Please note: This is not the final version of this paper. It has later been published as "Personal Security since 1820", with Winnie Bierman, Péter Földvari and Jan Luiten van Zanden (2014) in Jan Luiten van Zanden, Joerg Baten, Marco Mira d'Hercole, Auke Rijpma, Conal Smith, Marcel Timmer (eds.), *How Was Life? Global Well-being since 1820*. OECD, Paris, 139-158.

CHAPTER 8: PERSONAL SECURITY – HOMICIDE, INTERSTATE WAR, AND CIVIL WAR

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Introduction

1. Personal security is a very important component of the standard of living. Security is not only reduced by deficient health or poverty – on which separate chapters are included in this volume – but also by serious crimes and by war and other large-scale conflicts. These are potentially important threats to personal security of human beings, hence recent trends of homicide rates, for example, have received great attention in the general public (UNOCD, 2011). Other threats to personal health and life cannot be studied with consistent definition. For example, consistent evidence on terrorism, environmental hazards or accidents at the workplace are not available for the 19th and early 20th century – at least not on a global scale.

2. People's well-being is certainly higher, if they do not have to fear to become victim of a crime, especially a serious crime such as homicide. Even if a crime does not happen to an individual, the victimization of a close relative or friend has a disastrous influence on the individual's welfare (OECD, 2011). The change in the crime level may also affect well-being substantially; a rise of violent crime, even if the absolute level is still relatively low, may contribute to feelings of insecurity, in particular when it receives a lot of media coverage. On the other hand, a declining crime level may result in greater trust in the government which apparently is effective in its actions. In the following we will primarily focus on the occurrence of homicides as the main concept of this chapter. Why use this type of crime and not others? Development specialists as well as historians of crime have studied homicide rates more often than other crimes for a number of reasons:

1. Homicides are relatively clearly defined, whereas a number of other crimes were interpreted and counted differently in various cultures and periods.

2. The degree of measurement error is hence probably lower than among other crimes.

3. Social differences of this type of crime are comparatively modest. All social groups are affected by this type of crime, albeit poorer strata of society are more likely to be victims

4. Homicide is a very important crime -- for the victim, for the offender, and for the public which might invest large resources to prevent this type of crime.

5. Earlier studies have argued that other violent crimes tend to be correlated with homicide rates (OECD, 2011).

3. Apart from our main indicator for personal security, the homicide rate, we also focus on the incidence of civil war and war between countries. Both events obviously present large risks for personal security and individual survival. For both kinds of large-scale conflicts, it would be ideal to know the number of victims per population. However, such detailed information is not available for many countries during early periods. Especially developing countries during the 19th century did not create consistent statistics on this. Hence, in order to obtain consistent information also on the earlier periods and poorer countries, we will calculate the share of countries in which a large-scale conflict (war or civil war) broke out in a given decade, and aggregate this by world region.

Description of the concepts used

4. We use the official definition of intentional homicide as "unlawful death deliberately inflicted on one person by another person" (OECD, 2011).[1] This excludes inter-state war related killing, because at least soldiers are legitimised to kill each other in such situations. The victims of the civilian population killed in inter-state-war-related activities are traditionally also excluded from homicide rates, as well as civil war victims, even if this might not be a priori clear from the definition above. Hence, it is even more important to consider these three indicators in the present chapter together. As the size of population is obviously important for the number of homicides, the ratio of homicide per 100,000 inhabitant is calculated. This large number in the denominator already indicates that homicide is a rare crime in most societies, even in historical periods (OECD, 2011).

5. The Conflict Catalog by Peter Brecke (1999) is the source used for large-scale conflicts, which are conflicts with more than 32 casualties.It is not the only data source which covers the entire period studied here, but it has the advantage that it includes all major conflicts both among and within countries. Other datasets, such as the UNDP/PRIO database, only include conflicts with more than 1000 casualties (Blattman and Miguel 2010). Another high quality alternative data source is the Correlates of War (http://www.correlatesofwar.org/), that covers the sample period and also has more data on the number of casualties than the Conflict Catalog, but these are battle casualties and as a result they strongly underestimate total fatalities.[2].

Brecke's conflict catalog includes data on 3213 internal (revolutions, rebellions, civil wars and unrests, ethnic cleansings) and external conflicts (wars, interventions) from 1400 to 2000. The original dataset does not make an explicit distinction between internal and external conflicts; the subdivision was based on the catalog's description complemented by online information sources. This resulted in two binary datasets, where a country that is involved in a conflict in a given year is assigned the value one, and zero otherwise. A country was classified as participant in an external conflict if it were either officially at war, or if it actively participated in a conflict by sending troops. As a result, even if a country was involved in a conflict, it is possible that its territory was relatively safe (like Canada or Australia during World War II). The same bias does not apply for internal conflicts, which all happened on own soil.

Table 8.1. Indicators of the concept used:

Concept	Description	Sources
homicide	Unlawful death deliberately inflicted on one person by another person	Various, see text; sample period 1820-2010.

[1]UNODC 2014, see http://www.unodc.org/documents/data-and-analysis/IHS-rates-05012009.pdf

[2]For World War One the Correlates of War reports 8.587 million dead, while current estimates of total fatalities are around 15-17 million. Similarly, for the Spanish Civil War (1936-39) 466,300 military causalities are reported, but the total number of deaths is estimated between 500 thousand and 1 million.

internal conflict	Armed conflicts that took place within a single country, like revolutions, uprisings, civil wars or unrests; also genocides and political cleansings are identified as internal conflicts.	Conflict Catalog by Peter Brecke (Brecke 1999). The data is based on secondary sources, like historical atlases, monographs, articles, encyclopedias. While the original dataset covers 1400-2000, we only use the post 1820 period.
external conflict	Armed conflicts in which at least two countries were involved. Any country that was officially involved in the conflict is classified as participant, regardless of the geographical location of actual combat zones.	

Historical sources

6. We begin with a selective description of the more prominent sources on homicide data.

7. The most important source for contemporary homicides rates are the UNODC statistics, which cover the period from the 1950s to the present, but with a very uneven coverage of countries and world regions. The most important dataset which incorporates the UNODC statistics supplemented with a large number of historical time series is the Comparative Homicide Time Series (CHTS) dataset, put together by Martthi Lehti and Tapio Lappi-Seppälä (from the Finnish National Research Institute of Legal Policy (NRILP)). It integrates the available time series from various international agencies (including WHO) and the available historical work on homicides rates in a consistent framework, and is therefore a very valuable source for this chapter. The researchers have tried as much as possible to include sources on public health, only when reliable cause-of-death data was not available they used sources from criminal justice. When neither public health or criminal justice sources were available, they looked into media sources (on-line) (Lehti, 2013). It also covers the historical data presented on the Historical Violence Database (http://cjrc.osu.edu/research/interdisciplinary/hvd), an international collaborative project aimed at bringing together historical datasets concerning violence. Finally, we would like to mention the historical research carried out by Manuel Eisner, who has charted, for parts of Europe, the long-term evolution of this form of violent crime since the late Middle Ages and constructed national time-series of homicide rates covering seventeen European countries over a period of 160 years, from 1840 to the present. Eisner collected this data from three sources: previous publications, official statistical publications and by approaching scholars and statistical offices for specific data (Eisner, 2008). Finally, we have scanned a large number of historical sources and studies to extend the dataset, in particular for the pre 1950 period.

8. There are basically two sources available for this: from criminal justice (courts, police) and from public health (based on the causes of death statistics); for some countries both sources are available, demonstrating small differences in coverage. Mortality or public health statistics are considered more reliable than criminal justice statistics, firstly because there are simply more historical public health data available than there are criminal justice data, secondly because the criteria used by medical examiners remained relatively stable over time and thirdly because the data is usually less influenced by changes of legal frameworks (Eisner, 2008). We therefore expect that criminal records are more likely to underestimate the actual numbers of homicides than mortality statistics, but for the recent period the differences are on average small and in the opposite direction. For a sample of 26 countries for which we have data from both sources we calculated an average based on criminal records of 14.2 and based on death statistics of 12.6, but reassuringly the coefficient of correlation between both samples was as high as .98.[1] For the recent period,

police statistics for Western Europe show sometimes higher homicide rates than medical statistics, because foreigners who are killed in a Western European country show up in the police, but not in the medical statistics (because these refer often to the country of citizenship, not to the country in which a homicide took place). Globalization and international integration also affects the 'landscape of murder'.

9. Summing up, thanks to the existence of a considerable body of scholarly work, long-term time series are available for some countries, especially in Western Europe and North America; however, in other countries the documentation before 1950 is limited. Hence, the availability varies among world regions. Western Europe and European settlements have been the object of homicide studies even for the period before 1950. Other world region evidence is mostly limited to the post-1950 record, but we were able to compile some earlier evidence for a small number of countries in Latin America (Brazil), Asia (Sri Lanka, Japan), and Africa (South Africa).

10. The sources for Brecke's Conflict Catalog range from secondary literature, monographs, articles, encyclopedias, and historical atlases. The dataset employs non-English sources as well, notably in Chinese, Japanese and Russian. The detailed list of sources can be found in the appendix of Brecke (1999).The catalog is still being expanded in terms of additional variables.

Comparability issues and data limitations

Homicide rates

11. Three issues should be kept in mind when interpreting historical homicide rates:

Do homicide data represent overall crime rates?

12. Homicide, when compared with other crimes such as contact or property crimes, is a crime that does not occur very often. This leaves the question whether homicide rates can be used as an indicator for overall crime rates in a certain society. As explained, homicide rates are an accepted indicator of overall violence in modern countries. The OECD *How's life?*report states:

> "There is a strong correlation between the number of international homicides and the percentage of people who declare having been assaulted [… and] child death rate due to negligence, maltreatment or physical assault. […] OECD countries with high homicide rates also experience high levels of physical assault, both inside and outside the household. This suggests that we can talk about an "overall level of crime/insecurity" experienced by society" (OECD, 2011, 250).

13. However, this does not mean that the correlation between homicide rates and overall rates of violence is perfect; it is possible that over time and between different places the level of correspondence varies. To examine whether any correlation exists between homicide rates and rates of other types of crime, data is needed for both types of crime, unfortunately the figures on other types of crime are usually not available (but see Tornu 2013 for an analysis of trends in other kinds of crime). Some attempts have been made to measuring this correlation in the past, for example for Swedish cities during the nineteenth and twentieth centuries and during the sixteenth and seventeenth centuries. These studies show a clear link. However, this does not mean that the trends in homicide rates have always reflected overall rates in crime; using homicide rates as an indicator for overall crime rates is therefore not without difficulties (Eisner, 2012).

How big is the 'dark figure'?

14. There is always the question of how many homicides are not reported and recorded. The homicide rates that are available, have come to the attention of the police and/or the medical officials, but, perhaps especially in states with limited capabilities, murders may go unrecorded. As can be imagined, retrieving

useful and accurate sources becomes more problematic the further back in time one goes and the quality of statistics may also be lower for contemporary low-income countries (Eisner, 2012). The probability of a large 'dark figure' is also influenced by the forensic technologies at hand in the said societies; Eisner has noted that infanticide in nineteenth century Europe has probably been underestimated in the data because it was easy to disguise and difficult to proof (Eisner, 2008).We therefore consider all our homicide rates as lower bound estimates.

How reliable are the available data?

15. Official data on time series of homicide rates can still have their limitations. For instance, it can differ per region and per period how crimes are recorded, the police can change their recording system, which can have an effect on the overall rates recorded. Furthermore, what is perceived as homicide can change over time, and can also differ per society. For example, the estimate of the homicide rate can become problematic during times of civic or political unrest, wars or genocide. The bureaucratic system may not be in the best state to record homicides. Moreover, death caused by homicide or by killing during war or genocide may become harder to distinguish (Eisner, 2012).[2]The available estimates for historic societies are often based on case studies of small geographical scale, and not on national sources. The representativeness of these local studies for entire countries can be questioned. But also the national estimates for modern states can hide regional and even local differences in homicide rates (Eisner, 2012).

16. A more technical bias is the change of lethality of violence over time. The share of persons dying from the same type of severe violence has declined substantially during the last 200 years (OECD 2011, p. 248, citing Aebi, 2004). Modern medicine could not help to survive violence which until the early 19th century. After this, a modest increase in survival set in. After the 1970s and especially after the wide-spread use of cell phones (which reduced the time until an emergency team would appear) the share of death outcome after heavy violence declined. This obviously creates a small downward bias in the long-term estimates.

Internal and external conflicts

17. For civil wars, the scholarly discussion of data limitations and comparability issues fills book shelves. We already mentioned some of the problems here: countries may be involved with large-scale external conflicts without this having a large effect on the well-being of the population (in particular when wars are fought on foreign soil). The scale of conflicts are not taken into account: the Taiping rebellion with its perhaps 20 million casualties has the same 'value' as the Spartacist revolt in Germany in 1919 with 119 victims. Unfortunately, we lack the systematic data to control for this. The sources range from secondary literature, monographs, articles, encyclopedias, and historical atlases. One should bear in mind that only those conflicts are included that has been recorded, which makes it likely that the number of conflicts will be underestimated as we head back in time, and especially for the pre-1870s century Africa. Also change in the borders of countries is likely to introduce an error in the calculation since population data are only available for current borders, while conflict data is based on historical (changing) borders. Since there were less countries in the 19th century than in the 20th, and on average they were larger in term of population, we can expect that this also introduces a bias in the trend for the 19th century.

Table 8.2 Quality table homicide rates

	Western Europe (WE)	Eastern Europe (EE)	Western Offshoots (WO)	Latin America and Caribbean (LA)	Sub-Sahara Africa (SSA)	Middle East and North Africa (MENA)	East Asia (EA)	South and South-East Asia (SSEA)
1820	3				4			

1870	3			3				
1913	1	1	1	1			1	1
1950	1	1	1	1			1	1
1973	1	1	1	1	1	1	1	1
2008	1	1	1	1	1	1	1	1

Note: 1. Official : the product of official statistical agency (national or international); 2. High quality: the product of economic-historical research using the same sources and methods as applied by official statistical agencies ; 3. Moderate quality: economic historical research, but making use of indirect data and estimates and ;4. Low quality

Description of trends in the data over time and across countries

Homicide rates

18. Historical research on long-term trends in crime has focused very much on the spectacular decline of the homicide rate in Western Europe since the late Middle Ages (Eisner 2003; Spierenburg 2008). In the 13th-15th centuries homicide rates between 30 and 50 were usual – and it may even have been higher in Italy – but from the 16th century onwards all regions for which data are available registered a sharp long-term decline (see Table 8.1). In North-Western Europe this continued until the start of the 20th century, when the homicide rate had fallen to about 1 per 100,000. In Italy (and probably also in Eastern Europe, for which historical data are much scarcer) the decline was less dramatic, but it eventually reached about the same levels as in Western Europe (Table 8.1). The literature discussing the reasons for this pacification of Western Europe points to various driving forces behind the decline, such as the process of state formation resulting in the monopolization of violence by the state, and the changes in modes of behaviour and legal codes (in the tradition of Elias called 'civilization') resulting in less violent ways of conflict resolution (Spierenburg 2008; Pinker 2011).

Table 8.1. Long term homicide rates in Europe

Period	England	Netherlands and Belgium	Scandinavia	Germany and Switzerland	Italy
13th-14th centuries	23	47	…	37	(56)
15th century	…	45	46	16	(73)
16th century	7	25	21	11	47
17th century:					
first half	6	(6)	24	11	(32)
second half	4	9	12	(3)	…
18th century:					
first half	2	7	3	(7)	(12)
second half	1	4	,7	(8)	9
1800-1824	2	2	*1*	3	18
1825-49	*1.7*	…	*1.4*	4	15
1850-74	*1.6*	*.9*	*1.2*	2	12
1975-99	*1.3*	*1.5*	*.9*	*2.2*	*5.5*
1900-1924	*.8*	*1.7*	*.8*	*2.0*	*3.9*
1925-49	*.8*	*1.3*	*.6*	*1.4*	*2.6*
1950-74	*.7*	*.6*	*.6*	*.9*	*1.3*
1975-94	*1.2*	*1.2*	*1.2*	*1.2*	*1.7*

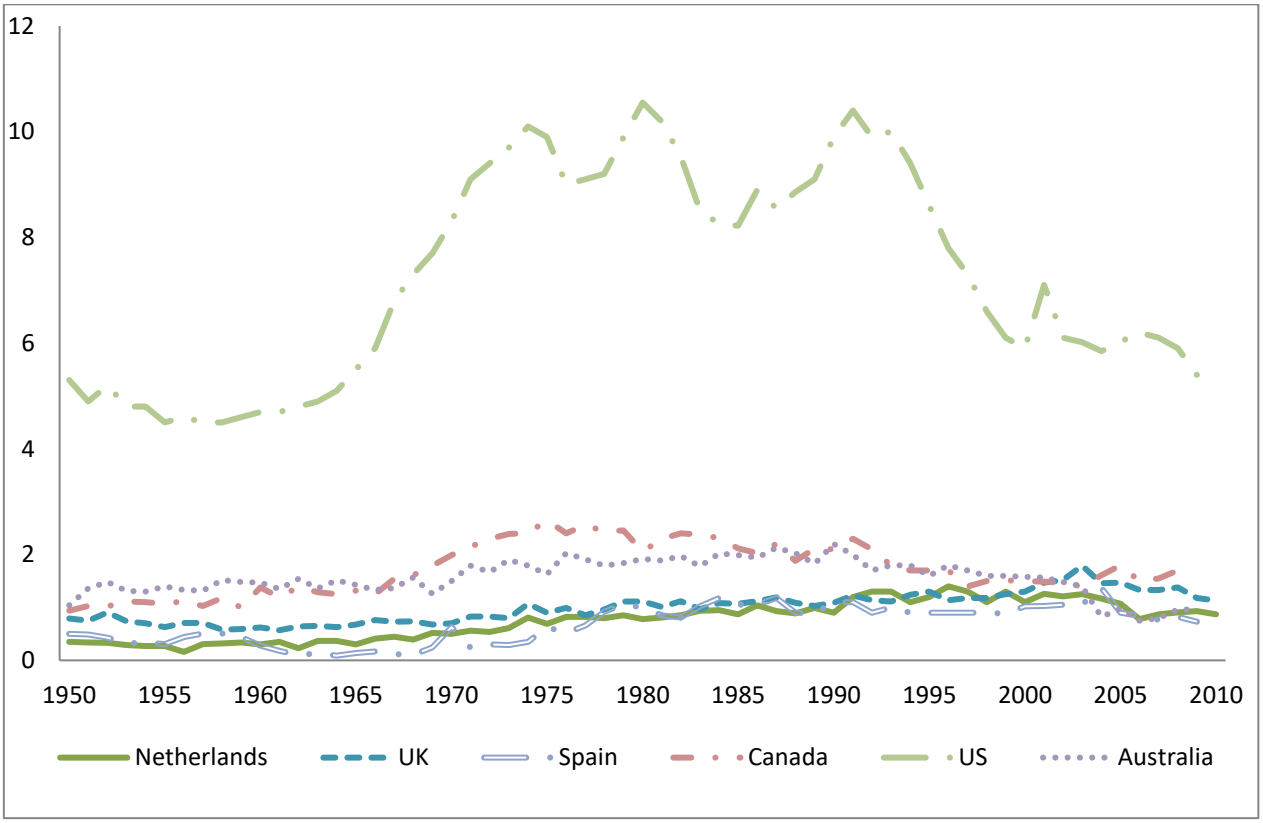
Source: Eisner (2003), table 1: Homicide Rates in Five European Regions; numbers in parentheses are conjectures based on a limited number of observations (often one or a few local or regional case studies). Data referring until the 19th century only refer to prosecuted cases only, which can caused downward biases.

19. A similar decline occurred in the United States, but due to different 'starting conditions' levels of violence were much higher there than in Western Europe, and the gap persisted into the 20thand even the 21th century. Whereas in Western Europe during the 20th century the homicide rate fluctuated between .5 and 2, it ranged from about 5 to 10 in the US, without showing a clear trend towards converging to the European level (see Figure 8.1 below). The 'divergent' development of US violence is one of the puzzles of historical criminological research (but see Spierenburg 2006 for a potential explanation); as Figure 8.1 shows, also other 'western offshoots' such as Canada and Australia with a potential similar frontier legacy, converged to the European levels well before 1950, but the US persisted in its own regime. One interpretation is that 'democracy came too early' (Spierenburg 2006); whereas in Europe the state first disarmed the population, and then became democratic, in the US democracy preceded the creation of a monopoly of violence, which made it almost impossible to ban or suppress gun ownership. What is also clear from Figure 8.1 is the rise of crime during the 1960s and early 1970s, which was strongest is the US, but also occurred in many other countries. Homicide rates of a sample of 16 major European countries almost doubled between the 1960s and 1990s (from 0.84 to 1.56 per 100,000), but fell again afterwards (1.31 in the next decade). The rise was particularly strong in the UK and Ireland, where homicide rates roughly doubled between the 1970s and 2000s, whereas France and Germany had almost no increase. Italy, Spain and Sweden saw increases of around one half (Spierenburg 2008).

20. This crime 'bulge', also noticeable in other crime and violence related statistics, has been linked to the anti-authoritarian 'liberation' of the 1960s, to demographic changes (the passing through of the postwar population explosion), to weapon laws, and to the rise of organized crime and the trade in drugs (Pinker, 2011; Spierenburg 2008). Eastern Europe saw a similar, but even more extreme increase of crime after the collapse of communism in the early 1990s. Homicide rates in Russia rose from the already high level of 9.8 in 1988 to 32.4 in 1994, but declined afterwards to the still rather high level of 15.1 in 2009. In much more peaceful Poland the figures for the same years are 1.8 (1988), 3.0 (1994 – also the peak in the Polish series), and 1.1 (2009) (see also Table 8.3).

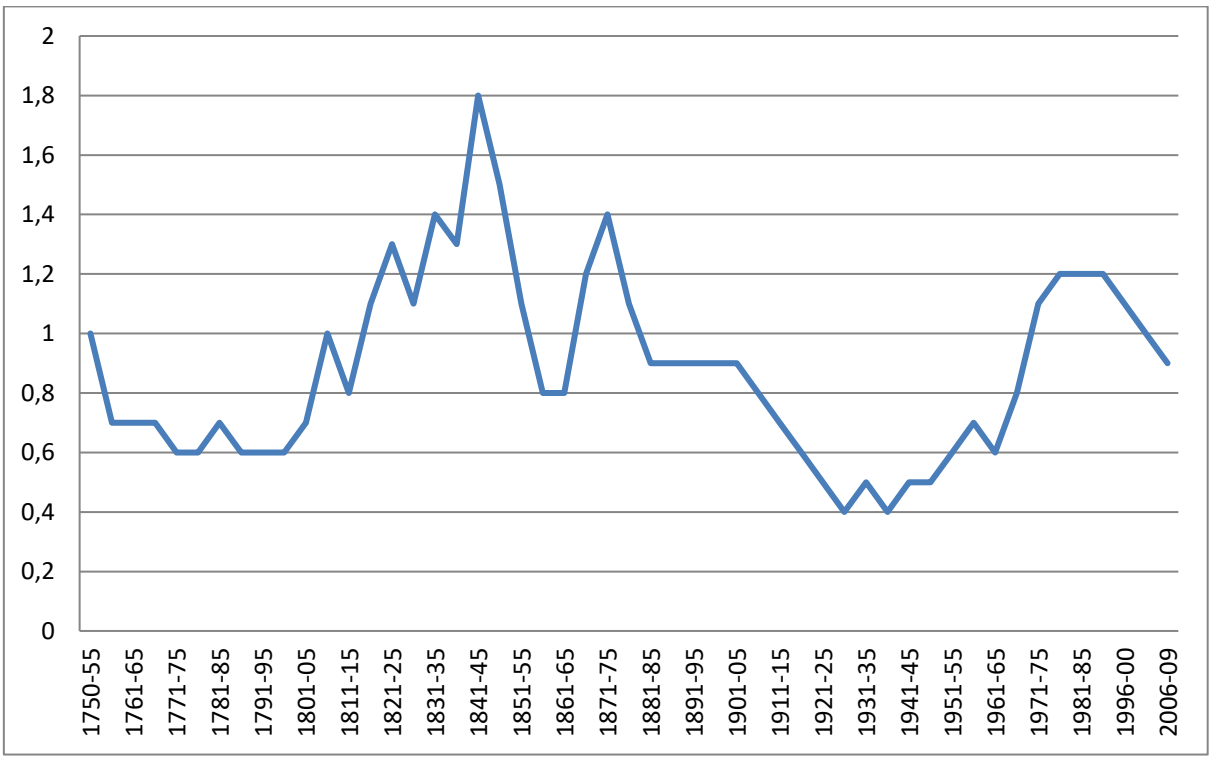
21. Western Europe may have seen a similar 'bulge' of crime before, as the long-run series of Sweden illustrates. During the first stage of industrialization – between 1750 and 1830 – there was probably a comparable rise in homicides, perhaps also linked to the 'liberal' ideas of the Enlightenment. The period has also been denoted with the – heavily debated -- concept of the 'first sexual revolution', because of the rise of the number of illegitimate births (Shorter 1972, Kok 1991). But this period of increased 'deviant' behaviour (also known at the time as a version of the 'social question') was soon followed by renewed processes of social integration, as the Swedish data illustrate (see Figure 8.2). However, also improvements in recording techniques can potentially explain a part of the 'increase' in homicides.

Figure 8.1.Homicide rates 1950-2010, selected Western countries



Source: NRILP CHTS dataset

Figure 8.2.Long-term homicide rates Sweden, 1750-2009, 5-year average

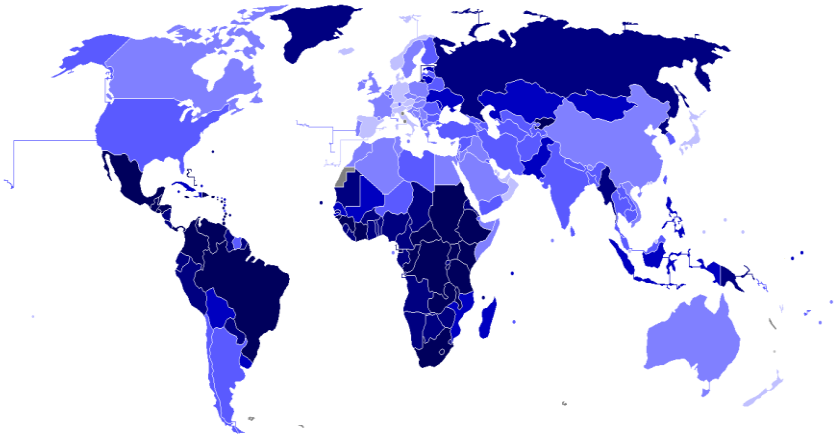


Source: Von Hoffer (2008), table 1.1: Homicide, 1750-2009. Vital statistics. 5-year average.

22. The huge decline of criminal violence in western Europe has been the topic of some debate. It plays a large role in Stephen Pinker's book *The Better Angels of our Future*, in which he develops the idea of an overall decline in violence in the past hundreds of years; he argues that other forms of violence (war, genocide, the death penalty) also show a somewhat similar decline, in particular when measured on a per capita basis. He identifies five causes of the increased security: the rise of the modern nation state with its monopoly of violence; commerce and economic development enhancing peaceful coexistence of nations; the increased respect for the interest and values of women; 'cosmopolitarianism' resulting from increased literacy and the development of the media; and finally the increased role for reason in interpersonal and international exchanges (Pinker, 2011). It is indeed striking that the decline of the homicide rate started relatively early in the part of Europe that saw an early development of nation states- following in the wake of the Reformation, with its stress on literacy (for reading the Bible) – and an equally early commercialization of economic life.

23. Contemporary world maps of the global spread of the homicide rate also show the very low levels of criminal violence in Western Europe (see Figure 8.3). When moving away from the North Sea one finds higher levels of violence in Eastern Europe (where an 'eruption' of violence happened after the collapse of communism), in the southern margins of Europe, and in particular crossing the Mediterranean into Africa and the Middle East (but statistics may be misleading here: as already mentioned Iraq for example has a striking low homicide rate, which apparently excludes the impact of terrorism and clan warfare). The 'darkest' regions in the world –those with the lowest levels of personal security – are clearly Central and Southern Africa, Latin America (the Colombia/Venezuela region having the highest rates during this period), and Russia, whereas Afghanistan and Burma also stand out within Asia.

Figure 8.3.World map of homicide rates per 100,000 inhabitants most recent years



Legend:

0-1
1-2
2-5
5-10
10-20
20<

Source: http://en.wikipedia.org/wiki/File:Map_of_world_by_intentional_homicide_rate.png (visited 20-11-2013), figures are from the UNODC Homicide statistics, 2012.

Table 8.2.a.Decadal regional average homicide rates, 1820s – 2000s

	Western Europe (WE)	Eastern Europe (EE)	Western Offshoots (WO)	LatinAmericaanCaribbean (LA)	Middle East and North Africa	Sub-Sahara Africa (SSA)	East Asia (EA)	South and South-East Asia (SSEA)	World
1820s	1.92	-	-	-	-	5.20	-	-	2.22
1830s	1.92	-	-	5.62	-	-	-	-	4.17
1840s	2.31	-	-	2.82	-	-	-	-	2.34
1850s	2.06	-	-	5.61	-	-	-	-	2.33
1860s	1.72	-	-	5.55	-	-	-	-	2.02
1870s	2.68	-	-	5.93	-	-	-	-	2.89
1880s	3.07	7.60	-	4.15	-	-	1.09	1.60	3.23
1890s	2.61	-	-	-	-	-	3.63	2.90	2.79
1900s	2.57	-	2.57	5.07	-	3.59	3.43	4.25	2.71
1910s	2.27	4.24	7.28	18.14	1.13	8.82	1.28	4.41	3.27
1920s	2.07	4.24	7.21	7.57	-	-	4.38	4.38	3.96
1930s	1.35	5.35	7.28	14.99	-	-	2.68	5.77	3.67
1940s	1.08	5.74	5.16	18.14	2.55	1.50	1.65	7.39	3.45
1950s	1.11	1.63	4.28	21.92	1.13	1.65	2.12	2.88	3.86
1960s	0.89	1.42	5.10	12.88	1.39	8.82	1.52	3.17	3.80
1970s	1.07	1.56	8.25	10.55	0.96	1.78	1.28	3.93	4.70
1980s	1.27	6.52	7.96	16.16	0.64	1.54	1.66	4.41	6.00
1990s	1.38	13.95	7.52	20.49	1.56	16.59	1.68	4.98	8.26
2000s	1.19	12.13	5.32	20.76	2.23	19.33	1.77	4.56	6.92

Table 8.2.b. Number of countries of which homicide rates are available per region

	Western Europe (WE)	Eastern Europe (EE)	Western Offshoots (WO)	LatinAmericaanCaribbean (LA)	Middle East and North Africa	Sub-Sahara Africa (SSA)	East Asia (EA)	South and South-East Asia (SSEA)
1820s	2	0	0	0	0	1	0	0
1830s	2	0	0	1	0	0	0	0
1840s	6	0	0	1	0	0	0	0
1850s	6	0	0	1	0	0	0	0
1860s	7	0	0	1	0	0	0	0
1870s	11	0	0	1	0	0	0	0
1880s	12	1	0	1	0	0	1	1
1890s	11	0	0	0	0	0	2	1
1900s	12	0	2	1	0	1	2	1
1910s	12	0	3	1	0	1	2	1
1920s	13	3	4	1	0	0	1	1
1930s	13	2	4	1	0	0	1	1
1940s	13	2	4	4	1	1	1	1
1950s	19	3	4	14	2	1	2	5
1960s	19	4	4	26	3	2	2	4
1970s	19	4	4	35	4	1	2	4
1980s	20	20	4	32	4	4	4	4
1990s	20	21	4	38	8	3	5	10
2000s	21	21	4	42	21	46	7	20

Table 8.3.Decadal average homicide rates selected countries

	Western Europe (WE)							Eastern Europe (EE)		Western Offshoots (WO)			Latin America an Caribbean (LA)			Middle East and North Africa		Sub-Sahara Africa (SSA)			East Asia (EA)		South and South-East Asia (SSEA)		
	UK	Netherland	France	Germany	Italy	Spain	Sweden	Russia/US	Poland	Australia	Canada	US	Argentina	Brazil	Mexico	Egypt	Turkey	Kenya	Nigeria	South Afric	China	Japan	India	Indonesia	Thailand
1820s	-	-	-	-	-	-	1,16	-	-	-	-	-	-	-	-	0	-	-	-	5,2	-	-	-	-	-
1830s	-	-	-	-	-	-	1,29	-	-	-	-	-	-	5,62	-	-	-	-	-	-	-	-	-	-	-
1840s	1,70	-	2,2	2,8	-	-	1,68	-	-	-	-	-	-	2,82	-	-	-	-	-	-	-	-	-	-	-
1850s	1,60	-	2,2	2,3	-	-	1,12	-	-	-	-	-	-	5,61	-	-	-	-	-	-	-	-	-	-	-
1860s	1,70	-	1,7	1,7	-	-	1,07	-	-	-	-	-	-	5,55	-	-	-	-	-	-	-	-	-	-	-
1870s	1,60	-	1,8	1,9	6,8	-	1,14	-	-	-	-	-	-	5,93	-	-	-	-	-	-	-	-	-	-	-
1880s	1,50	-	1,9	1,5	6,2	9,1	0,9	-	-	-	-	-	-	4,15	-	-	-	-	-	-	-	-	-	-	-
1890s	1,09	-	2	1,5	5,1	6,8	0,88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,64	-	-	-
1900s	0,91	0,5	2,1	1,9	3,9	8,2	0,93	-	-	2,17	-	2,59	-	-	-	-	-	-	-	-	-	3,42	-	-	-
1910s	0,75	0,35	1,3	2,4	3,62	5,3	0,71	-	-	1,53	1,53	6,06	-	-	-	-	-	-	-	-	-	2,82	-	-	-
1920s	0,74	0,26	0,9	2,1	5,19	-	0,49	-	-	1,23	1,41	8,09	-	-	-	-	-	-	-	-	-	-	-	-	-
1930s	0,79	0,45	1	1,6	1,87	-	0,49	-	-	0,96	1,38	8,21	-	-	-	-	-	-	-	-	-	-	-	-	-
1940s	0,83	0,52	0,8	1,2	-	1,4	0,5	-	-	1,07	1,12	5,78	-	-	-	-	-	-	-	-	-	-	-	-	-
1950s	0,71	0,30	1,12	0,96	2,37	0,43	0,70	-	1,11	1,35	1,06	4,77	-	-	30,66	1,1	-	-	-	-	-	2,15	2,49	-	8,41
1960s	0,67	0,37	1,08	1,1	1,23	0,16	0,73	-	0,95	1,42	1,40	5,74	6,02	-	20,17	1,10	-	-	-	-	-	1,54	2,50	-	12,91
1970s	0,90	0,70	0,91	1,25	1,49	0,56	1,09	-	1,08	1,79	2,38	9,37	6,34	8,32	16,64	1,12	0,77	-	-	-	-	1,25	2,86	-	18,92
1980s	1,08	0,91	1,14	1,17	1,84	0,99	1,28	10,79	1,71	1,95	2,18	9,07	4,80	14,46	18,13	0,69	0,49	-	-	-	-	0,86	3,46	-	17,10
1990s	1,19	1,21	0,98	1,06	2,72	0,95	1,22	24,6	2,66	1,78	1,78	8,6	4,60	22,21	16,45	-	1,47	-	1,42	58,26	-	0,6	4,17	-	8,32
2000s	1,42	1,06	0,74	0,62	2,46	0,96	0,97	24,05	1,52	1,13	1,56	6,06	6,06	26,40	10,95	1,02	0,57	20,45	1,48	41,69	1,59	0,50	3,13	8,5	6,43

24. Our data add historical perspective to this global map of crime (Table 8.2). Because the number of countries on which the regional averages are based, varies, trends are sometimes difficult to interpret. We already sketched the most significant trends: the gap between Western Offshoots (dominated by the US) and Western Europe, the convergence process within Western Europe (Table 8.3), the absence of convergence in Eastern Europe (but Poland moves to Western European levels, Russia does not), the very high levels of violence in Latin America, the strikingly low registered homicide rates in the MENA, and the great variation in both Africa and Asia, regions for which historical data are scarce. There is no clear trend in global homicide rates – changes in the world average are again heavily influenced by variation in the number of countries for which data are available. In most regions for which we have long time series, we notice a long-term decline of homicides; Latin America is probably the exception here. But this decline ends in the 1960s in Western Europe and its Offshoots, and in the 1990s in the (post-)communist world.

25. A number of determinants have been suggested to explain homicide rates (LaFree 1999; Paré 2006; Pratt and Cullen 2005; Nivette 2011). Inequality has been argued to increase homicide, partly because of envy-related effects, and perhaps also because of the high psychic pressure on inhabitants of countries with substantial inequality. Countries such as South Africa, Brazil and Russia have both high homicide rates and either high inequality, or they experienced recently strong increases in inequality (in the case of Russia). Another important determinant is the presence of criminal gangs, especially gangs involved in drug traffic. This probably accounts for the high levels of crime in Latin America. A large share of all drugs traded in the U.S. passes through Honduras, and this country has a horrendous homicide rate. The same was true until recently for Colombia, even if the Colombian homicide rate has declined substantially over the last few years. A related factor is the presence of young males (who tend to be most active in criminal gangs). Most victims and most offenders nowadays are of the age group 20 to 30, and most of them are male. Ageing societies in contrast seem to be less murderous, even after controlling for other criteria.

Internal and external conflicts

26. Another way to look at personal safety from premature, violent death is to estimate the probability that an average individual inhabits a country that becomes involved in a conflict (Figure 8.4). This is estimated by the average of the occurrence of a conflict in a given year (a binary variable) weighted by population (the last two columns of Table 8.4).

Figure 8.4.Total number of countries participating in an internal and external conflict

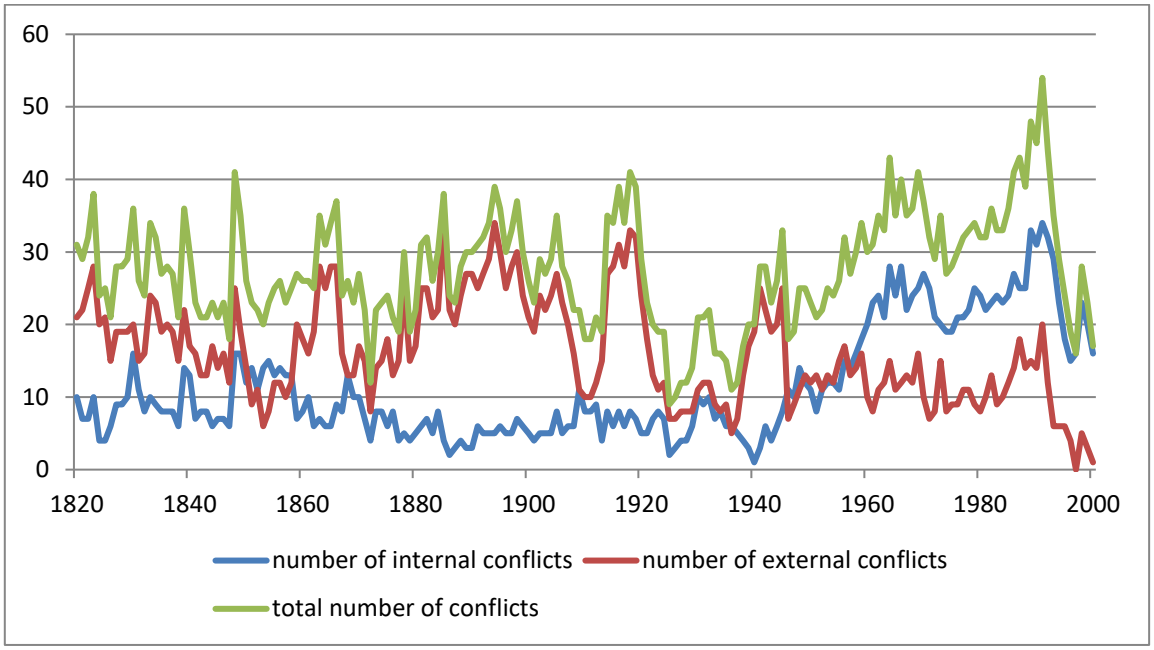
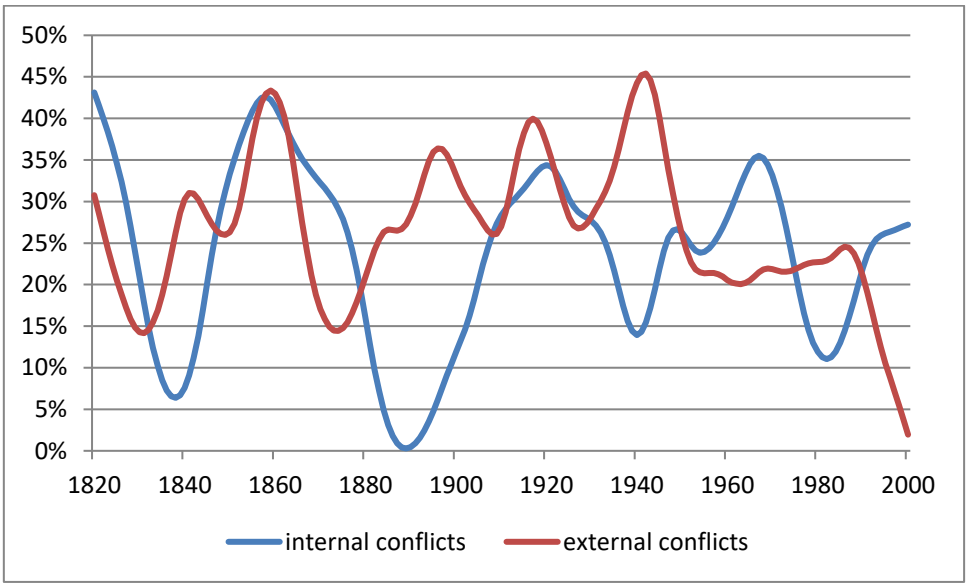


Table 8.4.Decadal average N of countries involved in internal and external conflicts

	number of countries involved in			probability of a random individual to be involved in a country having	
	internal conflicts	external conflicts	any conflicts	internal conflicts	external conflicts
1820s	7.6	20.9	28.5	35%	23%
1830s	9.8	19.3	29.1	12%	18%
1840s	9.4	16.2	25.6	18%	32%
1850s	12.6	11.4	24.0	42%	34%
1860s	8.3	20.4	28.7	34%	30%
1870s	6.4	15.5	21.9	29%	17%
1880s	4.7	23.7	28.4	4%	25%
1890s	5.3	27.9	33.2	5%	37%
1900s	6.0	20.7	26.7	20%	27%
1910s	7.2	22.6	29.8	30%	37%
1920s	5.1	11.6	16.7	30%	27%
1930s	6.8	10.3	17.1	24%	34%
1940s	7.5	17.0	24.5	22%	41%
1950s	12.8	13.6	26.4	23%	24%
1960s	23.9	12.0	35.9	34%	20%
1970s	22.0	9.7	31.7	22%	22%
1980s	25.0	12.3	37.3	12%	23%
1990s	24.1	7.6	31.7	28%	11%

27. In the period 1820-2000 we can observe a slight increase in the number of countries that were involved in some kind of conflicts, but this is not a surprise as the number of conflicts was increasing in the sample period. An interesting trend can be observed: the number of countries that were involved in an external conflict declined considerably from 20.9 in the 1820s to 7.6 in the 1990s while the number of countries that had some internal conflict increased from 7.6 to 24.1 in the same period (see Table 8.4). This period coincides with an increase in the number of countries, decolonization (especially from the 1950s onward) and an increasing worldwide democratization (see the chapter on political institutions).

Figure 8.5. Probability of a randomly chosen individual to be involved in an armed conflict (HP filter with λ=100)



28. Figure 8.5 exhibits a downward trend both for internal and external conflicts. Not surprisingly it was the period between the mid-1840s and 1860s (the Crimean War, the Opium Wars, the American Civil War and a number of uprising in Qing China) and the 1930s and 40s that were the most dangerous for an individual. It should be noted, however, that due to the weighting by population the conflicts involving populous countries like China, Russia or India have a disproportionate effect on these results. Nevertheless Figure 2 suggests similarly to Figure 4 that internal conflicts became by the end of the 20th century much more important determinants of individual safety than wars.

Table 8.5. Probability of a randomly chosen individual to inhabit a country that is involved in an internal armed conflict, by region

	Sub-Sahara Africa (SSA)	Middle East and North Africa (MENA)	Western Europe (WE)	Eastern Europe (EE)	Western Offshoots (WO)	Latin America and Caribbean (LA)	East Asia (EA)	South and South-East Asia (SSEA)	World
1820s	2.0%	9.4%	7.3%	40.0%	0.0%	6.7%	80.8%	0.2%	34.6%
1830s	1.5%	0.0%	26.5%	45.9%	27.1%	30.8%	9.9%	1.3%	11.7%
1840s	1.3%	6.1%	17.5%	18.5%	0.9%	43.2%	36.2%	1.4%	18.4%
1850s	1.1%	3.0%	4.9%	2.7%	43.5%	38.2%	90.5%	20.9%	41.6%
1860s	0.0%	0.2%	3.4%	6.4%	52.8%	13.3%	95.4%	1.1%	34.4%
1870s	0.1%	0.0%	9.2%	7.5%	0.9%	10.9%	91.7%	0.2%	29.4%
1880s	8.3%	0.3%	0.4%	0.0%	0.7%	3.1%	9.3%	0.5%	3.6%
1890s	8.6%	0.0%	2.0%	3.9%	0.0%	22.8%	9.2%	0.5%	4.8%
1900s	4.1%	13.9%	1.3%	22.4%	0.0%	2.7%	60.9%	0.0%	20.4%
1910s	1.2%	0.0%	5.4%	21.5%	8.7%	30.5%	86.7%	0.1%	30.0%
1920s	0.7%	2.8%	12.4%	20.8%	0.0%	7.6%	78.6%	16.0%	30.4%
1930s	0.0%	0.0%	16.9%	50.2%	0.0%	16.0%	60.7%	0.5%	24.1%
1940s	1.2%	8.1%	6.1%	32.5%	0.0%	2.0%	42.1%	22.0%	21.6%
1950s	3.4%	3.6%	0.0%	39.6%	0.0%	11.8%	16.6%	47.7%	22.8%
1960s	16.3%	3.9%	3.1%	34.9%	59.7%	18.1%	41.9%	41.7%	33.5%
1970s	12.2%	7.4%	15.9%	0.0%	17.0%	14.1%	50.5%	14.1%	22.4%
1980s	29.1%	16.7%	15.1%	0.6%	0.0%	19.7%	0.3%	17.1%	12.0%
1990s	25.5%	2.2%	8.0%	10.0%	0.0%	13.7%	0.0%	64.1%	27.8%

Source: Brecke (1999)

Table 8.6. The probability of a randomly chosen individual to inhabit a country that is involved in an external armed conflict, by region

	Sub-Sahara Africa (SSA)	Middle East and North Africa (MENA)	Western Europe (WE)	Eastern Europe (EE)	Western Offshoots (WO)	Latin America and Caribbean (LA)	East Asia (EA)	South and South-East Asia (SSEA)	World
1820s	4.8%	12.6%	29.5%	45.1%	21.5%	37.4%	0.0%	46.0%	22.6%
1830s	4.7%	12.3%	29.0%	39.6%	9.5%	13.0%	9.0%	18.1%	17.6%
1840s	8.7%	0.0%	49.0%	22.4%	26.3%	10.0%	27.1%	43.9%	32.1%
1850s	12.3%	6.5%	37.4%	42.1%	0.0%	2.2%	54.2%	15.8%	33.6%
1860s	7.8%	3.2%	50.4%	47.2%	51.9%	32.1%	37.7%	12.6%	30.4%
1870s	14.6%	0.0%	38.6%	29.3%	43.4%	4.2%	9.1%	10.2%	16.5%
1880s	40.2%	0.0%	53.5%	16.3%	0.0%	4.8%	26.6%	17.9%	25.4%
1890s	42.1%	0.0%	77.6%	25.7%	35.1%	1.1%	28.6%	36.6%	36.5%
1900s	25.9%	0.0%	56.8%	13.2%	61.7%	5.4%	21.8%	21.5%	27.1%
1910s	17.8%	0.0%	59.0%	40.8%	34.9%	2.4%	46.7%	27.1%	36.9%
1920s	0.2%	2.8%	52.0%	34.1%	8.7%	0.3%	55.2%	0.4%	26.8%
1930s	0.0%	1.7%	40.3%	31.2%	1.0%	2.6%	67.6%	26.7%	34.4%
1940s	2.4%	2.7%	54.2%	23.9%	49.3%	1.6%	57.7%	45.3%	41.1%
1950s	3.3%	8.3%	34.8%	4.5%	0.0%	0.7%	59.3%	12.9%	24.0%
1960s	10.1%	2.3%	14.8%	8.9%	0.0%	1.1%	25.1%	34.1%	20.2%
1970s	12.6%	2.3%	1.2%	0.0%	0.0%	0.0%	8.5%	58.4%	21.8%
1980s	12.0%	12.9%	1.5%	0.5%	16.8%	1.5%	25.6%	39.8%	23.0%
1990s	4.9%	0.1%	6.0%	1.9%	18.6%	0.7%	0.0%	26.3%	11.3%

Source: Brecke (1999)

Regional trends

29. Table 8.5 and 8.6 report the estimated probability for an individual to get involved in an armed conflict by regions and per decades; the global totals differ from those presented in Table 8.4 because they are weighted by population. The dominance of countries with large populations is even more visible here: the East Asian internal conflict probabilities are basically driven by the instable Chinese internal politics, with several uprisings, including the Taiping rebellion, the Boxer uprising or the Civil War during the Republican era in the 1920s and 30s or the Cultural Revolution in the 1960s. Similarly, the Western Offshoots are dominated by the USA. Until the 1950s the two most unstable regions are clearly East Asia and Eastern Europe, the latter is especially due to the numerous uprisings in Russia during the 19th century, followed by the Civil War, and the political cleansings that also were classified as internal armed conflict. Sub-Saharan Africa had relatively few (recorded) internal conflicts during the colonial era, and it is only after the decolonisation that we observe a strong increase in the likelihood of internal violence. Still, even in these years the probability remains much lower than the values observed for East or South East Asia. If we only focus on the last 50 years, it comes as no surprise that the most stable regions are the MENA countries, the Western Offshoots (USA, Canada, Australia and New Zealand) and Western Europe. Internal instability is not evenly distributed in time: there were certain decades that proved to be especially unstable, like the 1850s and 60s, the 1910s and 20s and the 1960s, when the average person had 3-4 conflict years per decade, while the most stable years are the 1870s and 1880s, the 1830s and the 1980s when only a single year or even less brought some internal conflict.

30. When we look at external conflicts, the picture changes fundamentally. Over the whole period Western Europe had most wars, even though after World War II these were usually limited to ex-colonies outside Europe (Indochina, Indonesia and the Middle East in 1956). It is only from the 1970s on that Western Europe becomes the least likely region to participate in wars. The second and third most warlike regions are East Asia and South and Southeast Asia where a relatively peaceful period only started during the 1990s. It may be a bit surprising but wars are the least likely in MENA countries, where despite the frequent Arab-Israeli conflicts, lasting only a few weeks at most, wars were quite infrequent after the 1830s, and Latin America, where after the'lost decades' (1820s-1860s) the number of wars was extremely low.

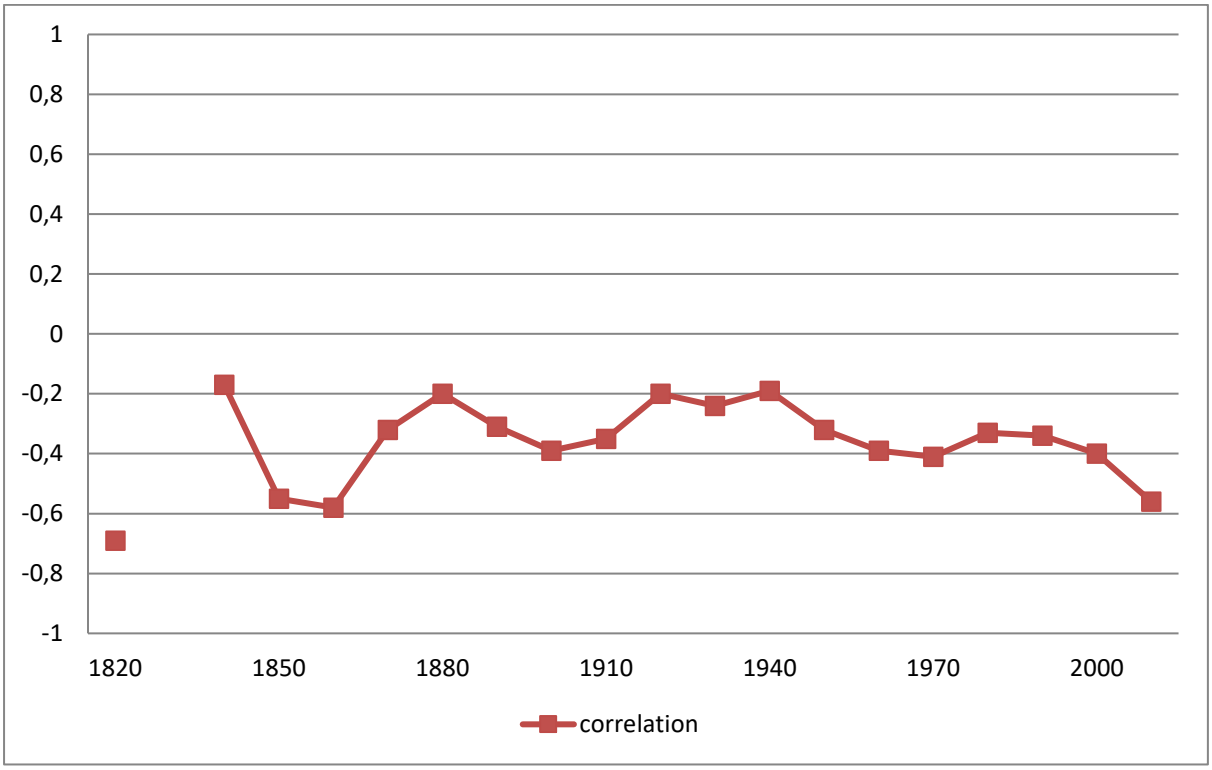
Correlations with GDP per capita

31. Homicide rates are in general negatively correlated with GDP per capita, and this correlation is in general quite strong and significant (pearson's r varies from -.17 to -.69, without showing a particular trend) (Figure 8.6). So in general rich countries have relatively low levels of personal violence and *vice versa*, but there are many exceptions to this rule – such as the US (combining high wealth and high homicide rates) and Nigeria or Egypt (poor and low homicide rates). It illustrates that economic factors play only a limited role in determining levels of personal security (and that personal security has only a limited influence on economic growth).

32. The literature also suggests that there is a negative relationship between civil wars and GDP per capita; Blattman and Miguel (2010) estimate that in the period 1960-2006 the incidence of civil war is highest (almost 30%) for the poorest countries and lowest (close to zero) for the richest countries. This negative link is a recent development, however. On the basis of the Brecke dataset, it can be shown that for most of the years the correlation coefficients between GDP per capita and conflicts are close to zero. There are some exceptions, however. For internal conflicts and GDP per capita we find a negative correlation after 1945 which become significant at the 5% level after 1983 (confirming the Blattman and Miguel findings). The relationship between external conflicts and GDP per capita is significant and positive during World War II, when apparently especially the rich countries fight among themselves. The correlation between wars and per capita income becomes negative from the 1960s on, but it remains insignificant.

33.

Figure 8.6.Correlation homicide rates and GDP per capita



Priorities for further work in the area

34. What should be the priorities for the study of homicide as an indicator of the standard of living in the future? The greatest potential probably lies in extending the existing evidence back to early times in developing countries, and to document regional evidence. Archival sources exist that document the activity of the police and the courts to punish murderers. However, it is challenging to identify the different pieces of evidence and their potential sample selection biases in historical data, and measurement error. Careful counter-checking of sources coming from different institutional contexts (such as from vital statistics and police records, and from prisons) might help to identify measurement error problems. Also studies on the determinants of homicides are crucial if we want to understand what encourages and what prevents this type of crime: how effective did police systems work? Did all social groups trust the police, or was the toleration of some homicides preferred over cooperation with the police? How large was social inequality, and is it really a core determinant of homicide? Finally, the existence of criminal gangs needs to be studied and wherever possible, also quantified.

35. We now know a lot about long-term trends in homicides in Western Europe, and begin to understand why this relatively violent society became pacified gradually. Much is still unclear about how other parts of the world developed in this respect. A link with processes of state formation, in which the monopoly of violence was successfully claimed by the state, is suggested by the evidence produced here; outside Europe it are regions with ancient states, such as the Middle East and East Asia, that show the lowest

levels of violent crime. And regions with relatively young states, such as Latin America and in particular Africa, have on average much higher homicide rates.

36. We did not find, as was suggested by Pinker (2011), a long-term, gradual decline of violence; it is not apparent in the conflict data, nor in the homicide estimates. Both did however correlate negatively with GDP per capita – for personal violence this negative link was relatively strong, for group violence such a relationship only emerged recently, in the last 50 years or so. Much more striking are the huge international differences in violent crimes, which show a large degree of persistence. The high homicide rate of the US, so much higher than that of 'comparable' countries (Canada, Australia, the UK) is a case in point. In Latin America, and in parts of Sub-Sahara Africa, criminal violence also seems self-perpetuating, undermining the well-being of the population living in those parts of the world. High levels inequality are often part of the explanation, but it should be realized that the poor really pay the prize for the kind of 'organized' violence that is characteristic of Johannesburg or Rio de Janeiro, because the rich have the resources to protect themselves against it. High levels of personal violence are therefore arguably one of the most important reasons for extremely low levels of well-being all over the globe.

37. This clearly also applies to the consequences of civil war and interstate warfare. Until the mid-1940s there was not a clear correlation between GDP per capita and both forms of organized violence. In the 19th century no part of the world was so heavily involved with warfare as Western Europe (continuing a tradition of almost incessant warfare going back to the Middle Ages), but this has changed and increasingly warfare is associated with poverty. This negative link between collective violence and GDP per capita, increasingly evident since the middle of the 20th century, is therefore one of the most significant negative feedback loops of underdevelopment, sometimes resulting in extreme destitution (Collier 2007) Both examples demonstrate the relevance of integrating violence in the approach to measure well-being.

[1] The difference was largely due to a few Latin American countries such as Venezuela and St. Kitts with extremely high murder rates according to the criminal statistics, but with somewhat lower estimates of the homicide rate according to the death statistics (for example Venezuela 47.7 and 34.5).

[2] It is for example striking how low official homicide rates are in contemporary Iraq (2 per 100 000 in 2008); in this case this measure fails to register the actual level of violence in that country; estimates for Afghanistan (3.4 in 2004) may be equally misleading.

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