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## **Homicide and Modernization in the European Outer Zone – The Case of Finland and Iceland**

Martti Lehti†  
University Researcher  
Institute of Criminology and Legal Policy  
University of Helsinki

Janne Kivivuori (Corresponding author)  
Professor of Criminology  
Institute of Criminology and Legal Policy  
University of Helsinki  
[janne.kivivuori@helsinki.fi](mailto:janne.kivivuori@helsinki.fi)

Guðbjörg S. Bergsdóttir  
Crime Analyst  
The National Commissioner of the Icelandic Police  
[gudbjorgs@logreglan.is](mailto:gudbjorgs@logreglan.is)

Jónas O. Jónasson  
Crime Analyst  
Reykjavik Metropolitan Police  
[jonas@lrh.is](mailto:jonas@lrh.is)

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## **Homicide and Modernization in the European Outer Zone – The Case of Finland and Iceland**

The research describes homicide trends during the twentieth century modernization process in Iceland and Finland. During the century, these rural societies became urbanized, industrialized and post-industrialized, while their populations quadrupled. Two semi-colonies, among the poorest in Europe, of the beginning of the century ended the century as independent republics among the wealthiest. We describe the main trends and structural changes of homicide of the era and explore whether there existed common patterns, which could be generalizable for other countries of European periphery. In spite of rather similar social and economic development, the countries differed in terms of homicide rates and rate changes, while manifesting some similarities in the compositional patterns of homicide. For instance, time cycles were partially similar and possibly manifesting analogous changes. We suggest that homicide rates of the European margins can reflect political processes, while compositional patterns could be consequences of such changes rather than symptoms of social structural causation. The most likely explanation for the significant differences between Icelandic and Finnish homicide trends of the period is the political context where the social and economic changes took place.

### **Introduction**

The era of industrialization coincided with a substantial decrease in homicide rates in Western Europe and Scandinavia. Contemporary historians and social scientists describe the era as the culmination of the decline in aggravated violent crime that began in Europe in the Middle Ages (Gurr, 1981; Lane, 1989, 1993, 1999; Söderberg, 1993; Eisner, 2008, 2015; Lindström, 2008; Spierenburg, 2012). The changes brought by the industrial era were, however, not uniform throughout Europe, there existed a clear distinction between an inner and outer zone of the continent. According to Spierenburg (2012), the latter one constituted a ring from Ireland to the Mediterranean, over the Balkans and Eastern Europe to Finland and had substantially higher homicide levels than the inner ring of western European and Scandinavian countries. This distinction is usually explained by the timing of the beginning of the modernization process. The decline in violent crime levels itself associated with modernization is seen (both continent wide and within each country) as a deterministic process that spread from the core to the periphery (Zehr, 1976; Gurr, 1981; Spierenburg, 2012).

The prevailing explanatory models are based on the ideas of Norbert Elias on the process of civilization in Western societies. Elias saw this process as a consequence of the demand for self-restraint brought about by social change (Elias, 1994[1939]). In violent crime research, historians have applied the theory to explain the declining trend in European homicides from the Middle Ages onwards. They have emphasized,

on the one hand, control factors, the emergence of the modern state with a monopoly of violence and the centralized justice system, and on the other hand, the complexity of the new social networks created by the emerging capitalism (Gurr, 1981; Österberg, 1996; Eisner, 2015; Spierenburg, 2012). Industrialization is seen as the culminating catalyst for this development. Industrial societies not only forced their citizens to learn self-control, they also put the citizens' lives under systematic control in factories and schools. There was no time left for acts of impulsive violence. In addition, the emergence of the modern police force enhanced the investigation of crimes, while the modernization of the judiciary made their punishing more effective (Gurr, 1981; Haapala, 1986; Horgby, 1986; Lane, 1989, 1993, 1999; Söderberg, 1993; Eisner, 2008, 2015; Spierenburg, 2012). These developments connected with a change in the position of the working population and the leveling out of its internal conflicts. Tensions caused by poverty and inequality were channeled into political activity and civic engagement in democratizing societies (Sperlings, 1980).

The current explanatory models are mainly based on western European and Scandinavian data and describe well the developments that took place there. More problematic is that these explanatory models are considered to be universally valid at different times and in different regions (Gurr, 1981; Lane, 1989; Spierenburg, 2012; Eisner, 2015). One reason for the onesided basis of contemporary research is the dearth of comparative homicide data of those societies of the era which constituted Spierenburg's "outer zone". Especially this is true for the western and eastern ends of the zone.

### *Research Questions*

In this research we describe the homicide trends of the twentieth century in two countries situated in the ultimate peripheries of the European north, Iceland and Finland. Both were late starters in the modernization process. During the twentieth century, they went through profound societal changes. Their predominantly rural and agricultural societies became urbanized, industrialized and post-industrialized, while their populations quadrupled. The two semi-colonies, among the poorest in Europe, of the beginning of the century ended the century as independent republics among the wealthiest.

In spite their different sizes in terms of population, Iceland's and Finland's similar political, social and economic ruptures of the last hundred years serve as a laboratory of homicide. We have two main goals in our study. First, we describe the main trends and structural characteristics of the homicidal crime of the era in these two countries and find out if and how these characteristics changed during the modernization pro-

cess. Second, we explore whether these two outer zone areas correspond to the prevailing explanatory models, i.e. a gradual decrease in homicide levels coinciding with the change from archaic agricultural society to a modern post-industrial one. This latter question ultimately addresses the question whether homicide trends are manifestations of law-like regularities, or locally contextual expressions of political-historical factors.

### **Political, Demographic and Economic Context**

The political processes leading to independence in the twentieth century differed significantly in Iceland and Finland. Both nations had lost their sovereignty during the thirteenth century. Finland had become part of the Swedish realm and Iceland of the Norse-Danish (later Danish) empire. During the nineteenth century they regained partial self-rule. In 1809, after a lost war, Finland was incorporated as a grand duchy into the Russian Empire. Her laws and legal structures remained, however, in force. Finland became an autonomous state with its own constitution, legislation, judicial system, army, monetary system, and national governmental institutions. A constitutional monarchy as a part of an autocratic empire. A state of affairs which led to increasing tensions at the beginning of the twentieth century, when the Finnish self-rule became under attack from the emerging Russian nationalism. This conflict characterized Finnish society in the first two decades of the century, but its effects were felt still years after the country gained independence in 1917. The year 1918 witnessed a civil war, followed by smaller armed conflicts with the Soviet Russia in 1918–1922. The civil war and its repercussions left deep wounds in society making the 1920s and the 1930s politically turbulent. The inter-war decades ended with the Second World War. For Finland, hostilities against Soviet Union (and later Germany) lasted from 1939 to 1945, with approximately 90,000 casualties. The country was never occupied, but lost the war, and did not regain full sovereignty until 1947 when the Allied Control Commission left (Rasila et al., 1977; Meinander, 2011).

In Iceland, the road to independence was more gradual and less conflict-ridden. In 1874, the Icelandic parliament (*Alþingi*) was invested with legislative power and an Icelandic constitution was established. In 1904, Iceland got an Icelandic ministry, which gave the *Alþingi* more power establishing a parliamentary government. In 1918, Iceland became sovereign kingdom in personal union with Denmark. During the Second World War, Iceland's connections with Denmark were severed. In 1940, the British army occupied the island, and was replaced in 1941 by the US army. The friendly occupation lasted until 1945. Iceland gained its independence from Denmark as a republic in 1944 after a referendum (Thorsteinsson & Jonsson, 1991; Jonsson & Magnusson, 1997; Gunnarsdóttir & Jónsdóttir, 2004).

The second half of the century was more peaceful in both countries with no openly violent conflicts. Social policies were based on the Nordic model of welfare state, economies grew fast. However, in Finland political divisions remained deeper and confrontations fiercer than in the other Nordic countries until the 1980s. Political life was characterized by challenging relations to the Soviet Union until its demise (Rasila et al., 1977; Gislason, 2007; Meinander, 2011).

During our study period Iceland's population grew from 78,000 to 340,000 and Finland's from 2.6 million to 5.5 million. Both countries were predominantly rural at the beginning of the twentieth century, fully urbanized at the end of the century. In Iceland, population growth was associated with a heavy concentration of people in the capital city. At the beginning of the century, less than 10 percent of Icelanders lived in Reykjavik, at the end of the century about 60 percent (Vattula, 1983; Jonsson & Magnusson, 1997; Asgeirsson, 2000).

Finnish and Icelandic population histories during the study period were similar in their major patterns, such as large birth cohorts in 1892–1912 and in 1945–1950. The countries were also characterized by a transformation from sources of migration to destination of immigration. This transformation led to a rapidly increasing number of foreign-born residents in the last two decades of the study period (Lehti et al., 2019).

At the beginning of the twentieth century, 85 percent of Icelanders and 70 percent of Finns were working in agriculture, fishing or forestry. At the end of the century, those livelihoods accounted for less than 10 percent of the workforce. The changes in economic structure were combined with rapid growth of national wealth. Both countries' gross domestic product per capita (based on purchasing power parity) increased more than ten fold in 1900–2016. This process was, however, punctuated by intermittent economic recessions (Vattula, 1983; Jonsson & Magnusson, 1997; Asgeirsson, 2000; Þór, 2003; Meinander, 2011; Einarsson et al., 2015; Pohjola, 2017).

Alcohol policies and consumption styles are of potential relevance in the analysis of homicide (Rossow, 2001; Lehti & Sirén, 2020). The first decades of the twentieth century were marked by a strong influence of temperance movements. In Iceland, full prohibition was in force in 1915–1922, after which wine was legalized. In 1934, all other alcoholic beverages were legalized except beer – illegal until 1989 (Gunnlaugsson & Galliher, 2000). In Finland, a prohibition during the First World War decreased per capita consumption by 70 percent. In contrast, the more laxly enforced prohibition in 1919–1932 led to an increase in alcohol consumption, as a consequence of large-scale trafficking. When the prohibition was abolished in 1932, the consumption of alcohol decreased (Rasinaho, 2006). A major liberalization of the retail distribution network in 1969 increased consumption by 37 percent, and the lowering of alcohol excises in 2004

by 10 percent within a year. During the whole twentieth century, per capita consumption of alcohol rose in Iceland from an estimated 1.5 liters to about 6 liters, and in Finland from less than 2 liters to 10 liters (Hagskinna, 1997; Lehti & Sirén, 2020).

To sum up, the rapid social transformations of the period likely loosened social control, and in interaction with political legitimacy and alcohol related problems, may have had their effect on homicide rates. The gradual rise of welfare state policies in the postwar period again may have alleviated some of the problems. These processes were mainly similar in both countries, but there were also clear differences. The most significant ones were related to political processes (LaFree, 1998; Roth, 2009, 2011; Lappi-Seppälä & Lehti, 2015, 2016).

### Data and Method

The Icelandic data cover the years 1900–2016. The main source for 1900–1997 are verdicts stored in the National Archives. Parts of them can be accessed at the *Fons Juris* website, a research platform including all published verdicts. We searched the database for homicide verdicts of 1900–1989 using as key words: *211. gr. almennra hegningarlaga, manndráp, látinn*. For finding homicides never processed in the courts, we used published Wikipedia lists of homicides in Iceland.<sup>2</sup> Nine cases in the lists were missing in our sources. Information on the missing cases was obtained from newspaper reports stored at the digital library of Icelandic newspapers (*timarit.is*). For 1998 onwards we have used as source both homicide verdicts and information from the police database. All data were recoded in accordance with the HHM coding standard. The data were coded by two researchers which made it possible to discuss and test the coding when issues or doubts about the right way to code arose.

In Iceland, cause-of-death statistics on homicides exist from 1911 onwards (Hagstofa Íslands, 1921, 1928, 1929, 1933a, 1933b, 1938, 1946, 1952, 1963, 1975, 1988, 2020; WHO, 2020). Our data for 1911–2016 included 107 homicide victims, the cause-of-death statistics included 131, the coverage was 82 percent. Main reasons for the difference are two. First, data providers differed: in the beginning of the twentieth century, data for the cause-of-death statistics were mainly from priests, our data again were based on court processes. Furthermore also inclusion criteria differed: Icelanders killed abroad were included in the cause-of-death data but missing from our data.

The Finnish data consist of three entities. The 1910–29 data include cases of homicide perpetrated in 1910–12 and 1920–29 and archived by the Courts of Appeal or the Supreme Court. A Penal Code stipulation in force during the period obliged the courts of the first instance to submit verdicts in aggravated crimes to the Courts of Appeal for

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<sup>2</sup> Wikipedia (2019); Wikipedia (2020)

review. With the exception of infanticides, almost all homicide cases were reviewed. When compared with cause-of-death statistics (excl. infanticides) the coverage of the data was 70 percent for 1910–12 and 69 percent for 1920–29. The data do not include any infanticide cases tried on the basis of the Penal Code infanticide stipulation (neonaticides perpetrated by unwed mothers). Because the data include only cases tried in the courts, they also do not include unsolved homicides or homicide-suicides. Intimate partner homicides by men (usually with a high percentage of offender suicides) and crimes connected with organized crime activities are probably the two main types of homicide underrepresented in the data (Verkko, 1948; Lehti, 2001).

The 1960–74 data are based on the annual case descriptions of homicides published by the Finnish National Bureau of Investigation. These reports included in principle all intentional homicides, except infanticides, investigated by the Finnish police. Their publication began in 1960 and was discontinued in 1975. Compared with cause-of-death statistics, the reports included information on 94 percent of the homicide deaths of persons one year of age and older; of victims less than one year of age they covered only 35 percent (Kivivuori, 2002).

The Finnish Homicide Monitor (FHM) data on homicides perpetrated in 2007–2016 form the third data source (see Lehti et al., 2019). The FHM is a joint project of the KRIMO and the Finnish Police Board. It is based on police data produced during preliminary investigation of homicides, and includes information about all homicides committed in Finland since 2002. The data are collected by an electronic form from the protocol officer of each investigation. The information is usually registered after the closure of the preliminary investigation. In case of crimes not solved within a reasonable space of time, the available data are registered approximately a year after the initiation of the investigation. The data are coded with the HHM compatible standard for coding. When compared with cause-of-death statistics, in 2007–2016, the coverage of the dataset was 112 percent for victims one year of age and older and 313 percent for victims less than one year of age (Lehti et al., 2019).

Because most of the Finnish data have been gathered for other research purposes, the source critique deals mostly with the validity of using the three datasets in our current purpose. Generally, the data are valid as sources for comparative homicide research. Validity has been cross-checked with cause-of-death statistics (Lehti, 2001; Kivivuori, 2002; Granath et al., 2011). Since the data for the 1960s and 2000s stem from an earlier stage of the criminal justice proceedings, their coverage is better than the coverage of the earlier period. All analyses exclude infanticides, defined as crimes against victims less than one year old at the time of the offence (Kivivuori et al., 2020).

Our analytic approach is based on the Historical Homicide Monitor (HHM) which is specifically designed for long duration comparisons of homicide (Kivivuori et al., 2020).

The instrument allows disaggregation of homicides by theoretically relevant variables, an important first step in understanding and explaining changes and differences in lethal violence in both countries. It enables us to see, for example, how different social and age groups, or conflict types, relate to variation in homicide levels.

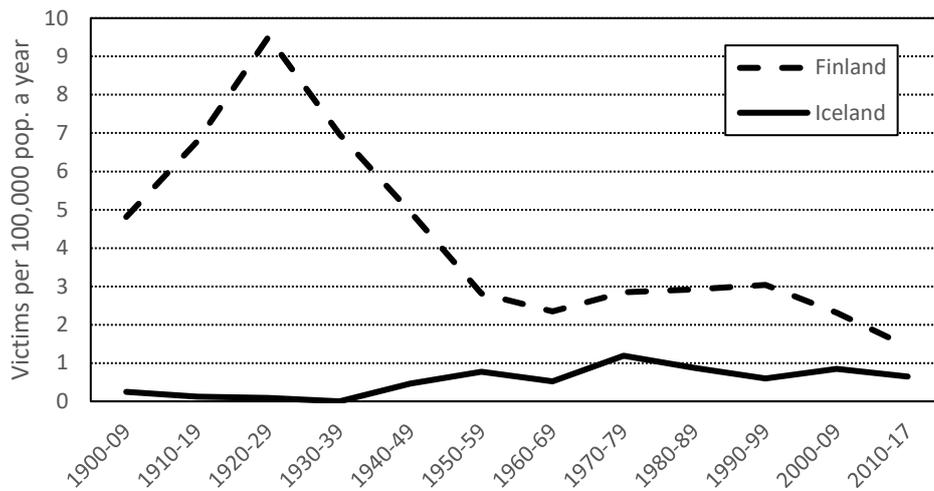
After disaggregating and describing the homicide trends, we examine whether the observed changes are consistent with factors stressed in historical criminology. This we do using those HHM variables that capture key aspects of main theories on homicide (Kivivuori et al., 2020). The HHM enables us to answer several core questions concerning the relation of modernization and homicide trends, for example: What types of homicide accounted for the main changes in homicide levels during the era? Were the changes unique or alike in Iceland and Finland? Were they associated with gender patterns? How was violence against women related to modernization?

## **Findings**

We have analysed the national homicide trends on the basis of published cause-of-death data. The comparisons of homicide patterns again are based on the HHM data. In comparing the patterns, we have divided both country datasets into three time-periods. For Finland, these periods correspond to different data sources. For Iceland, periodization reflects pragmatic concerns.

### *Homicide Rates*

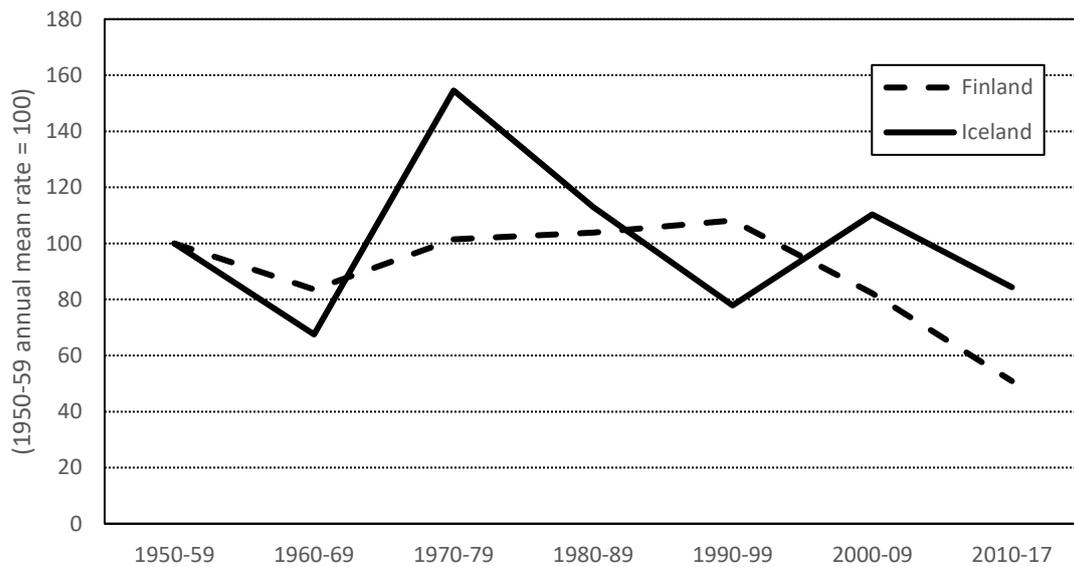
The first half of the twentieth century witnessed in Finland a drastic homicide wave peaking during the 1920s, with annual rates of 10 victims per 100 000 population. In Iceland, the annual rates of homicide remained below 0.3 during the whole period before the Second World War. The second half of the century was, in within-country comparison, less violent in Finland and more violent in Iceland, although the homicide rates in Iceland never came close to the Finnish rates. During the postwar era, Icelandic homicide rates reached their peak in the 1970s with 1.2 victims per 100 000 population annually. This was also peak for the whole observation period from 1900 to 2017 (Figure 1).



**Figure 1** Homicide mortality in Finland and Iceland, victims in 1900–2017 (Verkko 1948; Hagstofa Íslands 1921, 1928, 1929, 1933, 1938, 1946, 1952, 1963, 1975, 1988, 2020; WHO 2020; Finland excl. the year of the civil war 1918).

The first half of the twentieth century was dominated by a series of political crises and wars in Finland. It is therefore of interest to take a special look at the postwar period that can be described a peaceful era in both countries. In Figure 2, the 1950s is used as a reference decade, as the first full post-war decade of peace in both countries. Due to smaller number of victims, the Icelandic trend is volatile. Some similarities can nevertheless be observed. Homicide risk was reducing until the 1960s, but this trend was reversed in the 1970s. After that, the trends diverged until the most recent observation decade when both countries resumed a decreasing trend.

For both countries, the current homicide mortality is below the mortality level of the 1950s. The mean annual homicide mortality level of 2010–2017 was 0.7 in Iceland and 1.4 in Finland. Thus, while in the beginning of the twentieth century, the rate difference between the two countries was 84 to 1, in the beginning of the twenty-first century it is no more than 2 to 1.



**Figure 2** Homicide victimization rate change from the 1950s to the present decade, victims in Finland and Iceland (1950-59=100) (Verkko 1948; Hagstofa Íslands 1921, 1928, 1929, 1933, 1938, 1946, 1952, 1963, 1975, 1988, 2020; WHO 2020).

### *Urban and Rural Communities*

Homicides in Iceland were during the whole period an urban phenomenon. This in spite of the agrarian nature of Icelandic society before the second half of the century. The modernization of Icelandic society can perhaps lie behind the increase in homicide rate after the 1950s but it did not urbanize the crime; the few pre-war cases were already urban. The role of Reykjavik was central in Icelandic lethal violence during the whole era. Of the six homicides that took place in Iceland in the first half of the century, four took place in Reykjavik. In the period from 1950 to 1989, Greater Reykjavik's share of Icelandic homicides was 75 percent, other towns' eight percent and rural communities' 16 percent. In the years 1990–2016, 78 percent of homicides were perpetrated in Greater Reykjavik, 11 percent in other towns and 11 percent in rural communities. Thus, of the 107 homicides in Iceland between 1900 and 2016, three out of four took place in the Reykjavik area.<sup>3</sup>

In Finland, 70 percent of the homicides took place in rural communities in the first half of the century and about 43 percent in the 1960s and the 1970s. These percentages corresponded roughly to the share of rural population out of resident population. In 2007–2016, 82 percent of homicides in Finland took place in cities and towns; little

<sup>3</sup> Including also infanticides.

less than the share of urban population out of resident population. The general observation, however, was that both in agrarian Finland of the first half of the century and urban Finland of the second half, the overall homicide rates of rural and urban communities were more or less the same. Violence could be pinpointed to certain rural and urban municipalities and community sub-types, rather than to either community type in general.

### *Time Cycles*

The daily and weekly distributions of lethal violence were similar in both countries and formed a very stable structural feature.

In regard to *daily cycles*, the number of homicides peaked during the evening hours and night time. This pattern did not change during the transformation from pre-modern to post-modern society (Table 1).

**Table 1** The daily distribution of homicide incidents (%). Peaks bolded.

	Finland			Iceland		
	1910–29	1960-74	2007-16	1900-49	1950-89	1990-2016
Morning (6.00 to 12.00)	6	..	9	0	20	22
Afternoon (12.00 to 18.00)	16	..	19	0	12	18
Evening (18.00-24.00)	<b>50</b>	..	<b>39</b>	50	16	22
Night (00.00 to 6.00)	28	..	33	50	<b>53</b>	<b>38</b>
Total	100	..	100	100	100	100
N	2181	0	891	4	51	45

The *weekly cycle* of homicides also showed a consistent pattern. Violence was concentrated on weekends. In Finland, in the 1960s, coinciding with the change from a six-day working week to a five-day one, the weekly homicide peak moved from Sunday to Saturday. Since then the weekly distribution of homicides has remained stable. In Iceland, homicides also concentrated on weekends. In the first-half of the twentieth century, two-thirds of the few cases were perpetrated on Saturdays or Sundays. Of the crimes in 1950–1989, two-fifths took place during the weekend, while the share rose to close to half in 1990–2016. The number of crimes of the first half of the century is so small that any generalizations should be treated cautiously. But at least since the 1950s Sunday has been the most violent day of week in Iceland when measured by the number of homicides. This in spite of the fact that also Iceland has had a five-day working week since the 1960s (Table 2).

**Table 2** The weekly distribution of homicides (%), incidents in Finland and Iceland. Peaks bolded.

	Finland			Iceland		
	1910–29	1960-74	2007-16	1900-49	1950-89	1990-2016
Monday	11	14	12	17	8	9
Tuesday	8	12	13	0	16	4
Wednesday	9	10	13	17	10	13
Thursday	7	13	13	0	16	11
Friday	9	16	15	0	10	15
Saturday	15	<b>22</b>	<b>19</b>	<b>50</b>	18	22
Sunday	<b>41</b>	13	16	17	<b>24</b>	<b>26</b>
Total	100	100	100	100	100	100
N	2219	1410	930	6	51	46

There was a relatively stable *seasonal* variation in the twentieth century Finnish homicides (Table 3). The summer months were by relative terms the most violent, both in rural society of the first half of the century and in urban society of the second half. In agrarian Finland the autumn months (the post-harvest season), also had more than the average number of homicides. This feature disappeared in urban society. In Iceland, the seasonal pattern was not as clear. As noted above, Icelandic homicides were throughout the century an almost exclusively urban phenomenon. However, the seasonal variation did not seem to reflect any kind of regularity. The winter months were the most violent from 1950 to 1989. The spring months were the most violent from 1990 to 2016. Unlike in Finland, in Iceland, summer months had the lowest number of homicides during the whole century.

**Table 3** Seasonal<sup>a</sup> distribution of homicides (%), incidents in Finland and Iceland. Peaks bolded.

	Finland			Iceland		
	1910–29	1960-74	2007-16	1900-49	1950-89	1990-2016
Winter	21	21	24	33	<b>35</b>	20
Spring	21	26	23	33	18	<b>39</b>
Summer	29	<b>30</b>	<b>30</b>	0	22	17
Autumn	<b>29</b>	24	24	33	24	24
Total	100	100	100	100	100	100
N	2257	1406	930	6	51	46

<sup>a</sup> Winter = December to February, Spring = March to May, Summer = June to August, Autumn = September to October.

The temporal distribution of modern homicides has often been explained by routine activities. Homicides, especially those outside the family circle, usually take place in leisure hours and often in alcohol consumption situations (Ylikangas, 1998; Tiihonen et al., 1997; Kivivuori, 1999; Lehti, 2001). Our findings largely corroborate the routine activities interpretation. The seasonal cycle of Icelandic homicide may be an exception to this pattern, but explaining its exceptionality needs further research.

### *Locations*

Concerning the locations of homicides the trends were opposite ones. In Finland, the share of homicides perpetrated in private homes increased gradually from less than 50 percent in the beginning of the century to about 80 percent at the end of the century. In Iceland, the corresponding share decreased from 80 percent to 60 percent during the same period.

Previous research has connected the change in Finland with urbanization and changes in social background of lethal violence, as well as to improvements in social public housing policies in the latter half of the century (Ylikangas, 1998; Kivivuori, 1999; Lehti, 2001). Juvenile crime played a major role in Finnish lethal violence in the first half of the century and a large percentage of homicides took place at dances and parties of the youth. After the Second World War, in the urban setting, the violence of socially marginalized substance abusers displaced the agrarian party-violence of juveniles. Consequently, the locations of violence also changed, first to urban landfills and shantytowns, and later, to flats of public rental estates (Kivivuori, 1999, 2002; Lehti, 2001).

In Iceland, a similar urbanization process of violence was lacking. Icelandic homicides were urban already in the beginning of the century and also private place oriented. The decrease in the share of crimes in private homes in the last decades of the studied period was connected to a decrease in the share of domestic violence related homicides.

### *Modus Operandi*

The most common instruments of killing in Finland were sharp weapons, knives and kitchen knives. This was also the case in Iceland from the 1950s onwards. The share of knife-killings in Finland decreased with the urbanization of homicides from about 55 percent to around 40 percent. In Iceland, their share increased from less than 20 percent in 1900–1949 to about 50 percent in 1990–2016 (Table 4).

**Table 4** Instruments of lethal violence (%), incidents in Finland and Iceland, 1900–2016. Highest value bolded.

	Finland			Iceland		
	1910–29	1960–74	2007–16	1900–49	1950–89	1990–2016
Sharp instrument (incl. axe)	<b>56</b>	<b>42</b>	<b>43</b>	17	<b>32</b>	<b>48</b>
Firearm	30	21	14	0	22	9
Blunt weapon	11	14	9	17	6	9
Hitting, kicking, pushing	1	14	16	<b>50</b>	16	15
Other	2	10	18	17	24	20
Total	100	100	100	100	100	100
N	2251	1391	927	6	50	46

The relative and absolute numbers of firearm homicides decreased in both countries during the century.<sup>4</sup> In the 1920s' Finland, about a third of homicides was committed with a firearm. Finnish society was awash with handguns left behind by the 1917 revolutions, the civil war and the emptied Russian garrisons. These firearms made the weekend-dance fights of young men deadlier than before. Gun violence was also linked to organized crime: two thirds of the homicides related to alcohol trafficking were perpetrated by firearms. The impact of firearms on the very high Finnish homicide mortality rates was likely significant (Lehti, 2001). The firearms used in the homicides of the 1920s were mainly handguns and the drop in the number of firearm homicides in the second half of the century took place mainly in crimes perpetrated by handguns. In the 1960s and 1970s, handguns made up less than half of the Finnish firearm homicides, a share that remained stable also in 2007–2016. In Iceland, the twentieth century firearm homicides were perpetrated mainly with hunting weapons; handguns were used in less than 30 percent of the cases.

In both countries, the share of killings perpetrated without any weapon was stable in the post-Second World War decades, less the one in six homicides. In the pre-war Finland, the percentage was much lower, only one percent of all homicides. This might partly be a consequence of biased data. It is possible, that when the rapidly increasing numbers of intentional homicides put a strain on the criminal justice and prison system, the courts began to prosecute and convict cases of assaults leading to death increasingly as involuntary manslaughter. In this case, this type of homicide would make a large share of the 30 percent of killings missing from our Finnish pre-war data. The infrequency of non-weapon killings could also relate to the public nature of the pre-war violence. If no deadly weapons were used, the fights were regularly interrupted by spectators before they led to any grave consequences (Lehti, 2001).

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<sup>4</sup> Excluding the first period of Iceland, with only six homicides and not a single firearm homicide.

### *Victim-Offender Relationship and Homicide Types*

In both countries, the share of domestic homicides, between intimate-partners and family members, was smaller in the first half of the century than in the second. Intimate-partner homicides were also in absolute numbers rare events before the Second World War (Tables 5 and 6).

**Table 5** Victim's relationship to offender, % of incidents in Finland and Iceland.

	Finland			Iceland		
	1910-29	1960-74	2007-16	1900-49	1950-89	1990-2016
Wife (or similar)	3	19	19	0	27	13
Husband (or similar)	0	2	5	0	8	9
Child	1	7	2	0	0	4
Other relative	7	15	8	40	6	9
Acquaintance	<b>72</b>	<b>53</b>	<b>53</b>	40	<b>46</b>	<b>48</b>
Stranger	17	5	13	20	13	17
Total	100	100	100	100	100	100
N	2168	1193	906	5	48	46

The drop of homicide mortality in Finland in the post-Second World War decades took place mainly in non-domestic violence, in crimes between acquaintances and strangers. In Iceland, the percentage of domestic violence related homicides was relatively stable from the 1950s until the 1990s, i.e. their numbers followed the changes in the increasing overall homicide rate. From the 1990s onwards their share and level began to decrease.

In Finland, our observations are consistent with the widely accepted notion that the share of domestic cases increases as the general homicide rate decreases. It has been explained in previous research by the long-term stableness of the levels of domestic violence related homicides (Verkko, 1951; Lappi-Seppälä & Lehti, 2016). However, that is not the case in Iceland, where the increase in overall homicide mortality was connected to an absolute and a relative increase in domestic-violence related crimes.

In the first half of the twentieth century, the most common homicide type in Finland was nightlife violence, killings that took place at the weekend-dances of teenagers and young adults. It was an ancient tradition of agrarian society that young men entertained themselves at the dances by fighting each other. What made this tradition exceptionally lethal in the 1920s was a combination of handguns and cheap trafficked alcohol (Lehti, 2001). Handguns and trafficked alcohol began to disappear from the Finnish nightlife after the end of the prohibition in the 1930s and disappeared for good during the Second World War. Urbanization and the modern entertainment industry

changed the youth culture and gradually ended the tradition of weekend fights (Table 6).

**Table 6** Types of homicide, % of incidents in Finland and Iceland, 1900–2016. Highest value bolded.

	Finland			Iceland		
	1910–29	1960-74	2007-16	1900-49	1950-89	1990-2016
Partner killing	3	20	24	0	33	22
Other familial killing	8	21	9	20	8	15
Robbery	5	5	1	20	8	11
Rape	0	2	1	0	6	2
Criminal milieu	5	3	3	0	0	7
Nightlife violence	28	1	2	20	10	4
Other	<b>52</b>	<b>50</b>	<b>61</b>	<b>40</b>	<b>35</b>	<b>39</b>
Total	100	100	100	100	100	100
N	2168	1238	914	5	49	46

The general type category “other” in Table 6 covers the largest share of offences in both countries. Many of those cases can be described as drunken brawls: non-domestic killings without any clear motive, characterized only by the deep state of intoxication of persons involved. In both countries, this generic type included the largest relative share of incidents in all periods (Table 6).

### *Alcohol and Drugs*

Alcohol consumption is known to have had influence on Nordic homicide rates across time (Lehti & Sirén 2020 and referred literature). This is corroborated also in our study. In Finland, the percentage of intoxicated offenders (about 80%) and adult victims (about 70%) remained stable during the whole study period; in Iceland, the percentages were similar for the post-war period. The Icelandic pre-war period contained only six offences; in these, the role of alcohol was lesser. The similarity of the post-war findings for the two countries was striking. The stability of offender drunkenness was noteworthy also because it seemed to be resistant to changes in homicide rates and patterns.

Other drugs than alcohol emerged for the first time in Finnish and Icelandic homicides in the 1990s. This change reflected mainly the changing substance consumption habits and living-conditions of the high-risk population groups and was not linked to other pattern changes in lethal violence.

### Offenders and Victims

**Gender.** In regard to gender, homicides were a very masculine type of crime in both countries. In Finland, men made up 99 percent of offenders and 94 percent of victims in the first half of the century. In the second half the share of female victims increased to 30 percent, whereas the percentage of men out of offenders remained over 90 percent. In Iceland, of the six homicides in the first half of the century five were perpetrated by men against men. After the war, the share of female victims was at its highest in 1950–1989, 40 percent, but decreased in 1990–2016 to less than 30 percent. Male share of offenders was 94 percent in 1950–1989 and 84 percent in 1990–2016.

**Table 7** Homicide offenders' and victims' age, % of offenders and victims in Finland and Iceland, 1900–2016.

	Finland			Iceland		
	1910–29	1960-74	2007-16	1900-49	1950-89	1990-2016
Offenders						
1-14	0*	0*	0*	0	0	0
15-30	77	33	34	40	50	55
31-50	21	45	45	60	48	38
51+	3	21	21	0	2	8
Total	100	100	100	100	100	100
N	2326	1314	919	5	50	53
Victims						
1-14	2	8	3	50	6	4
15-30	59	24	19	0	33	26
31-50	31	40	41	25	41	44
51+	9	28	38	25	20	26
Total	100	100	100	100	100	100
N	1640	1399	1007	4	49	46

\* Value < 0.5

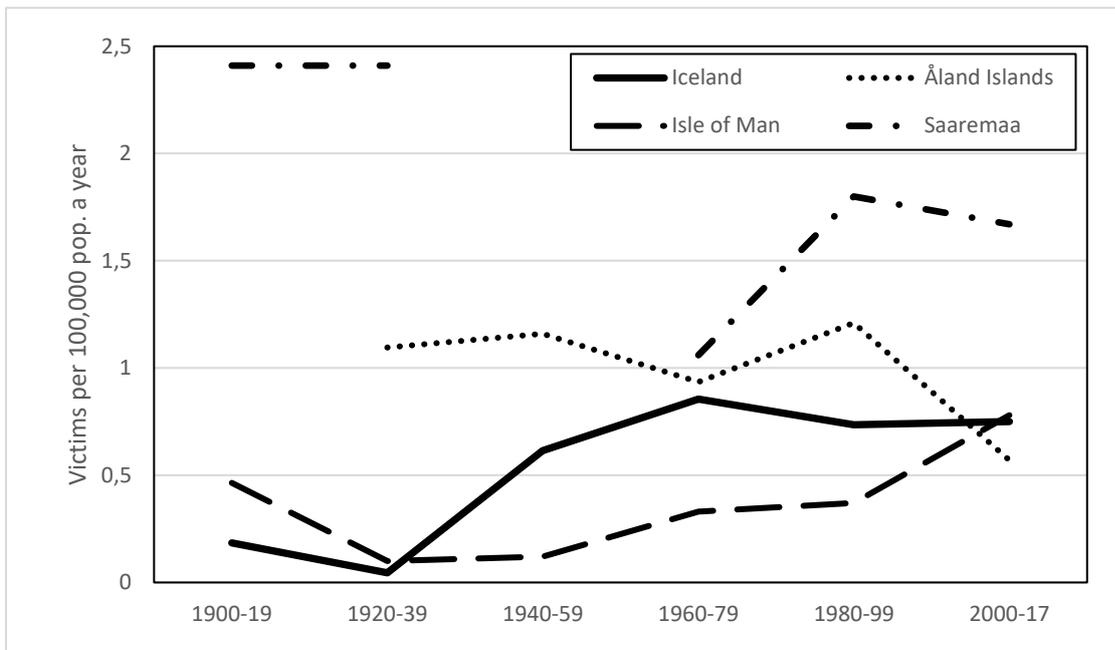
**Age.** Finnish homicides of the first half of the century were juvenile crime. More than three out of four offenders were in the age category 15-30, as well as three out of five victims. In the second half of the century, lethal violence became increasingly a crime of urban substance abusers. This was reflected in the increasing mean age of victims and offenders. In Iceland, the trend was the opposite one, the mean age of offenders decreased during the post-war decades (Table 7).

**Birth country.** In both countries, before the twenty-first century, homicides were mainly perpetrated by native citizens against native citizens. During the last two decades this situation has changed. Immigrants' share of homicides offenders has risen to

about 10 percent and their crime level is currently higher than that of natives. In Iceland, unlike Finland, foreign-born residents are currently also overrepresented among homicide victims (Lehti et al., 2019).

### The Insular Factor

It is reasonable to ask, if the above observed differences, especially between the homicide trends and levels, were not mainly related to the fact that Iceland was a relatively small island nation? To explore this, we compared the Icelandic homicide trend with three other small European island nations during the twentieth century (Figure 3): Isle of Man was from Western Europe, the Åland Islands and Saaremaa Island from Eastern Europe. They went through a similar societal and economic transformation, and their population was rather similar to Iceland's at the beginning of the century, but, unlike Iceland, grew only moderately or decreased during the study period.



**Figure 3** Homicide victimization in Iceland, the Åland Islands, Isle of Man and Saaremaa Island in 1900–2017 (Hagstofa Íslands 1921, 1928, 1929, 1933, 1938, 1946, 1952, 1963, 1975, 1988, 2020; Lehti 2001; 2002; Kuritegevus Eestis 2001–2019; Wilkinson 2008; WHO 2020).

All of them had conspicuously low homicide rates during the whole century; especially this is true for the Åland Islands and Saaremaa Island when compared with continental Finland and Estonia. However, there is a clear difference in the trends. The trend in Isle of Man resembled that in Iceland with a significant increase in the second half of the century; those of the Åland Islands and Saaremaa Island again the Finnish homicide

trend with substantially higher homicide level in the first half of the century than in the second half. In Iceland, the very low overall homicide levels throughout the study period may have been related to the specific characteristics of small island nations; the trend differences between Finland and Iceland, however, seem not to be explainable by those characteristics.

## **Discussion**

We have examined homicide in the eastern and western peripheries of the European North during the period of modernization from 1900 until 2016. Our aim has been to 1) describe the main trends and structural characteristics of the homicidal crime of the era and find out if and how these characteristics changed during the modernization process; and to 2) explore whether there existed common patterns which could be generalizable for the other countries of the European “outer zone” and if these correspond to the late starter theory of the prevailing explanatory models, i.e. a gradual decrease in homicide levels coinciding with the change from archaic agricultural society to modern post-industrial one. We have strived to achieve this by disaggregating the trends and analyzing what types of homicide accounted for the main changes in homicide levels during the era; were these changes unique or alike in Iceland and Finland; were they associated with gender patterns, and how changes in violence against women were related to modernization.

### *Main Findings*

Finland and Iceland experienced a largely similar socio-economic development in the course of the century, from predominantly agrarian societies to industrial, urban and increasingly services-oriented economies. Both countries gained independence during that process. For Finland, this happened in the midst of sustained chain of internal and external crises. For Iceland, the process was peaceful following democratic decision-making principles.

In our study, Iceland emerged as extremely non-violent society during the whole modernization process. It had a slight increase in homicide rates as it developed into post-agrarian society; yet remained one of least violent societies globally. However, if modernization had any long-term effects on the Icelandic homicide levels, they were rather negative than positive.

Finland provided a stark contrast to Iceland, having much higher homicide rates during the whole study period. Also, we found a decreasing trend in homicide levels that coincided with modernization. The Finnish twentieth century was characterized by wars and long periods of political crises, relating to Finland’s relationship towards Russia. This instability of the political regime in the first decades of the century caused

an avalanche of violence making it hard to extract the “true level” of homicidal crime during that period (Lehti, 2001). The decreasing trend of the second half of the century can be also interpreted as return to normality in more stable political conditions and may have had very little or nothing to do with modernization. Iceland remained exempt from similar convulsions. Thus, our study corroborates the dictum that homicide trends are contextually defined by the history of each country or region (Goertzel et al., 2013), rather than indexing the unfolding of general laws. Yet, some patterns may exist.

Due to the extension of weekend to Saturday, the weekly cycles of homicide were affected in Finland. In both countries, the share of homicides committed during the working days of the week increased. This can reflect an increasing marginalization of social groups involved in homicide (Kivivuori & Lehti, 2006). From this perspective, the violence of the Finnish homicide peak in the interwar period was linked to normal routine activities, like partying during the weekend. In contrast, the more recent homicide may be less anchored to normal routines. However, one should note that the weekly alcohol consumption and leisure time routines of the contemporary high homicide-risk population differ considerably from those of the general population.

In Finland, also a substantial change in the age structure and social background of homicides took place with the transformation from rural to urban society. In rural society, homicides were mainly a form of juvenile crime and related to youth culture, in urban society, they became a phenomenon closely linked to substance abuse of marginalised middle-aged men unattached to the normal routines and social bonds. This change corresponds roughly to the archaic-modern hypothesis suggesting that high levels of “normal” violence were suppressed by industrialization, democratization and more efficient control, a process that left behind a smaller but more deviant homicide scene. The retreat of lethal violence to private places, may also reflect this abnormalization of violence. Generally, our findings are consistent with the notion that homicide rate changes reflect political factors, while pattern changes reflect the marginalization of homicide in interaction with social structural changes. Some of the changing patterns of homicide are thus probably consequences of political processes rather than tell-tales of social structural causation.

Intimate partner homicides were rare in the pre-war Finland and Iceland, and increased both in relative and absolute terms after the Second World War. This finding contradicts notions of stability in lethal violence against women (Verkko, 1951). At least three interpretive possibilities emerge. First, modern societies may place women at increased risk of violence. If so, this could be related to the possibility of divorce, motivating some men to control their spouses by violent means (Lappi-Seppälä & Lehti,

2016). Second, emphasis placed on emotional ties between spouses may have increased and spread to all social strata, thus also increasing tensions in marital relations (Roth, 2009). Third, pre-modern agricultural societies may have been capable of forestalling intimate partner homicide by means of comparatively efficient social control towards excessive violence (Kivivuori et al. 2022).

### *Limitations*

We limited the analyses in Finland into three separate periods. This decision was based on data availability ultimately reflecting the very high number of homicides in the country during the study the period 1900-2016 (according to cause-of-death data, 20,957). Although the periods used for Finland were in our opinion fairly representative for different phases of the modernization process, significant changes and developments can have gone unnoticed. For Iceland, we had a full series.

### *Change and stability during modernization*

Our study showed the complexities and historically contextual nature of homicide trends and patterns. In spite of rather similar social and economic development, in terms of rate change, the two countries were almost like mirror images in the period of modernization. We found little evidence of any general “laws” of the development of violent crime during the period; and especially little for the hypothesis “archaic-violent vs. modern-non-violent”. Based on our observations, however, it is probable that the effects of political processes on violent crime during the period of modernization have received too little attention in prior research. The most likely explanation for the significant differences between Icelandic and Finnish homicide trends of the period is the political context where the social and economic changes took place. The democratic context in Iceland allowed gradual social reforms whereas the lack of this in the early twentieth century Finland erupted in serious social unrest and civil war. When the country emerged from this abyss after the Second World War, violence decreased and retreated to the margins of society.

## Literature

- Asgeirsson JF (ed) (2000) *20. öldin: Brot úr sögu þjóðar*. Reykjavík: Nýja bókafélagið.
- Einarsson BG, Gunnlaugsson K, Olafsson TT and Petursson TG (2015) *The long history of financial boom-bust cycles in Iceland. Part I: Financial crises* (Working Paper No. 68). Reykjavík: Central Bank of Iceland.
- Eisner M (2008) Modernity Strikes Back? A Historical Perspective on the Latest Increase in Interpersonal Violence (1960–1990). *International Journal of Conflict and Violence* 2(2): 288–316.
- Eisner M (2015) From Swords to Words: Does Macro-Level Change in Self-Control Predict Long-Term Variation in Levels of Homicide? *Crime and Justice* 43(1): 65-134.
- Elias N (1994 [1939]). *State Formation and Civilization. The Civilizing Process*. Oxford: Blackwell.
- Gislason IV (2007) *Fæðingar- og foreldraorlof á Íslandi: Þróun eftir lagasetninguna árið 2000*. Available at: <https://www.stjornarradid.is/media/velferdarraduneyti-media/media/acrobat-skjol/Fadingarorlofsskyrsla.pdf> (accessed 18 February 2020)
- Goertzel T, Shohat E, Kahn T, Zanetic A and Bogoyavlenskiy D (2013) Homicide Booms and Busts A Small-N Comparative Historical Study. *Homicide Studies* 17(1): 59-74.
- Granath S, Hagstedt J, Kivivuori J, Lehti M, Ganpat S, Liem M and Nieuwbeerta P (2011) *Homicide in Finland, the Netherlands and Sweden. A First Study on the Euro-pean Homicide Monitor Data*. Research Report 2011/5. Stockholm: Swedish Council for Crime Prevention.
- Gunnarsdóttir HG and Jónsdóttir SK (eds) (2004) *Althingi: Althingi and democracy*. Available at: <https://www.althingi.is/pdf/enska.pdf> (accessed 22 March 2019).
- Gunnlaugsson H and Galliher JF (2000) *Wayward Icelanders: Punishment, Boundary Maintenance, and the Creation of Crime*. Madison: The University of Wisconsin Press.
- Gurr TR (1981) Historical Trends in Violent Crime: A Critical Review of the Evidence. *Crime and Justice* 3: 295-353.
- Haapala P (1986) *Tehtaan valossa. Teollistuminen ja työväestön muodostuminen Tampereella 1820-1920*. Historiallisia tutkimuksia 133. Vammala: SHS.
- Hagskinna. Sögulegar hagtölur um Ísland* (1997). Reykjavík: Hagstofa Íslands.
- Hagstofa Íslands (1921) *Mannfjöldaskýrslur árin 1911–1950*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6440569#page/n24/mode/2up> (accessed 21 March 2019).
- Hagstofa Íslands (1928) *Mannfjöldaskýrslur árin 1916–1920*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6440661-#page/n0/mode/2up> (accessed 26 November 2020).

- Hagstofa Íslands (1929) *Mannfjöldaskýrslur árin 1921–1925*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6440741-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1933a) *Mannfjöldaskýrslur árin 1926–1930*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6440849-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1933b) *Mannfjöldaskýrslur árin 1931–1935*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/644102-7#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1946) *Mannfjöldaskýrslur árin 1936–1940*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6440955-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1952) *Mannfjöldaskýrslur árin 1941–1950*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6441127-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1963) *Mannfjöldaskýrslur árin 1951–1960*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6441311-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1975) *Mannfjöldaskýrslur árin 1961–1970*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6441451-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (1988) *Mannfjöldaskýrslur árin 1971–1980*. Reykjavík: Hagstofa Íslands. Available at: <https://timarit.is/page/6441655-#page/n0/mode/2up> (accessed 26 November 2020).
- Hagstofa Íslands (2020) Dánir eftir dánarorsökum (Evrópski stuttlistinn), kyni og aldri 1981–2018. Available at: [http://px.hagstofa.is/pxis/-pxweb/is/lbuar/lbuar\\_\\_Faeddirdanir\\_\\_danir\\_\\_danarmein/MAN05301.px/?rxid=f0a10d38-4ac3-4a5a-8df0-0ed2c0f662cf](http://px.hagstofa.is/pxis/-pxweb/is/lbuar/lbuar__Faeddirdanir__danir__danarmein/MAN05301.px/?rxid=f0a10d38-4ac3-4a5a-8df0-0ed2c0f662cf) (accessed 26 November 2020).
- Horgby B (1986) *Den disciplinerade arbetaren: brottslighet och social förändring i Norrköping 1850-1910*. Stockholm: Almqvist & Wiksell international.
- Jonsson G & Magnusson M (eds) (1997). *Hagskinna: Sögulegar Hagtölur um Ísland*. Reykjavík: Hagstofa Íslands.
- Kivivuori J (1999) *Suomalainen henkirikos. Teonpiirteet ja tekojen olosuhteet vuosina 1988 ja 1996*. Oikeuspoliittisen tutkimuslaitoksen julkaisuja 159. Helsinki: Oikeuspoliittinen tutkimuslaitos.
- Kivivuori J (2002) Sudden Increase of Homicide in Early 1970s Finland. *Journal of Scandinavian Studies in Criminology and Crime Prevention* 3(1): 6–21.

- Kivivuori J and Lehti M (2006) The Social Composition of Homicide in Finland, 1960–2000. *Acta Sociologica* 49(1): 67–82.
- Kivivuori J, Rautelin M, Bergsdóttir G, Granath G, Jónasson J, Karonen P, Koskivirta A, Lehti M, Lindström D, Netterstrøm J and Okholm M (2020) *Historical Homicide Monitor 2.0. General Instructions and Coding Manual*. Research Briefs 40/2020. Helsinki: University of Helsinki, Institute of Criminology and Legal Policy.
- Kivivuori J & Rautelin M & Netterstrøm J B & Lindström D & Guðbjörg S. Bergsdóttir GS & Jónasson JO & Lehti M & Granath S & Okholm M & Karonen P (2022). *Nordic Homicide from Early Modern to Present Era*. Helsinki University Press, Helsinki. (Accepted for publication, forthcoming in 2022)
- Kuritegevus Eestis 2000–2018 (2001–2019)*. Tallinn: Justiitsministeerium.
- LaFree G (1998) *Losing Legitimacy: Street Crime and the Decline of Social Institutions in America*. Boulder, CO: Westview Press.
- Lane R (1989) On the Social Meaning of Homicide Trends in America. In: *Violence in America 1. The History of Crime*. Newbury Park: Sage, pp. 55–79.
- Lane R (1993) *Roots of Violence in Black Philadelphia 1860–1900*. Cambridge, MA: Harvard University Press.
- Lane R (1999) *Violent Death in the City. Suicide, Accident, and Murder in Nineteenth-Century Philadelphia*. Columbus, OH: Ohio State University Press.
- Lappi-Seppälä T and Lehti M (2015) Cross-comparative perspectives on global homicide trends. In: Tonry M (ed) *Why Crime Rates Fall, and Why They Don't*. *Crime and Justice* 43: 135–230.
- Lappi-Seppälä T and Lehti M (2016) Global Homicide Mortality Trends by Gender 1950–2010. In: Kury H, Redo S and Shea E (eds) *Women and Children as Victims and Offenders: Background, Prevention, Reintegration. Suggestions for Succeeding Generations*. New York: Springer, pp. 427–478.
- Lehti M (2001) *Väkivallan hyökyaalto. 1900-luvun alkuvuosikymmenten henkirikollisuus Suomessa ja Luoteis-Virossa*. Oikeuspoliittisen tutkimuslaitoksen julkaisuja 178. Helsinki: Oikeuspoliittinen tutkimuslaitos.
- Lehti, M. (2002). Trends in homicidal crime in Estonia 1919–1999. In *Manslaughter, fornication and sectarianism. Norm-breaking in Finland and the Baltic area from mediaeval to modern times*. Suomen tiedeakatemia toimituksia, Humaniora 319. Saarijärvi: Suomen tiedeakatemia.
- Lehti M and Sirén R (2020) The impact of alcohol consumption on homicide: A time-series analysis of three Nordic countries. *European Journal of Criminology* 17(3): 356–369. doi: 10.1177/1477370818802524.
- Lehti M, Kivivuori J, Bergsdóttir G, Engvold H, Granath S, Jónasson J, Liem M, Okholm M, Rautelin M, Suonpää K and Syversen V (2019) *Nordic Homicide Report. Homicide*

- in Denmark, Finland, Iceland, Norway and Sweden, 2007-2016*. Research Briefs 37/2019. Helsinki: University of Helsinki, Institute of Criminology and Legal Policy.
- Lindström D (2008) Homicide in Scandinavia: Long-Term Trends and Their Interpretations. In: Body-Gendrot S and Spierenburg P (eds) *Violence in Europe*. New York, NY: Springer.
- Meinander H (2011) *A History of Finland. Directions, Structures, Turning-Points*. London: Hurst Publishers.
- Österberg E (1996) Criminality, Social Control and the Early Modern State: Evidence and Interpretations in Scandinavian Historiography. In: Johnson E & Monkkonen E (eds) *The Civilization of Crime: Violence in Town and Country since the Middle Ages: Violence in Town and Country Since the Middle Ages*. Champaign, Illinois: University of Illinois Press.
- Pohjola M (2017) Suomen talouskasvu ja sen lähteet 1860–2015. *Kansantaloudellinen aikakauskirja* 113(3): 266–292.
- Rasila V, Jutikkala E and Kulha KK (1977) *Suomen poliittinen historia 1809–1975. 2. osa*. Porvoo: WSOY.
- Rasinaho K (2006) Alkoholien salakauppa Helsingissä vuosina 1919–1932. In: Peltonen M, Kilpiö K and Kuusi H (eds) *Alkoholien vuosisata. Suomalaisten alkoholiolojen käännetä 1900-luvulla*. Helsinki: SKS, pp. 17-85.
- Rossow I (2001) Alcohol and homicide: a cross-cultural comparison of the relationship in 14 European countries. *Addiction* 96: 77–92.
- Roth R (2009) *American Homicide*. Cambridge: Belknap/HUP.
- Roth R (2011) Biology and the Deep History of Homicide. *British Journal of Criminology* 51(3): 535–555.
- Söderberg J (1993) *Civilicering, marknad och våld i Sverige 1750–1870*. Stockholm: Almqvist & Wiksell International.
- Sperlings S (1980) *Violent Criminality and Social Control during Stockholm's Industrialization*. Scandinavian Studies in Criminology 7. Oslo: Pax Forlag A/S.
- Spierenburg P (2012) Long-Term Historical Trends of Homicide in Europe. In: Liem M and Pridemore W (eds) *Handbook of European Homicide Research. Patterns, Explanations, and Country Studies*. New York: Springer, pp. 25-38.
- Pór JB (2003) *Saga sjávarútvegs á Íslandi. Uppgangsskeið og barningsár, II. Bindi 1902-1939*. Akureyri: Bókaútgáfan Hólar.
- Thorsteinsson B and Jonsson B (1991) *Íslands saga til okkar daga*. Reykjavík: Sögufélagið.
- Tiihonen J, Räsänen P and Hakko H (1997) Seasonal Variation in Occurrence of Homicide in Finland. *American Journal of Psychiatry* 154(12): 1711-1714.
- Vattula K (ed) (1983) *Suomen taloushistoria 3. Historiallinen tilasto*. Helsinki: Tammi.

- Verkko V (1948) *Maailman vanhin väkivaltatilasto. Taulustolaitoksen 200-vuotismuiston johdosta*. Helsinki: Valtioneuvoston kirjapaino.
- Verkko V (1951) *Homicides and Suicides in Finland and Their Dependence on National Character*. Scandinavian Studies in Sociology 3. Copenhagen: G.E.C. Gads Forlag.
- WHO (2020) Mortality Database. Available at: [www.who.int/healthinfo/mortality\\_data/en/](http://www.who.int/healthinfo/mortality_data/en/) (accessed October 4th, 2020)
- Wikipedia (2019) Listi yfir morð á Íslandi frá 1970–1999. Available at: [https://is.wikipedia.org/wiki/Listi\\_yfir\\_mor%C3%B0\\_%C3%A1\\_%C3%8Dslandi\\_fr%C3%A1\\_1970%E2%80%931999](https://is.wikipedia.org/wiki/Listi_yfir_mor%C3%B0_%C3%A1_%C3%8Dslandi_fr%C3%A1_1970%E2%80%931999) (accessed 22 September 2019).
- Wikipedia (2020) Listi yfir morð á Íslandi frá 1874–1969. Available at: [https://is.wikipedia.org/wiki/Listi\\_yfir\\_mor%C3%B0\\_%C3%A1\\_%C3%8Dslandi\\_fr%C3%A1\\_1874%E2%80%931969](https://is.wikipedia.org/wiki/Listi_yfir_mor%C3%B0_%C3%A1_%C3%8Dslandi_fr%C3%A1_1874%E2%80%931969) (accessed 22 September 2019).
- Wilkinson K (2008) *Manx Murders: 150 Years of Island Madness, Mayhem and Manslaughter*. Edinburgh: Mainstream Publishing.
- Ylikangas H (1998[1976]) *The Knife Fighters. Violent Crime in Southern Ostrobothnia 1790–1825*. Suomen tiedeakatemia toimituksia, Humaniora 293. Helsinki: Suomalainen tiedeakatemia.
- Zehr H (1976) *Crime and the Development of Modern Society. Patterns of Criminality in Nineteenth Century Germany and France*. Lanham: Rowman.