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How to Reduce the Global Homicide Rate to 2 per 100,000 by 2060

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The current average global homicide rate is about 8 per 100,000 per year. This means, that in the first decade of the 21st century an estimated 5 million people lost their lives due to interpersonal violence, making murder a more important source of violent death than war. In many countries it is a leading cause of death amongst 15-44-year olds (Geneva Declaration Secretariat 2008).

Can this loss of human lives be significantly reduced in the coming decades? And if so: By what means? Only recently have researchers and policy makers started to address this issue, most prominently through the *World Health Organization* and its *Violence Prevention Alliance* (Krug et al. 2002). However, developing the knowledge base to effectively reduce homicide across the world remains a huge challenge. To highlight these challenges, and ways to address them, we reflect about the kind of criminology needed to reduce the global homicide rate to a level close to that of contemporary pacified societies, namely about 2 per 100,000, over the next 50 years.

Is Such a Reduction Possible?

Is a worldwide reduction of homicide rates to about 2 per 100,000 within the next 50 years imaginable? We developed a simple scenario to explore this question: Derived from the 2004/5 international homicide data collected by UNODC (United Nations Office on Drugs and Crime 2011), we split the country-level data into quartiles (see table 1). This shows, for example, that the average homicide rate in the 25% of countries with the highest homicide rates is 26.9 per 100,000. Almost one-fifth (18.6%) of the world population live in these countries, which account for 56.8% of all homicides worldwide. In contrast, 12.2% of the world population currently lives in the 46 countries with the lowest homicide rates. In these countries, the average rate was 1.2 per 100,000, thus accounting for 1.5% of all homicides worldwide.

[Table 1 about here]

We use these data to understand how a global homicide rate of 2 per 100,000 could be achieved over the coming 50 years. Following the logic of prevention science, we assume that it would be desirable to focus efforts on those countries that suffer most from lethal interpersonal violence. We therefore modelled an average decline of 4% per year in the highest quartile and of 1% in the lowest quartile. By 2060 this decline would result in homicide rates of between 0.7 and 3.5, and the global homicide rate (weighted by current country size) would be 1.8 per 100,000. On the basis of the present world population this means about 430,000 fewer victims of homicide per year.

Empirical evidence suggests that declines of this size are within reach: There are many historical and contemporary examples where individual countries have experienced similar falls in homicide rates over several decades (LaFree 1999). Thus, a non-systematic sample of countries across the globe suggests that during periods of society-wide pacification the annual rates of decline range between 2% and 8% (table 2).

A worldwide drop by 75% over five decades would hence be ambitious, but within the range of patterns that have been observed in the past. But how would criminology have to advance in order to make research-based recommendations to the global community about how to achieve this goal?

A Take-off of Global Violence Prevention

The past 10 years have seen an astonishing development in global violence prevention efforts, many of which build on research by David Farrington: Their cornerstones are good basic research on the causal risk-factors for violence (Farrington 1998, 2003), experimental research on the effectiveness of interventions (Farrington 1983, 2006b) and meta-analyses as a principled way to summarize knowledge across studies (Farrington and Welsh 2007). These principles first had an enormous influence on the spread of evidence-based crime prevention in the United States, spreading to Western Europe over the past 15 years.

Since 2002 the World Health Organization has made these principles a cornerstone of their global campaign for violence prevention. This is reflected in three major reports: The *World Report on Violence and Health* (Krug et al. 2002), the *Preventing Violence* report (World Health Organization 2004), and the *Violence Prevention: The Evidence* report (World Health Organization 2010). They are complemented by the World Violence Prevention Alliance, a network of WHO Member States, international agencies and civil society organizations working to prevent violence, and the Violence Prevention Website maintained by the Centre for Public Health at Liverpool John Moores University, in collaboration with the WHO (http://www.preventviolence.info). Amongst others, it provides access to high quality evaluations of the effectiveness of interventions to prevent violence from across the world.

These initiatives are a big step forward towards a coordinated, evidence-based global strategy. However, while the roadmap laid out by Farrington and others is currently the most promising path to pursue, criminology will need to address several unresolved issues to significantly contribute to a global sustained decline of serious violence and homicide. We sketch out three topics that would make this goal more realistic.

The Cross-cultural Universality of Causal Risk Factors

Good basic science on the epidemiology and the causes of violent crime is an important basis for effective prevention. Longitudinal studies, in particular, provide key information on the predictors of serious offending and violence, and that should hence be at the center of risk-focused intervention: "The basic idea of risk-focussed prevention is very simple: Identify the key risk factors for offending and implement prevention methods designed to counteract them" (Farrington 2006a).

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In the developed world a large body of research has been accumulated over the past 50 years on individual, family, school, and situational causal risk factors associated with serious violence. Many of these risk factors appear to be similar in different Western countries. However, the evidence is much more limited for the rest of the world. This raises the question of whether the same parenting styles and the same life-skills are universally associated with the risk of violence everywhere in the world (World Health Organization 2010). The evidence is thin and the verdict on the weight of universal risk factors relative to culturally specific factors is still out. Some risk factors like low self-control seem to be universally associated with violence (Rebellon et al. 2008). But others are probably not. For example, a recent study by Boakye (2011) on delinquency in *Ghana* found that some risk factors such as poor parental supervision, physical punishment and large family – featuring high in many prevention programs - size were unrelated to delinquency in Ghana, although they were associated with crime in Pittsburgh and London. Also, individual risk factors for attacking other people's lives may differ significantly between societies with different overall levels of interpersonal violence. For instance, rational violent self-help in the absence of law enforcement and organized violent entrepreneurs may be highly relevant in high-homicide countries, while individual pathologies may account for more variation in low-homicide contexts.

If criminology is to make good recommendations on how to reduce serious violence and homicide across the globe, cross-cultural comparative research on causal risk factors will have to advance significantly. It will need good empirical evidence on what risk and protective factors are most relevant in different cultures or economic and political contexts. In particular - besides good cross-sectional studies – criminologists will need cross-culturally comparative longitudinal studies, which enhance the knowledge base needed for the advancement of effective violence reduction in different contexts.

Scaling up the Evidence Base

For the developed world, meta-analyses and lists of recommended interventions now help practitioners to improve services and implement more effective interventions. The recently initiated *WHO Prevention Website* has started to develop a similar knowledge-base on a global scale. We examined the 131 studies on this website by WHO region. The results illustrate the challenge of creating an evidence-base for a globally relevant violence prevention strategy.

[Table 3 about here]

It demonstrates that 98% of all studies on promising interventions come from the Americas (mainly from the United States and Canada) and Europe (mainly Western Europe). A finer geographic analysis would probably reveal that more than 95% of all programme evaluations relate to about 12% of the global

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population, while less than 5% of evaluations worldwide relate to the remaining 90% of the global population.

Developing a broader knowledge basis that adequately reflects the major regions of the world and that would allow interventions to have a genuine impact on macro-level trends will be a major challenge. This will not only be an issue of conducting experimental replication studies of the same interventions in different contexts across the world and solving the issue of taking interventions to scale – these two challenges are known and will likely be addressed by an emerging global prevention science (Krug et al. 2002). Rather, criminology and related disciplines (education science, prevention science, public health research) will have to develop a much broader range of research-based strategies, processes and programmes that can be tailored to the needs of different populations.

Understanding the Pacification of Societies

A future criminology that wants to create knowledge useful for a global reduction in homicide rates, will also need to advance and integrate macro-level institutional analyses. Countries with high homicide rates only partly suffer from a lack of evidence-based parent training programs, and initiatives exclusively aimed at improving individuals and their immediate environment are unlikely to do the job. Both historical and cross-national comparative analyses suggest that the process of pacifying societies requires more.

Societies with the highest levels of homicide in Latin America (e.g. El Salvador, Colombia), Africa (e.g. South Africa, Congo), or Asia (e.g. Kazakhstan, Russia) suffer from a syndrome of characteristics (e.g. Nivette 2011). These include high state corruption, low investments into public health and education, low state stability, ethnic, ideological or religious cleavages, and high inequality. Low homicide societies, in contrast, tend to have a functioning and stable state that is accountable to its citizens, effective public health, education and criminal justice systems, relatively low social inequality, and citizens that actively engage in matters of shared concern.

Levels of homicide, it seems, are influenced by whether societies are ruled by law, whether elites are trusted, whether corruption is under control, and whether services are provided; in short, they are influenced by social institutions. Historical research suggest, for example, that establishing faith in the government and confidence that its legal and judicial institutions are fair and will redress wrongs and protect lives and property are amongst the most important requirements for homicide rates to fall (LaFree 1998; Roth 2009).

The implications of macro-level research for effective prevention have remained largely unexplored, although the reports by the *World Health Organization* recognize the need for a better integration. The public health perspective that dominates much current thinking is important. But violence prevention, in order to be effective, needs to address both sides: Change the way people lead their lives and change the wider structures so that more civilized patterns of life become worthwhile and attractive.

We believe that the chances of a successful reduction of homicide rates can be greatly increased by making broader institutional change an integral part of prevention efforts. Currently, the links between macro-level research on institutional contexts and prevention science are poorly developed. Better and more conclusive research is needed on the ways in which specific components of state building are associated with violence. Building states with an effective and legitimate police force, a non-corrupt public administration, and accepted mechanisms to solve conflicts between groups may turn out to be a critical component of the long-term decline of homicide.

Conclusion

We can observe that major long-term declines in homicide rates have happened in the past, but we lack the knowledge to make them happen. Developing this knowledge-base will require a more encompassing criminology, that overcomes its traditional limitation to Western, highly developed societies, and that develops a much broader knowledge base on the patterns and causes of violence across the globe. It will also need a significant expansion of experimental, quasi-experimental and observational studies on the effects of programs and processes on violence in different setting and for various groups. And finally, it will require an integration of knowledge on macro-level dynamics into strategies to reduce violence. If these advances, which have already started, are transported into actual policy making, a significant reduction of homicide rates is a realistic goal.

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	Situation 2004/5			Target for 2060		
Quartile	Mean Homicide Rate	% of World Population	% of homicides	Annual Reduction	HR by 2060	Total Reduction
Highest (1)	26.9	18.6	56.8	-4%	3.5	-87%
2	11.9	14.2	19.2	-3%	2.6	-78%
3	3.7	53.5	22.4	-2%	1.3	-65%
Lowest (4)	1.2	12.2	1.5	-1%	0.7	-42%

Sources: Homicide: WHO estimates compiled by UNODC (2011); Population: World Bank World Development Indicators (2011).

Table 2   *Some Historically Documented Major Drops in Homicide Rates*

Country	Peak (Year)	Trough (Year)	No of years	Mean annual decline
Sweden (Stockholm)	26.0 (1650s)	1.4 (1750s)	100	- 2.9%
Italy	8.0 (1880)	2.2 (1930)	50	- 2.8 %
Hong Kong	6.9 (1921)	0.7 (1961)	40	-5.6%
Japan	3.5 (1955)	0.9 (1990)	35	-3.8 %
United States	9.8 (1991)	5.0 (2009)	18	- 3.7%
Washington DC	80.6 (1991)	24.0 (2009)	18	- 6.5%
Colombia	83.0 (1991)	35.2 (2009)	18	-4.5%
South Africa	60.0 (1995)	34.2 (2010)	16	-4.0%
Italy	3.3 (1991)	1.0 (2008)	17	-6.8%

Sources: Sweden and Italy: Eisner (2003); Japan: Johnson (2008); Hong Kong and Colombia: Pan American Health Organization (2011); South Africa: South Africa Police Service (2002/2003, 2009/2010).

Table 3   *Number of Studies on Effective Violence Prevention by WHO Region*

WHO Region	Number of Studies		World Population	
	N	%	In Millions	%
Africa	3	2%	805	12%
Americas	120	92%	915	14%
Eastern Mediterranean Region	0	0%	1760	26%
European Region	8	6%	889	13%
South East Asia Region	0	0%	580	9%
Western Pacific Region	0	0%	1787	27%

<u>Note:</u> Number of studies included on the WHO Violence Prevention Website, http://www.preventviolence.info