp, M., Lauber, C., et al. (2006). Changing times: A longitudinal analysis of international firearm suicide data. American Journal of Public Health, 96(10), 1752–1755.

Clarke, R. V., & Mayhew, P. (1988). The British gas suicide story and its criminological implications. *Crime and Justice*, 10, 79–116.

Council, F. (2010). Armeebericht 2010 [Report on the Army 2010]. Bern: Defence Ministry.

Defence Ministry. (2008). Schlussbericht der Arbeitsgruppe Ordonnanzwaffen (Final Report of the ordnance weapons working group). Bern: Defence Ministy.

European Sourcebook of Crime and Criminal Justice Statistics. (2010). 4th edition, The Hague: Boom Editors and Ministry of Justice. Retrieved February 25, 2011, from http://europeansourcebook.org/ob285_full.pdf

Hawton, K., Bergen, H., Simkin, S., Brock, A., Griffiths, C., Romeri, E., et al. (2009). Effect of withdrawal of co-proxamol on prescribing and deaths from drug poisoning in England and Wales: Time series analysis. *British Medical Journal*, 338, b2270.

Hemenway, D., Shinoda-Tagawa, T., & Miller, M. (2002). Firearm availability and female homicide victimization

¹See the chapter on homicide in Switzerland, Table 16.1.

- rates among 25 populous high-income countries. *Journal of the American Medical Women's Association*, 57, 100–104.
- Johnson, H., Ollus, N., & Nevala, S. (2008). Violence against women. An international perspective. New York: Springer.
- Killias, M. (1991). Gun ownership and violent crime: The Swiss experience in international perspective. *Security Journal*, 1/3, 169–174.
- Killias, M., & Haas, H. (2001). Waffen Wieviele haben sie, wie gefährlich sind sie? [Firearms – how many own them, how dangerous are they?]. Crimiscope, 16/17, 1–10.
- Killias, M., & Haas, H. (2002). The role of weapons in violent acts: Some results of a Swiss national cohort study. *Journal of Interpersonal Violence*, 17(1), 14–32.
- Killias, M., Kuhn, A., Dongois, N., & Aebi, M. F. (2009). Grundriss des Allgemeinen Teils des schweizerischen Strafgesetzbuches (General Principles of the Swiss Criminal Code). Bern: Stämpfli.
- Killias, M., van Kesteren, J., & Rindlisbacher, M. (2001).
 Guns, violent crime, and suicide in 21 countries.
 Canadian Journal of Criminology, 43, 429–448.
- Kivivuori J., Lehti M., & Aaltonen M. (2007). Homicide Finland 2002–2006. A description based on the Finnish homicide monitoring system (FHMS). Research Brief No. 3.
- Leistra, G., & Nieuwbeerta, P. (2003). *Moord en doodslag in Nederland 1992–2001*. Amsterdam: Prometheus.
- Levi, F., La Vecchia, C., Lucchini, F., Negri, E., Saxena, S., Maulik, P. K., et al. (2003). Trends in mortality from suicide 1965–99. Acta Psychiatrica Scandinavia, 108, 341–349.
- Liem, M., Postulart, M., & Nieuwbeerta, P. (2009). Homicide-suicide in the Netherlands: An epidemiology. *Homicide Studies*, 2009(13), 99–123.
- Lizotte, A. J., Tesoriero, J. M., Thornberry, T. P., & Krohn, M. D. (1994). Patterns of adolescent firearms ownership and use. *Justice Quaterly*, 11(1), 51–74.

- Maire, V. (2007). La prévention situationnelle à l'épreuve des suicides par saut dans le vide: Le cas du pont Bessières. Revue internationale de criminologie et de police technique et scientifique, 60(4), 387–398.
- Reisch, T. (2011). Die Schweiz im glücklichen Blindflug: Armee XXI und die Prävention von Schusswaffensuiziden. *Schweizerische Ärztezeitung*, 92(1/2), 11–13.
- Reisch, T., Schuster, U., Jenny, C., & Michel, K. (2006). Suizidprävention bei Brücken: Grundlagen. Bern: Bundesamt für Strassen.
- Smith, K., Flatley, J., Coleman, K., Osborne, S., Kaiza, P., & Roe, S. (2010). Homicides, Firearm Offences and Intimate Violence 2008/09: Supplementary Volume 2 to Crime in England and Wales 2008/09. Retrieved February 25, 2011, from http://tna.europarchive.org/ 20100413151426/homeoffice.gov.uk/rds/pdfs10/ hosb0110.pdf
- Soothill, K., & Francis, B. (2012). Homicide in England and Wales. In M. C. A. Liem & W. A. Pridemore (Eds.), Handbook of European Homicide Research. New York: Springer.
- Soothill, K., Francis, B., Ackerley, E., & Fligelstone, R. (2002). Murder and serious assault: What criminal histories can reveal about future serious offending. Police Research Series Paper 144, London: Home Office.
- van Dijk, J. J. M., Mayhew, P., & Killias, M. (1990). Experiences of crime across the world: Key findings of the 1989 International Crime Survey. Kluwer Law and Taxation Publ. Deventer: Boston.
- van Dijk, J. J. M., van Kesteren, J., & Smit, P. (2007). Criminal victimisation in international perspective. Key findings from the 2004–2005 ICVS and EU ICS. Den Haag: Boom Juridische Uitgevers.
- van Kesteren, J. Guns and victimisation risks. Results from the 2004/05 ICVS and 2005 EU ICS. (forthcoming).