

# WORLD HOMICIDE SURVEY -GLOBAL RESEARCH REPORT

Marc OUIMET, Ph.D.



Les rapports de recherche du CICC

# CICC' OVERVIEW

The International Centre for Comparative Criminology (ICCC) was founded in 1969 to bring together researchers seeking a multi-disciplinary understanding of the processes by which criminal behaviour is regulated and the control mechanisms put in place by public, private and community institutions. It is the largest francophone body of researchers in the field of criminal phenomena, control and security, and one the leading centres worldwide.

The ICCC is comprised of 56 regular researchers from six Quebec universities (University of Montreal, University of Quebec in Trois-Rivières, Laval University, University of Quebec in Montreal, McGill University, University of Sherbrooke) and five public and parapublic organizations, as well as 73 collaborators from Quebec, Canada and other countries (France, Switzerland, United Kingdom, etc.) that participate in our studies and the dissemination of findings. Researchers and collaborators are from such disciplinary fields as criminology, psychology, sociology, law, philosophy and political science.

Three Canada Research Chairs are also affiliated to the ICCC. The Canada Research Chair for Security, Identity and Technology, held by Benoit Dupont, studies the impact of technology on the security of individuals. The Canada Research Chair in Surveillance and the Social Construction of Risk, led by Stéphane Leman-Langlois at Laval University, evaluates various practices of social control through surveillance. The Canada Research Chair on Conflicts and Terrorism, led by Aurélie Campana at Laval University, seeks to understand why individuals serving a cause are ready to commit terrorists acts to defend it.

In 2003, the ICCC and the University of Quebec in Trois-Rivières formed a group of four researchers (six in 2008), all of whom are psychoeducation professors at UQTR. The group receives funding from the UQTR and the University of Montreal via the Quebec government's ICCC Strategic Alliance Grant. It is planned that, from now to 2017, in recognition of UQTR's growing role, the ICCC will change status to become an interuniversity centre attached to the University of Montreal and the University of Quebec in Trois-Rivières.

The ICCC's regular members are researchers whose research work is conducted mainly within the Centre or research teams whose funding is administered or co-administered by the Centre. Collaborators are researchers that participate in the Centre's research on an ad hoc basis.

The Centre was born 40 years ago from a scientific partnership between the University of Montreal and the International Society for Criminology. To uphold this heritage and further its influence, the ICCC operates within a network of 19 centres and organizations across five continents that participate in each other's core activities and researcher exchange programs, allowing for various scientific activities to take place.

The scientific leadership of ICCC researchers and their contribution to the advancement of knowledge is reflected not only by their productivity in terms of publications, but also by their involvement in applied settings, which provide opportunities for valuable data collection, information sharing and transfer of knowledge activities. Over the last few years, we have contributed to reshaping the theoretical and applied model for sexual delinquency and its treatment, internal security and its governance, criminal networks and their organization, young offender interventions, criminal technology regulation and the street gang phenomenon.

### PURPOSE

The ICCC's primary mission is to conduct advanced research on the processes by which criminal behaviour is regulated and the control mechanisms put in place by public, private and community institutions. The research is done in association with students from undergraduate and graduate levels as a means to enhance their education. The research findings help promote concrete measures aimed at improving quality of life and the protection of rights and liberties. Finally, the ICCC serves as a hub for research conducted in different countries and languages.

### GOAL

Through its size, the quality of its researchers and their ability to express themselves in different languages, the ICCC strives to be one of the leading research and education centres focused on criminal phenomena, control and security. The Centre also aims to provide a rallying point for French-language research while joining together various national research traditions. To achieve its goals, the ICCC operates within a network of centres and organizations in several countries that share collaboration protocols for researcher exchange programs and participation in each organization's core activities. These agreements allow for various scientific and educational activities to take place nationally and internationally.

Carlo Monolli

Carlo Morselli, Director

Les rapports de recherche du CICC

# **INFORMATION SUR LA COLLECTION**

Les rapports de recherche du CICC sont une publication du Centre international de criminologie comparée. Ils ont pour but de faciliter le transfert de connaissances. En mettant à la disposition des chercheurs un outil de publication, nous souhaitons en effet contribuer à la diffusion des savoirs qu'un centre de recherche international ne manque pas de développer. Par ailleurs, en fournissant un soutien et une infrastructure aux étudiants, nous poursuivons le but d'intégrer encore davantage ces derniers à la vie scientifique du Centre et de valoriser leurs travaux. Pour certains, cette première expérience de publication pourra s'avérer décisive dans un choix de carrière universitaire. Pour d'autres, cela leur permettra de faire connaître des résultats de recherche à des utilisateurs potentiels.

Les rapports de recherche du CICC se distinguent des anciennes publications du Centre (Les Cahiers de recherches criminologiques, publiés entre 1984 et 2005), par la présence d'un comité de lecture composé de deux chercheurs du Centre, ainsi que par une vocation de diffusion électronique. Le rapport sera disponible gratuitement sur Internet afin d'en favoriser la diffusion. Cette redéfinition de notre publication s'inscrit dans la dynamique actuelle du CICC, à savoir de dynamiser le milieu de la recherche criminologique et d'en accroître la diffusion.

Les rapports de recherche du CICC comportent trois collections distinctes :

La collection **« Mémoires et thèses** » a pour objectif de diffuser un mémoire de recherche ou une partie de thèse d'un étudiant ayant un directeur affilié au CICC. Cela peut comprendre autant la version intégrale d'un mémoire qu'une version plus succincte de ce dernier ou d'une thèse, ou encore un chapitre spécifique présentant un intérêt particulier.

La collection « **Actes de colloque** » permet à des professeurs et/ou à leurs étudiants de diffuser les actes d'un colloque ou d'une journée de recherche qu'ils ont organisés.

La collection **« Résultats de recherche »** se veut une plateforme de diffusion des aboutissements de recherches entreprises par un chercheur du CICC et ses collègues ou étudiants. Par l'entremise de cette collection et une fois la recherche effectuée, le chercheur peut ainsi communiquer autant au milieu de la recherche qu'à celui de la pratique, les résultats auxquels il est parvenu.



# World Homicide Survey - Global Research Report

**Marc Ouimet** 

Juin 2016

Note: This research was made possible by grant 435-2013-0035 from the Social Sciences and Humanities Research Council (SSHRC) of Canada

ISSN: 1921-2054

Dépôt légal Bibliothèque et Archives nationales du Québec Bibliothèque nationale du Canada ISBN : 978-2-922137-55-2

CENTRE INTERNATIONAL DE CRIMINOLOGIE COMPARÉE Université de Montréal Case postale 6128, Succursale Centre-ville Montréal, Québec, H3C 3J7 Canada

Téléphone :	(514) 343-7065
Télécopieur :	(514) 343-2269
Courriel :	cicc@umontreal.ca
Site Web :	www.cicc.umontreal.ca

Les rapports de recherche du CICC

# SUMMARY

The World Homicide Survey is a research project centred on the idea that it is possible to gain insight into the causes of violence around the world by asking knowledgeable individuals their opinions on the social conditions in their country, the functioning of the criminal justice system, and the forms and prevalence of violence and homicide. This technical research report aims to leave behind a trace of information related to the methodology used in the study. It should help those interested in using the individuallevel and country-level databases.

This research report is comprised of three sections. The first section presents the World Homicide Survey in general terms, including its objectives and methodology. The second section presents the questions and descriptive results for 149 different countries, compiled from 1201 respondents. Results for eight regions are presented to offer an idea of the global variations. The dimensions covered are: 1) the varieties of homicides, 2) clearance and conviction rates, 3) public opinion of the criminal justice agencies, 4) rule of law, and 5) the importance of social factors related to violence and homicides. The third section examines the results, aggregated at the country level, their consistency, and for certain of the issues, to what extent they relate to similar sources of existing data. The fourth section presents the construction of the final data sets with dimensions and factors.

Keywords : Homicide, International, Violence, Justice, Economic, Survey

# Table of content

SECTION 1: THE PROJECT	1
The World Homicide Survey	
The original project	1
Data collection strategy	3
Who were the experts or respondents?	3
Procedure:	
Response rate	5
Confidentiality	
The online questionnaire	
Number of respondents per country	
1 1 5	
SECTION 2: RESULTS AT THE INDIVIDUAL LEVEL	9
Results for all questions at the individual level	9
Characteristics of homicides:	
Efficiency of the criminal justice system	
Social and precipitating factors:	
	-
SECTION 3: RESULTS AT THE COUNTRY LEVEL	. 15
The responses aggregated at the country level	
Poverty	
Firearms:	
Bribes and corruption	
Validation of our country-level data with external criteria	
Poverty	
Firearms	
SECTION 4: MODEL AND CONSTRUCTION OF THE FINAL DATA SET	. 24
Theoretical framework	. 24
Dimensions of the model	. 27
The homicide rate	. 27
Rare homicides	. 30
Adverse social conditions	. 32
Collective poverty	
Poverty	
Inequality	
Youthful population	
Social conditions	
Formal social control	
Rule of law	
Corruption	
Effectiveness of the CJ system	
Appreciation of the CJ system	
Formal social control	
Violence precipitators	
Firearms	
Fear of crime	
Drug trafficking	
	-

Armed conflicts	40
Violence precipitators	
Appendix 1: The original SSHRC application	
Appendix 2: The Questionnaires	51
English	51
French	55
Spanish	59
Portuguese	63
Russian	

### SECTION 1: THE PROJECT

### The World Homicide Survey

Violence varies greatly from one nation to the next. Among the world's most dangerous countries, the homicide rate can amount to 90 per 100,000 people (Honduras), while in the most tranquil the homicide rate is only about 0.3 per 100,000 people (Japan). The first country's citizens are thus 300 times more likely to be killed than citizens of the second one. These homicide-rate variations are well known to researchers in criminology, sociology and the political sciences, and have been interpreted, more generally, as evidence that beyond only homicide, violence in its many forms is driven by demographic, economic, social and political factors.

In relatively recent publications of credible homicide rate estimates for large numbers of countries, most cross-national comparisons focused on factors related to the small variations in violence levels among the 40-to-60 most developed nations. Comparing these developed nations is interesting because there are many detailed social indicators to choose from, making it possible to test the influence of a large number of predictors. However, testing models that explain why Italy has a 0.9 homicide rate, Finland a 1.6 rate, and Canada a 1.0 rate are not, in the end, particularly useful. Those developed countries have the least crime (lowest crime rates?), therefore making it a biased, unrepresentative and uninteresting group. It would be like modeling drinking habits, in the world of alcohol-consumption research, based on a sample made up of teetotallers, Mormons and Muslims.

Over the last 10 years, international agencies such as the United Nations Office on Drugs and Crime (UNODC) researched the issue of homicide's prevalence in almost all of the world's countries, coming up with what are considered to be valid estimations of the homicide rate. Researchers have since published papers focused on the determinants of the homicide rate's variations, using available variables such as the country's per-capita Gross Domestic Product, the Gini coefficient of income inequality, percentage of youths in the population, population growth and so on. The problem is that there are almost no available variables to characterize the more direct causes of violent crime, such as the presence of criminal organizations, corruption and firearms. As well, there are simply no international figures on important factors such as the apprehension rate, the conviction rate and the general efficiency of criminal justice agencies. This is why the World Homicide Survey project aimed to gather data on various aspects of violence for the largest number of countries possible.

### The original project

In 2011, Marc Ouimet (the principal investigator) teamed up with Paul-Philipe Paré and Maurice Cusson to develop a research project aimed at collecting original data on violence and homicide around the world. They submitted a funding application to the SSHRC of Canada and received a grant of \$113,400, to be used between 2012 and 2016. The project was named "The World Homicide Project: Towards a better understanding of the role of criminal justice institutions in explaining variations of the homicide rate across the world." The summary of the proposed research is as follows (the complete project can be found in Appendix 1):

The country-to-country variation in the prevalence of homicide is impressive: from 0.5 per 100,000 people in Japan to over 50 per 100,000 people in Guatemala or Côte d'Ivoire. Violence and homicide are major barriers to fluid economic exchanges and they can impede sustainable development in certain developing countries. According to the Geneva Declaration Secretariat (2008), "Armed violence stunts human, social,

and economic development and erodes the social capital of communities." The goal of our research project is to contribute to the understanding of why violence is more prevalent in certain societies than in others. Hopefully, establishing the nature of those factors might help, in the long-run, to reducing violence's prevalence.

We hypothesize that macro factors, such as a nation's wealth, poverty and inequality (along with other macro variables), do not impact directly on homicide. Rather, they do so indirectly, through both precipitating factors (prevalence of firearms, organized crime and general corruption) and endogenous factors (corrupt police, inefficient and insufficient criminal justice institutions—police, courts and prisons). This modeling builds on Black's (1976, 1983, 1989) theory of law and justice, in which he argues that when the state fails to protect citizens against crime, they instead have to take justice into their own hands. Crime both plays the role of selfhelp and social control. Based on this perspective, high rates of violence and homicide are expected in countries in which the police and the courts are utterly inefficient. In sum, we will use and test a fairly elaborate model specifically conceived to explain variations of the homicide rate across the world.

Given that it's a heterogeneous phenomenon, we will also investigate how deaggregating homicides by both a victim's gender and the homicide type (familyrelated, organized-crime-related, quarreling-related, felony murder) sheds new light on our understanding of the factors influencing homicide rates. Factors related to the prevalence of familial homicides may differ from those related to organized-crime homicides. This study rests on an innovative combination of available and new data. Since 2008, valid data on the homicide rates in a large number of countries (190) are available through the "Causes of deaths statistics" published by the World Health Organization (WHO). To help characterize certain countries, various data are also available through international agencies such as the United Nations (UN), the World Bank, and the International Monetary Fund (IMF).

However, our project aims to gather new data on two specific issues. First, using two sources of data (local newspapers and experts' opinions), we will estimate, for as many countries as possible, the proportion of homicides committed against men and women, as well as the proportion of homicides for each of the most prevalent types (family, organized crime, felonious and quarrelsome/vindictive). Second, through experts, we will measure important criminal justice variables such as the public's confidence in the police, and the efficiency of the criminal justice system in prosecuting authors of homicide.

Objective 1 is to collect new data on as many countries as possible. The second and main objective is to test our new theoretical model for understanding the variations in the prevalence of homicide (Figure 1).



Figure 1: The general analytical framework of the study

Although a rich tradition of empirical work from criminologists showing why nations vary in their levels of homicide exists, it is based on macro-level factors (under background in Figure 1). Our conceptualization goes beyond the black-box thinking that is assumed in current research by also specifying operating or proximal factors. We propose to examine three broad categories of mediators that can help explain why and how macro-level factors are ultimately linked to the homicide rate across nations: (1) precipitating factors such as the availability of firearms, and the presence of organized crime or general corruption; (2) endogenous factors such as trust in, and availability of, the police to help citizens, as well as the functioning of criminal courts and prisons; and (3) the prevalence of general crime as a predictor of the homicide rate.

### Data collection strategy

During the course of the research, surveying the opinion of experts became our main operational objective. Because we wanted as many respondents as possible in a maximum number of countries, all energy needed to be focused into finding respondents.

#### Who were the experts or respondents?

Our respondents, that we call experts, are people possessing some knowledge of crime or the criminal justice system. Since finding experts on homicide in smaller countries would be next to impossible (there may not be any homicide expert in Togo or in French Guyana), it was thought that an expert was someone who had one of these characteristics:

- Has written a published article on violence in regard to a specific country.
- Has presented a conference on a subject related to violence in the context of a country.
- Is a university professor who lists, on his web page, a research interest related to criminology or violence.
- Is a graduate student in criminology or in a related discipline that has an interest in violence or in the criminal justice system.
- Is a professional that has worked within the criminal justice system (as an attorney, a police commandant, etc.)

#### **Procedure:**

Most respondents were found through Google Scholar using keywords such as "Haiti violence" or "Argentina homicide." Once an author of a paper on violence or homicide was identified, they were contacted with a personalized email that acknowledged the piece they had published. We also looked at lists of participants for various conferences hosted by the American Society of Criminology, the European Society of Criminology, the International Criminology Conference, etc. For smaller or more outlying countries, simple Google searches had to be used to find possible respondents. The questionnaire and all correspondence were prepared using one of the five languages supported by the research.

Here is an example of a personalized letter sent to a respondent:

Dear Mr. \_\_\_\_

We are looking for people who have studied violence or homicide in Swaziland to answer a short opinion questionnaire. You don't have to be an expert on homicide; you only need to have a basic understanding of violence, criminal justice and the social system in your country. You have published the following article: "Crime and Social Control in Swaziland," which qualifies you as a possible contributor to our international research.

In the last two years, our research team, financed by the Canadian government, has been building a completely new dataset of violence and criminal justice systems in countries around the world. We have published a number of articles; the one recently published in the *International Criminal Justice Review* explains our project, methodology and preliminary results (see attached PDF file). We now have respondents for 122 different countries and are looking for respondents for approximately 60 remaining countries, including Swaziland. This is why we would appreciate if you could take eight minutes to answer our online questionnaire, which measures your opinion, and estimates relating to violence, the criminal justice system and factors contributing to violence. Individual responses will never be published (only country averages) and your identification will not appear in our databases.

To fill the questionnaire:

English : <u>http://fluidsurveys.com/surveys/marco/experts-eng-v2/</u> Spanish : <u>http://fluidsurveys.com/surveys/marco/experts-esp-v2/</u> French : <u>http://fluidsurveys.com/surveys/marco/experts-fra-v2/</u> Portuguese: <u>http://fluidsurveys.com/surveys/marco/opinion-portugese-v2/</u> Russian: <u>http://fluidsurveys.com/surveys/marco/opinion-rus-v2/</u>

Don't hesitate to contact me for any additional information.

Yours truly, Marc Ouimet, Ph.D. (Rutgers, 1990) Full professor School of criminology, University of Montreal P.O. Box 6128, Station Centre-Ville Montreal, Québec, H3C 3J7, Canada marc.ouimet@umontreal.ca www.worldhomicidesurvey.org

The procedure covered here was used for a large majority of our respondents. We also used different strategies. In some cases, we encouraged respondents to send the online questionnaire to people they knew who would be good respondents. We also had face-to-face respondents in a few

international conferences in which we participated. Additionally, we had a research assistant in Western Africa, as well as one in Haiti, asking various knowledgeable people to respond via face-to-face interviews.

### **Response rate**

The response rate for individuals contacted was low. For example, of approximately 700 people contacted for the Russian-language survey—all of whom were contacted in Russian—we ended up with only approximately 60 respondents (some of the Russian or Ukrainian respondents had done so through the English or French questionnaire). Over the last three years, we contacted thousands of people. As an overall ballpark estimate, in most developed or developing countries, one person out of 10 who was contacted through a personalized email ended up responding. However, in Asian countries, we had less success.

The main reasons for not responding were:

- The email address was no longer active, or it was, but the person no longer used it.
- The contact did not want to respond to an online questionnaire focused on what could be considered delicate matters.
- Some respondents told us that they did not know enough about the subject, and so they stopped answering before the end of the questionnaire.

### Confidentiality

The contact letter explained that participation was entirely optional. Also, it was explained that the individual responses in the dataset would in no way be made public. For in-house researchers, the dataset would not include any information allowing them to identify the respondent (name, IP address, email, institution). For public use, only the aggregate data (mean or median values for each country) would be made public.

In responding to the online version of the questionnaire, respondents had to check a box confirming that they had read the confidentiality agreement, accepted the terms and knew that they could have their own data deleted, at their request, from the dataset at any time.

# The online questionnaire

The online questionnaire was hosted by fluidsurvey.com (now part of monkeysurvey.com) and was fairly easy to use. Figure 2 shows an example of the online questionnaire's look in English and Russian.

## Figure 2: Excerpts from the online questionnaire

V8. What would be the probability that a suspect identified or charged for homicide is eventually convicted by the courts (conviction rate)?

	10% and less	20%	30%	40%	50%	60%	70%	80%	90% and more
Intrafamily, spousal and crimes of passion	0	0	0	0	0	0	0	0	0
During a fight	0	0	0	0	0	0	0	0	0
During a theft	0	0	0	0	0	0	0	0	0
During a rape	0	0	0	0	0	0	0	0	0
Conflict between criminals	0	0	0	0	0	0	0	0	0

V9. What would be the population's level of satisfaction with these agencies :

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
Police	0	0	0	$\circ$	0
Criminal courts	0	0	0	0	0
Civil courts	0	0	0	0	0
Prisons and correctional services	0	0	0	0	0

#### Back Next

V9. Каким будет уровень удовлетворенности населения этими учреждениями:

	Очень недовольно	Недовольно	Ни недовольно, ни довольно (нетрально)	Довольно	Очень довольно
Полиция	0	0	0	0	0
Уголовные суды	0	0	0	0	0
Гражданские суды	0	0	0	0	0
Тюрьмы и исправительные учреждения	0	0	0	0	0

### Number of respondents per country

We began our analysis with approximately 1250 filled-out questionnaires. Subsequent examination found and removed duplicates and a few questionnaires that were unacceptable due to total incoherence in the answers. We thus ended up with 1201 workable questionnaires. For most variables, there are a number of missing values. Various feasibility checks were completed on the individual data to eliminate responses deemed impossible. For example, if a respondent answered that the proportion of females amongst individuals committing murder was over 70%, the response was deleted. Questionnaires for respondents with more than two unusual answers were excluded.

For countries with fewer than five respondents, we carefully examined the response patterns. If three or four respondents from a country agreed in their answers related to a specific variable, it was kept in the database. Values for variables with important disagreement were deleted. At the present time, we have data for 149 countries in the world, covering a population of 6.9 billion or approximately 94% of the world's population. The countries with more than one million inhabitants for which we have no data are the following (population in millions).

	•	,			
Ethiopia	90	United Arab Emirates	9	Qatar	2
Thailand	65	Paraguay	7	Gambia	2
Iraq	36	Sierra Leone	7	Guinea Bissau	2
Uzbekistan	31	Nicaragua	6	Kosovo	2
North Korea	25	Eritrea	5	Bahrain	1
Angola	24	Ireland - Eire	5	Equatorial Guinea	1
Syria	23	Congo Rep - Brazz.	5	East Timor	1
South Sudan	12	Lesotho	2	Swaziland	1

Table 1: Countries with populations above one million og (not sure what the og stands for?) not included in our survey (millions of citizens)

For analytical purposes, we decided to group the countries into regions. There are many ways to group countries into regions, but we could not find one that fit our number of respondents well. For example, it would have been interesting to distinguish between West and East Asia, but this was not possible given the lower number of respondents in the region. We ended up grouping countries using the notion of cultural regions. Hence, all Arabic-Turkic-Persian-Islamic countries were grouped together, as well as the Slavic-Orthodox countries. The frontiers for which countries are counted as Eastern European are defined differently by various scholars, but we considered the Russian influence to have been sufficient in countries such as Georgia or Azerbaijan to consider these countries as such. However, despite falling within the former USSR's sphere of influence, we placed Tajikistan and other Central Asian countries in the Arabic-Turkic-Persian-Islamic countries group because most citizens are of Persian descent and are Sunni Muslims. Table 2 presents the number of respondents per country as grouped into eight cultural regions.

<b>Region / country</b>	N
CAN_US_AUS_NZ	94
Canada	54
USA	25
Australia	9
New Zealand	6
Central America and	
Caribbean	134
Mexico	50
Haiti	29
Trinidad and Tobago	10
Costa Rica	6
El Salvador	6
Jamaica	6
Antigua, Bahamas,	
Barbados, Cuba, Dom Rep,	
Guatemala, Honduras,	
Martinique, Panama, Puerto	5 or
Rico, St. Kitts	less
South America	132
Brazil	69
Colombia	22
Venezuela	10
Peru	8
Argentina	7
Chile	7
Bolivia, Ecuador, Guyana,	5 or
Uruguay	less
Western Europe	219
France	110
Spain	15
Italy	10
UK	10
Netherlands	8
Switzerland	8
Belgium	7 7
Germany	7
Denmark	6

Portugal	6
Austria, Cyprus, Czech	
Rep, Finland, Greece,	
Iceland, Luxembourg,	5 or
Malta, Norway, Sweden	less
Eastern Europe	227
Georgia	39
Russia	31
Ukraine	30
Armenia	24
Croatia	12
Kazakhstan	12
Albania	9
Hungary	9
Bosnia-Herzegovina	8
Estonia	7
Slovenia	6
Azerbaijan, Belarus,	
Bulgaria, Georgia, Latvia,	
Lithuania, Macedonia,	
Moldova, Montenegro,	5 or
Poland, Romania, Serbia,	less
Slovakia	
North Africa & Middle	
East	85
Morocco	13
Kirghizstan	12
Tunisia	9
Turkey	6
Afghanistan, Algeria,	
Egypt, Iran, Israel, Jordan,	
Kuwait, Lebanon, Libya,	
Oman, Pakistan, Saudi	5 or
Arabia, Sudan, Tajikistan,	less
Turkmenistan, Yemen	

Sub Saharan Africa	257
Ivory Coast	44
Burkina Faso	33
Niger	28
Senegal	24
Congo RD - Kinshasa	15
Nigeria	12
South Africa	10
Kenya	8
Madagascar	7
Benin	6
Burundi	6
Rwanda	6
Botswana, Cameroon,	Ŭ
Central African Republic,	
Gabon, Ghana, Guinea-	
Conakry, Réunion, Liberia,	
Malawi, Mali, Mauritania,	
Mauritius, Mozambique,	
Namibia, Tanzania, Chad,	
Togo, Uganda, Zambia,	5 or
Zimbabwe	less
Asia	83
Hong Kong	17
India	8
Korea, South	7
Japan	6
Bangladesh, Bhutan,	
Cambodia, China,	
Indonesia, Laos, Malaysia,	
Mongolia, Myanmar,	
Nepal, New Caledonia,	
Papua NG, Philippines,	
Singapore, Sri Lanka,	
Taiwan, Timor-Leste,	5 or
Vietnam	less

Table 2: Number of respondents per country by region

# SECTION 2: RESULTS AT THE INDIVIDUAL LEVEL

# Results for all questions at the individual level

In the present section, responses for all the variables are described. As can be seen in the following table, 60% of respondents describe themselves as being part of academia or research, while close to 10% are linked to the police, or the judicial and correctional job sectors, or describe themselves as other.

Table 3: Job sector of the respondents

What is your job sector:	Ν	Percentage
Academia and research	711	58.0
Government	53	4.3
Police	131	10.7
Judicial and correctional	139	11.3
Journalism	47	3.8
Other	145	11.8
	1231	

In the first set of questions, respondents were asked to think in terms of homicides in their country, and provide us with an idea of what the repartition for different variables might be.

### **Characteristics of homicides:**

### Table 4: Characteristics of homicides

In your opinion, for a typical year in your country, what would be the distribution of homicides for the following variables? Make sure to provide a total of 100 per question.

V2. Per 100 homicide victims, how many are:	Mean	Median	S Dev	Ν
Males	69,9	70,0	15,3	1176
Females	30,1	30,0	16,9	1176
V3. Per 100 murderers, how many are:	Mean	Median	S Dev	N
Males	83,9	90,0	10,5	1184
Females	16,1	10,0	10,5	1184
V4. Per 100 homicide victims, what was the weapon causing death:	Mean	Median	S Dev	N
Firearm	46,0	40,0	27,5	1173
Other (knife, blunt object, bare hands)	54,0	40,0 60,0	27,5	1173
V5. Per 100 homicide victims, what is the distribution for the following types of homicide:	Mean	Median	S Dev	N
Intra-family, spousal and crimes of passion	29,5	25,0	18,7	1141
During a fight	25,9	23,0	14,7	1141
During a theft, a rape or a kidnapping	22,8	20,0	16,7	1141
Conflict between criminals	22,8	20,0	16,9	1142

Respondents answered on average that 68% of the victims of homicides were males, while 32% were females. Such an estimate makes sense and corresponds to the known gender differential in homicide in certain countries. As far as what the gender of murderers was, respondents said that 83% were male and 17% were female, which also falls within the range of what is known in criminology. Of course, an individual's estimates might vary if they included infanticides in their calculations, which would increase the estimate of women as murderers.

Questioned on the proportion of homicides caused by firearm, respondents thought that 46% of murders worldwide involved a firearm. The standard deviation is larger than for previous variables, thus suggesting that there were more variations in responses on this variable.

For the context of the homicides, respondents on average estimated that 29% of the homicides were family-related (spouse, family member, crime of passion). The three other contexts had almost equal values. What stands out for this variable is the importance of homicides during a theft, rape or kidnapping. In a country like Canada, felony murders are much less frequent than homicides between acquaintances, family members of fellow criminal members.

The next set of questions aimed to estimate the prevalence of rare forms of homicide across countries. Respondents were asked to estimate the frequency of various uncommon forms of homicide and to score their response using a Likert-type scale (from almost never to almost every week). Important to keep in mind is that these questions are related to population size; rare homicides should be more frequent in a larger country than in smaller ones. This complicates the analysis later on.

### Table 5: Rare forms of homicide

# V6. Provide an estimate of the frequency of the following types of homicides in your country.

Choice of responses (internal value): Almost never (1), Maybe a case a year (2), A few cases a year (3), A case a month (4), Almost every week (5)

	Mean	Median	S Dev	N
The killing of a judge, a mayor or an elected official	1,7	1,0	0,9	1198
A killing during a kidnapping	2,1	2,0	1,1	1198
A massacre (10 victims +) by an armed gang	1,9	1,0	1,2	1188
Person killed by a mob (lynching)	2,1	2,0	1,1	1193
Heinous killing of a minority	2,1	2,0	1,0	1186
Killing linked to witchcraft	1,7	1,0	1,0	1188
Killing of an on-duty police officer	2,7	3,0	1,1	1191
Person killed by a security guard	2,3	2,0	1,1	1187
Person killed by a group of organized vigilantes	2,0	2,0	1,1	1178

By looking at the median of the distribution, we can state that respondents thought that most of these rare crimes happened at a rate of "Maybe a case a year," except for homicides linked to witchcraft and the killing of an on-duty police officer, which occured at a rate of "A few cases a year."

### Efficiency of the criminal justice system

The following questions pertained to impunity, or, the probability of offenders getting away with their crime and not facing formal consequences. Many theories of both delinquency and violence point out that when the risks of denunciation, arrest and conviction are low, criminal conduct becomes more likely and frequent. We asked respondents to provide us with an estimate of the probability that a given crime would be declared to the police (reportability rate), would lead to an arrest (clearance rate) or that an arrest would lead to a conviction (conviction rate). In fact, research has established that in some Central American countries, only one out of 10 people having committed a homicide is later convicted of that crime.

Table 6: Estimated reportability, clearance and conviction rates

V1. What would be the probability of a given crime being reported to the police (reportability rate)? This question is about normal crimes, NOT about homicides. Choice of responses (internal value): 10% and less (7), 20% (20), ... 80% (80), 90% and more (93)

	Mean	Median	S Dev	Ν
Assault: A man beats his wife	24,3	20,0	17,1	1082
Rape	34,7	30,0	20,4	1030
Armed robbery	73,1	80,0	23,4	1196
Burglary	68,8	80,0	24,1	1191

# V7. What would be the probability of a suspect being identified or charged for the following types of homicides (clearance rate)?

Choice of responses (internal value): 10% and less (7); 20% (20), ... 80% (80), 90% and more (93)

	Mean	Median	S Dev	Ν
Intra-family, spousal and crimes of passion	60,8	70,0	30,5	1162
During a fight	60,0	70,0	24,8	1156
During a theft	52,4	50,0	25,0	1149
During a rape	51,3	50,0	27,2	1142
Conflict between criminals	43,1	40,0	26,8	1133

# V8. What would be the probability of a suspect identified or charged with homicide eventually being convicted by the courts (conviction rate)?

Choice of responses (internal value): 10% and less (7); 20% (20), ... 80% (80), 90% and more (93)

	Mean	Median	S Dev	Ν
Intra-family, spousal and crimes of passion	63,4	70,0	28,6	1136
During a fight	62,6	70,0	26,1	1136
During a theft	65,9	70,0	25,9	1123
During a rape	65,8	80,0	28,2	1127
Conflict between criminals	58,7	70,0	30,3	1129

The first items tapped into the denunciation rate (or reportability rate) of common crimes such as assault, rape, robbery and burglary. Those questions were asked first in the questionnaire to limit the tendency for respondents to think in terms of homicides, but we suspect that a portion of respondents might still have thought that the question somehow concerned homicide. Hence, the

mean value for the reporting of marital assault (24%) is far above the rates found in research in this domain. Research clearly shows that only a tiny fraction of marital assaults and rapes are reported to the police, far below the high estimates provided by the respondents in our survey. Better news is that the relative reportability rate between different types of crime was as expected (i.e. robberies are more often declared to police than rapes).

The following histograms show that respondents seemed to discriminate quite well between the two very different forms of crime.





The second set of items dealt with the clearance rate, or, the proportion of homicides being resolved by the police via identifying or charging their author. The average results were in line with what previous research has found, especially in terms of the ordering between the different types of homicides. However, intra-family/spousal/passion homicides would have been expected to have a much higher rate given that the offender in those cases is almost always identified. The third set of questions is centred on the conviction rate.

Question V9 (Table 7) tapped into respondents' thoughts related to people's appreciation of four different agencies. For all four agencies, the average responses were somewhere between dissatisfied and "Neither satisfied nor dissatisfied." Prison and correctional services scored lower, but not by a large margin.

Table 7: Satisfaction with criminal justice agencies

V9. What would be the population's level of satisfaction with these agencies?

Choice of responses (internal value): Very dissatisfied (1), Dissatisfied (2), Neither satisfied nor dissatisfied (3), Satisfied (4), Very satisfied (5)

	Mean	Median	S Dev	Ν
Police	2,7	3,0	1,2	1184
Criminal courts	2,6	2,0	1,1	1182
Civil courts	2,7	3,0	1,0	1174
Prisons and correctional services	2,4	2,0	1,1	1174

The next set of questions looked at what we call the "rule of law," which can be defined as "the legal principle that law should govern a nation, as opposed to being governed by arbitrary decisions of individual government officials." We asked respondents for their opinion on a number of statements (Table 8).

#### Table 8: Rule of Law

### V11. Give your opinion on the following questions:

Choice of responses (internal value): Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly agree (5)

				1
	Mean	Median	S Dev	Ν
Judges are independent and are not subject to external pressures	2,7	3,0	1,3	1167
Civil courts protect property rights (land, goods)	3,3	4,0	1,1	1157
People charged before the courts have access to a fair trial	3,1	3,0	1,1	1153
The police protect the interests of people in power rather than the interests				
of the population	3,3	3,0	1,2	1155
The police are intimidated by criminal organizations	2,7	3,0	1,1	1161
People are afraid of the police	3,1	3,0	1,1	1154

Overall, on average, respondents were quite neutral with averages around 3, which is not necessarily a very positive result. We would expect that people would be more enthusiastic and positive about the work of the courts and the police.

### Social and precipitating factors:

Respondents were asked to answer a number of questions that tapped into factors that might influence the level of violence in their society. We wanted information on phenomena such as firearm carrying, police bribery, poverty and the absence of police, which seem to be important problems. Respondents had to select a predefined value ranging from "2% and less," to "90% or more." In the database, for later analysis, "2% and less" is coded as a value of 1, while "90% or more" is coded as 93.

Table 9: Estimates for various safety related variables

### V10. For the whole country, what would be...

Choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93)

	Mean	Med	S Dev	N
The proportion of households that possess a firearm	16,9	10,0	20,4	1161
The proportion of men that frequently carry a firearm with them (on them or in their car)	11,7	2,0	17,0	1157
The proportion of the population that are sometimes required to pay a bribe to police officers	31,1	20,0	31,5	1156
The proportion of the population living in extreme poverty (have difficulty feeding themselves)	31,4	20,0	27,2	1162
The proportion of the population living in areas where the police are virtually absent	26,4	20,0	25,3	1154
The proportion of women afraid to walk alone in their neighborhood at night	43,7	40,0	29,5	1157
The proportion of men afraid to walk alone in their neighborhood at night	24,6	20,0	24,4	1058

On average, globally, respondents thought that 16% of citizens in their country had a firearm at home, and 11% of men carried a firearm or had one handy. They also said that 32% of people were sometimes required to pay a bribe to a police officer. Respondents were asked to answer a

number of questions that tapped into factors that might influence the level of violence in their society. Respondents believed that 44% of women and 24% of men were afraid of walking alone in their neighborhood at night.

Finally, there were more general questions on the importance of various social problems.

### Table 10: Social problems

# V12. To what extent might the following problems significantly affect the quality of life for a segment of the population in your country?

Choice of responses (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5)

	Mean	Median	S Dev	Ν
Religious tensions	2,3	2,0	1,2	1158
Ethnic tensions	2,7	2,0	1,3	1156
Linguistic tensions	2,0	2,0	1,1	1158
Political tensions	3,3	3,0	1,2	1160
Poverty	3,8	4,0	1,1	1159
Corruption of the criminal justice system	3,3	4,0	1,5	1156
Actual or past civil war	2,3	1,0	1,6	1153
Local drug trafficking	3,2	3,0	1,3	1160
International drug trafficking	2,8	3,0	1,3	1155

As can be seen in our results, poverty is perceived as the most serious problem, followed by the corruption of the criminal justice system, and political tensions.

### SECTION 3: RESULTS AT THE COUNTRY LEVEL

### The responses aggregated at the country level

The objective of this research project is to analyze the factors leading to violence and homicide around the world. The questionnaires filled out by experts were aggregated at the country level in order to produce new estimates for a large number of countries. For most of the variables we collected, there are currently no worldwide estimates available. In the present section, we analyze the results for three variables for which there is at least some information available for a large number of countries, namely poverty, firearm ownership and corruption. The goal is to demonstrate whether our research strategy provides results that have some face validity. Note that some of the data for this section is based on an earlier data set containing 1176 respondents instead of the current 1231.

### Poverty

In order to get a sense of the level of poverty as considered by our expert respondents, two questions were asked in different contexts.

The first question was a more direct one: For the whole country, what would be the proportion of the population living in extreme poverty (have difficulty feeding themselves)? The choice of responses were (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93). The second question was more general and asked within the context of social problems: To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Poverty. The choice of responses were (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5). Our data showed that, at the individual level, the correlation between both measures of poverty was very strong (0.68).

Results for every country are presented in Table 11. Note that the region estimates are in fact the average of the responses of all respondents living in this region, not the average of country averages. This biases the regional values towards the countries with more respondents.

The results in table 11 show that in Canada, the United States and Australia, there is a significant portion of the population that have difficulty feeding themselves, and that poverty is considered an important social problem. Western Europe fared very slightly better. All other regions seemed to have more poverty problems, with an aggravated situation in Central America, the Caribbean and Sub-Saharan Africa.

### Table 11: Estimated levels of poverty

For the whole country, what would be the proportion of the population living in extreme poverty (have difficulty feeding themselves)? And: To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Poverty (scale 1-5).

		% pop difficulty	Poverty as a	N
	USA	feeding 15,5	social problem 4,1	N. 22
CAN_US_AUS	USA Australia	15,5 9,8	4,1 2,4	22 9
10,1 / 3,3 (89)	Canada	8,2	3,1	52
10,17, 0,0 (00)	New Zealand	7,3	3,3	6
	Guatemala	63,3	4,0	<= 4
	Mexico	52,6	4,0	49
Central America	Honduras	52,0	4,2	5
48,6 / 4,2 (72)	El Salvador	51,7	4,8	6
40,074,2(72)	Panama	30,0	4,3	<= 4
	Costa Rica	11,7	4,3	6
Caribbean	Haiti	68,5	4,2	29
44,4 / 4,2 (59)	Cuba	30,0	4,7	<= 4
++,+ / +,2 (33)	Dominican Rep.	30,0	4,7	<= 4
	Bahamas	26,7	4,7	<= 4
	Jamaica	26,7	4,3	<-4 6
	Trinidad and Tobago	20,5	3,7	9
	Martinique	20,0	3,0	<= 4
	Barbados	15,0	2,5	<= 4
	Puerto Rico	5,0	3,5	<= 4
	Antigua and Barbuda	2,0	2,0	<= 4
	-			
	Saint Kitts and Nevis	0,1	3,0	<= 4
	Colombia	42,3	4,4	22
	Bolivia	40,0	4,3	<= 4
	Peru	28,6	3,7	7
	Brazil	24,7	4,3	65
South America	Venezuela	21,3	3,7	8
26,3 / 4,1 (125)	Argentina	15,7	3,9	7
	Ecuador	13,4	4,0	<= 4
	Chile	12,9	3,3	7
	Guyana	10,0	4,0	<= 4
	Uruguay	5,0	2,5	<= 4
	Greece	20,0	4,0	<= 4
	Portugal	15,7	3,7	6
	Spain	14,0	3,0	13
	France	11,8	3,5	104
	Belgium	11,7	3,3	7
	UK	10,6	2,7	10
	Malta	7,4	1,7	<= 4
	Italy	4,2	3,2	10
	Czech Republic	4,0	3,0	<= 4
West Europe	Netherlands	2,8	2,1	8
9,3 / 3,1 (208)	Austria	2,0	2,0	<= 4
	Cyprus	2,0	3,0	<= 4
	Finland	2,0	2,0	<= 4
	Norway	2,0	1,5	<= 4
	Denmark	1,7	2,0	6
	Sweden	1,5	1,8	<= 4
	Germany	1,4	2,7	7
	Luxembourg	1,4	2,7	<= 4
	Switzerland	1,4	2,0	6
	Iceland	1,0	2,0	<= 4
	Moldova	48,0	4,6	5
	Ukraine	42,2	4,3	27
	Bosnia-Herzegovina	39,0	4,4	8
	Macedonia	36,7	3,3	<= 4
	Armenia	30,2	4,4	9
	Serbia	30,0	4,0	<= 4
	Georgia	30,0	4,5	<= 4
	Kazakhstan	28,4	3,8	11
	Russia	25,4	3,8	27
	Bulgaria	22,0	3,8	5
Fact Furners	Albania	21,3	4,3	9
East Europe	Croatia	16,8	4,0	12
25,3 / 3,9 (165)	Hungary	16,7	4,4	9
	Latvia	15,0	3,0	<= 4
	Montenegro	15,0	3,5	<= 4
	Romania	12,5	3,8	<= 4
	Poland	10,0	3,0	<= 4
	Slovakia	10,0	2,7	<= 4
	Slovenia	8,4	3,8	<= 4 6
		8,4 6,0	3,8 2,7	7
	Estonia Azerbaijan			
	Azerbaijan	5,0	4,5	<= 4
	Lithuania	4,0 2,0	2,7 2,3	<= 4 <= 4
	Belarus			

oven	y (seale 1-5).			
	A f=h =	62.2	2.0	
	Afghanistan	63,3	3,8	<= 4
	Yemen	60,0	5,0	<= 4
	Pakistan	56,7	4,7	<= 4
	Egypt	40,0	4,0	<= 4
	Tajikistan	40,0	4,0	<= 4
	Tunisia	39,2	4,0	9
Ν.	Sudan	36,0	4,4	5
Africa	Kirghizstan	31,3	3,9	11
& Mid	Libya	30,7	1,7	<= 4
E	Morocco	26,9	4,3	13
30,2 /	Kuwait	25,0	3,0	<= 4
3,7	Iran			
(79)		20,0	4,0	<= 4
(75)	Jordan	20,0	3,5	<= 4
	Lebanon	20,0	3,0	<= 4
	Oman	20,0	4,0	<= 4
	Turkmenistan	20,0	4,0	<= 4
	Algeria	16,7	2,5	<= 4
	Turkey	12,4	3,0	5
	Israel	4,4	2,8	5
	Saudi Arabia	2,0	1,0	<= 4
	Liberia	93,0	5,0	<= 4
	Madagascar	86,0	5,0	7
	Guinea-Conakry	79,0	4,2	<= 4
	Тодо	78,6	4,6	5
	Burundi	77,2	4,2	6
	Chad	75,0	4,5	<= 4
	Congo RD	72,2	4,6	13
	Malawi	70,0	4,7	<= 4
	Mali	70,0	, 4,7	<= 4
	Zimbabwe	67,7	4,7	<= 4
	Somalia			<= 4
		65,0	4,0	
	Burkina Faso	63,1	4,4	29
	Central African Republic	60,0	5,0	<= 4
	Nigeria	59,5	4,6	11
SS	Ivory Coast	57,7	3,9	42
Africa	Mozambique	56,7	4,7	<= 4
55,6/	Niger	54,8	3,7	26
4,1	Benin	53,3	4,8	6
(239)	Kenya	51,4	4,7	7
	Uganda	50,0	5,0	<= 4
	Cameroun	47,5	4,3	<= 4
	Ghana	45,0	1,5	<= 4
	Mauritania	42,5	3,5	<= 4
	Tanzania	40,0	5,0	<= 4
	Gabon	40,0	3,5	<= 4
	Rwanda	40,0	4,6	5
	Senegal	39,5	3,3	22
	South Africa	39,0	4,5	10
	Zambia	30,0	5,0	<= 4
	Botswana	25,0	4,0	<= 4
	Namibia	20,0	5,0	<= 4
	La Reunion	15,0	4,0	<= 4
	Mauritius	8,4	3,2	5
	Timor-Leste	50,0	5,0	<= 4
	Papua New Guinea			<= 4 <= 4
		41,0	3,0	
		37,5	4,3	8
	Cambodia	33,3	4,7	<= 4
	Philippines	32,5	4,0	<= 4
	Hong Kong	30,1	4,1	17
	Bangladesh	30,0	4,0	<= 4
	Laos	30,0	4,0	<= 4
	Indonesia	24,0	3,4	5
	Mongolia	20,0	4,0	<= 4
Asia	Nepal	20,0	3,0	<= 4
23,7 /	Sri Lanka	15,5	3,8	<= 4
3,6	Korea, South	15,3		
(74)			3,0	6
	Taiwan	15,0	3,0	<= 4
	Vietnam	13,4	2,0	<= 4
	Macao, China	10,0	2,0	<= 4
	New Caledonia	10,0	3,0	<= 4
	China	5,0	3,5	<= 4
	Japan	1,4	2,5	<= 4
	Bhutan	0,1	2,0	<= 4
	Malaysia	0,1	2,0	<= 4
	Myanmar	0,1	4,0	<= 4
	Singapore	0,1	2,0	<= 4

### Firearms:

The next table presents the average responses by country for one of the questions regarding firearms. The question was: "For the whole country, what would be the proportion of households that possess a firearm?" The choice of responses was 2% and less (coded 1 in the data set), 5% (5), 10% (10), ... 80% (80), 90% and more (coded 93).

Results showed that 29% of homes in the Canada-USA-Australia-NZ region had some sort of firearm at home, which was also the case for 28% of homes in Central America, 21% in the Caribbean and 18% in South America. The proportion was lower in Western Europe (13%) and Eastern Europe (15%), with North Africa and the Middle East (20%) falling in between. Firearm ownership is lowest in the regions of Sub-Saharan Africa (10%) and Asia (6%).

Results also revealed wide differences in firearm ownership within regions. The USA's firearm ownership rate was twice that of Canada's, which is roughly equivalent to what we know from other sources. In the Caribbean, results showed high levels of household firearm ownership in Puerto Rico (60%) and the Dominican Republic (45%), but very little in Cuba (1%). For Western Europe, Switzerland had a high ownership rate (64%), while only a few Dutch homes possessed a firearm (1%).

In general, it can be said that firearm ownership is high in countries with a strong hunting tradition, as well as in countries with ongoing or recent civil wars. Our data does not, however, distinguish between hunting rifles and handheld firearms. We do have a second question that asked respondents "The proportion of men that frequently carry a firearm with them (on them or in their car)." The results differed quite a bit from the ones presented here (Table 12).

		Mean	N.		Afghanistan	86,5	<
	USA	52,2	23		Yemen	86,5	<
AN_US_AUS_NZ	Canada	24,0	52		Jordan	75,0	<
29,2 (89)	Australia	11,8	8		Lebanon	70,0	•
	New Zealand Honduras	10,0	6 5		Libya	66,7	
	El Salvador	44,0 28,3	6		Pakistan Oman	44,0 30,0	
Central America	Mexico	28,3	50		Egypt	20,7	
27,6 (73)	Panama	26,7	<= 4		Israel	20,0	
27,0 (70)	Guatemala	20,7	<= 4	North Africa &	Turkey	18,7	
	Costa Rica	18,7	6	Middle East	Kirghizstan	12,4	
	Puerto Rico	60,0	<= 4	20,2 (80)	Kuwait	10,0	
	Dominican Republic	46,7	<= 4		Turkmenistan	10,0	
	Bahamas	36,7	<= 4		Sudan	5,2	
	Antigua and Barbuda	30,0	<= 4		Iran	3,5	
Caribbean	Haiti	23,6	29		Algeria	2,0	
21 (58)	Trinidad and Tobago	12,5	9		Morocco	2,0	
()	Barbados	11,0	<= 4		Saudi Arabia	2,0	•
	Jamaica	8,7	6		Tunisia	1,4	
	Martinique	2,0	<= 4		Tajikistan	0,1	
	Saint Kitts and Nevis	2,0	<= 4 <= 4		Somalia Namibia	86,5	
	Cuba Guyana	<u>1,0</u> 50,0	<= 4		Guinea-Conakry	45,0 25,5	
	Uruguay	45,0	<= 4		Burundi	25,0	
	Venezuela	21,1	9		Gabon	25,0	
	Ecuador	20,0	<= 4		South Africa	21,2	
South America	Colombia	19,2	21		Chad	20,0	
17,6 (124)	Brazil	17,8	64		Mauritania	20,0	
	Bolivia	17,3	<= 4		Ghana	16,0	
	Argentina	15,7	7		Mali	14,0	
	Chile	7,7	7		Ivory Coast	13,1	
	Peru	5,2	7		Kenya	11,7	
	Switzerland	63,8	6		Reunion	10,0	
	Malta	36,7	<= 4		Botswana	10,0	•
	Norway	35,0	<= 4		Burkina Faso	8,5	
	Finland Iceland	30,0	<= 4 <= 4	Sub Saharan	Niger	8,0	
	Greece	25,0 17,5	<= 4	Africa 10,3 (242)	Madagascar Mozambique	7,4 7,4	
	Portugal	17,3	<- 4 6	10,5 (242)	Togo	7,4	
	Spain	12,0	13		Nigeria	6,4	
	France	11,4	103		Zambia	5,0	
Western Europe	Sweden	10,0	<= 4		Benin	5,0	
12,7 (206)	Italy	9,6	10		Zimbabwe	4,7	
	Belgium	7,5	7		Mauritius	3,6	
	Czech Republic	7,4	<= 4		Senegal	2,7	
	UK	5,6	10		Cameroun	2,0	
	Luxembourg	4,7	<= 4		Liberia	2,0	
	Germany	3,7	7		Rwanda	2,0	
	Denmark	1,7	6		Congo RD	1,6	
	Netherlands	1,2	7		Malawi	1,4	
	Austria	0,7	<= 4		Tanzania Control African Bonublic	1,0	
	Cyprus	0,1 55,0	<= 4 <= 4		Central African Republic Uganda	0,1	
	Montenegro Bosnia-Herzegovina	53,8	<= 4		New Caledonia	0,1 40,0	
	Croatia	23,3	12		Papua New Guinea	25,0	
	Serbia	20,7	<= 4		Taiwan	20,0	
	Macedonia	20,0	<= 4		Philippines	15,0	
	Ukraine	18,8	27		Cambodia	10,7	
	Albania	18,0	9		Mongolia	10,0	
	Slovakia	16,7	<= 4		Singapore	10,0	
	Georgia	15,0	<= 4		Nepal	7,3	
	Russia	14,5	27		China	6,0	
Eastern Europe	Slovenia	10,7	6		Hong Kong	5,2	
14,9 (165)	Kazakhstan	8,9	11	Asia	Bangladesh	2,0	
/- \/	Armenia	8,9	9	5,8 (74)	Bhutan	2,0	
	Romania	6,0	<= 4	- , - ( )	Indonesia	2,0	
	Latvia	5,0	<= 4		Japan	2,0	
	Bulgaria	4,8	5		Macao, China	2,0	
	Moldova	4,4	5		Malaysia	2,0	
	Lithuania	4,0	<= 4		Myanmar Sri Lanka	2,0	
	Estonia Azorbajian	2,3	7		Sri Lanka Timor Losto	2,0	
	Azerbaijan Hungary	2,0	<= 4		Timor-Leste Korea South	2,0	
	Hungary Poland	1,4 1,4	9 <= 4		Korea, South Vietnam	1,4 1,4	
	Belarus	1,4 0,7	<= 4 <= 4		India	1,4	
	uciai us	0,7	<u></u> 4	1	muld	1,5	

### Table 12: Estimated level of firearm possession For the whole country, what would be the proportion of households that possess a firearm?

#### Bribes and corruption

In our survey, there were two questions relating to corruption. The first question regarding corruption was the following: For the whole country, what would be the proportion of the population that are sometimes required to pay a bribe to police officers (BRI)? The choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93).

As expected, data in Table 13 reveals that the countries in which citizens are least likely to pay bribes to police officers are in North America, Australia and Western Europe. However, within most regions, there are countries with low levels of police bribery, such as in Cuba, Chile, Slovenia, Jordan and Israel, and Japan. It is unclear whether any Sub-Saharan African countries have little police corruption, since the three countries with low estimates had few respondents.

Our second question relating to corruption was asked later in the questionnaire within a different context. The question, in a section tapping into social problems in general, was the following: *To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Corruption of the CJ system (COR)*. The choice of responses is (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5).

Results for this second question essentially mirrored those of the first question. The correlation between both questions stands at 0.80, which can be considered very strong. The following figure presents the scattergram of the average values on both questions for all countries.



Figure 4: The relationship between our two measures of corruption

### Table 13: Estimated levels of bribery and criminal justice corruption

For the whole country, what would be the proportion of the population that are sometimes required to pay a bribe to police officers) (BRI)? And: To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Corruption of the CJ system (COR, scale 1 to 5).

		BRI	COR	Ν
	USA	4,7	2,9	2
CAN_US_AUS	Canada	3,1	1,8	5
3,3 / 2,1 (90)	New Zealand	2,0	1,3	
	Australia Mexico	1,8 71,9	2,1 4,4	5
	Honduras	68,6	5,0	5
Central America	Panama	56,7	4,0	<=
61,7 / 4,2 (73)	Guatemala	43,3	4,0	<=
	El Salvador	31,7	4,3	
	Costa Rica	12,3	2,5	
	Dominican Rep.	73,3	4,3	<=
	Barbados	31,0	2,5	<=
	Haiti	30,8	4,3	2
	Jamaica	20,3	4,7	
Caribbean	Antigua and Barbuda	20,0	2,0	<=
25,7 / 3,8 (57)	Bahamas Trinidad and Tahaga	17,3	3,0	<=
	Trinidad and Tobago Martinique	13,5 2,0	3,8 1,0	<=
	Saint Kitts and Nevis	2,0	1,0	<=
	Cuba	1,0	1,5	<=
	Puerto Rico	0,1	3,0	<=
	Bolivia	71,0	5,0	<=
	Guyana	60,0	4,0	<=
	Venezuela	51,3	4,3	
	Ecuador	50,0	4,0	<=
South America 42,8 / 4,1 (124)	Peru	46,9	4,0	
	Brazil	44,5	4,2	6
	Colombia	44,0	4,5	2
	Argentina	38,6	3,6	
	Uruguay	21,0	1,0	<=
	Chile	2,9	2,1	
	Malta	21,3	2,0	<=
	Portugal	12,0	2,5	
	Greece	11,0	4,0	<=
	Cyprus UK	10,0	3,0	<=
	Belgium	8,6 4,3	1,5 1,7	-
	Italy	4,3	2,5	
	Czech Republic	4,2	2,5	<=
	France	3,7	1,8	1
West Europe	Spain	3,1	2,2	1
4,1 / 1,76 (205)	Austria	2,0	1,0	<=
	Denmark	2,0	1,6	
	Finland	2,0	1,0	<=
	Germany	2,0	1,1	
	Iceland	2,0	1,3	<=
	Netherlands	2,0	1,0	
	Norway	2,0	1,0	<=
	Switzerland	2,0	1,0	
	Sweden	1,5	1,3	<=
	Luxembourg	1,4	1,0	<=
	Kazakhstan Azerbaijan	71,7 65,0	4,6 5,0	<=
	Serbia	54,3	3,5	<=
	Ukraine	53,3	4,5	
	Bulgaria	48,0	3,8	
	Albania	40,0	4,4	
	Moldova	40,0	3,8	
	Macedonia	36,7	4,0	<=
	Russia	36,6	3,6	
	Armenia	33,8	3,9	
Foot Furrers	Croatia	28,5	3,8	:
East Europe 34,4 / 3,7 (164)	Romania	25,5	3,8	<=
57,77, 5,7 (104)	Slovakia	20,7	2,7	<=
	Lithuania	16,7	3,3	<=
	Bosnia-Herzegovina	16,5	3,6	
	Latvia	15,0	2,5	<=
	Montenegro	15,0	3,0	<=
	Hungary	11,8	1,9	
	Belarus	10,7	2,3	<=
	Poland	3,4	2,7	<=
	Estonia	2,6 1,7	1,6 3,2	
	Slovenia			

	Pakistan	85,3	4,3	<= 4
1	Turkmenistan	80,0	5,0	<= 4
	Afghanistan	77,3	3,8	<= 4
	Lebanon	70,0	3,0	<= 4
	Yemen	70,0	4,5	<= 4
N. Africa & Mid E 42,7 / 4,2 (79)	Egypt	66,7	4,3	<= 4
	Kirghizstan	65,9	4,0	10
	Tunisia	49,1	3,4	9
	Morocco	48,7	4,1	13
	Tajikistan	40,0	3,0	<= 4
	Libya	36,7	3,7	<= 4
	Iran	35,0	4,3	<= 4
	Sudan	24,4	4,0	5
	Kuwait	16,0	2,0	<= 4
	Turkey	15,3	3,2	6
	Algeria	7,3	3,7	<= 4
	Jordan	5,0	2,0	<= 4
	Israel	2,0	1,6	5
	Oman	2,0	2,0	<= 4
	Saudi Arabia	2,0	2,0	<= 4
	Tanzania	86,5	4,5	<= 4
	Liberia	80,0	5,0	<= 4
	Madagascar	79,9	4,7	7
	Togo	77,8	4,6	5
	Zimbabwe	77,7	4,0 5,0	<= 4
	Benin	77,2	4,2	<-4 6
	Burundi	76,7	4,7	6
	Congo RD	76,5	4,6	13
	Mauritania	74,0	4,0	<= 4
	Mali	72,0	5,0	<= 4
	Guinea-Conakry	71,2	4,4	5
	Gabon	70,0	5,0	<= 4
	Cameroun	68,3	4,5	<= 4
	Nigeria	66,9	3,8	11
	Mozambique	64,3	4,0	<= 4
	Central African Republic	60,0	4,0	<= 4
SS Africa 46,9 /3,7 (238)	Kenya	57,6	4,4	7
	Somalia	51,5	4,5	<= 4
	Rwanda			5
		51,0	3,0	
	Zambia	50,0	4,5	<= 4
	Ghana	45,0	2,5	<= 4
	Ivory Coast	40,3	3,4	42
	Burkina Faso	38,4	3,7	28
	Chad	35,0	4,5	<= 4
	South Africa	32,0	3,7	10
	Niger	30,5	3,3	25
	Malawi	30,0	4,0	<= 4
	Uganda	30,0	4,0	<= 4
	Mauritius	24,0	3,0	5
	Senegal	19,7	3,0	22
	Botswana			<= 4
		1,0	3,0	
	La Reunion	1,0	2,0	<= 4
	Namibia	1,0	2,5	<= 4
	Myanmar	80,0	3,0	<= 4
	Bangladesh	71,0	4,0	<= 4
				<= 4
	Papua New Guinea	70,0	4,5	
	Papua New Guinea Vietnam		4,7	
		70,0		<= 4
	Vietnam	70,0 66,7	4,7	<= 4 <= 4
	Vietnam Cambodia	70,0 66,7 61,0	4,7 4,7	<= 4 <= 4 <= 4
	Vietnam Cambodia Mongolia	70,0 66,7 61,0 60,0	4,7 4,7 3,0 4,3	<= 4 <= 4 <= 4
	Vietnam Cambodia Mongolia India Indonesia	70,0 66,7 61,0 60,0 50,4 46,4	4,7 4,7 3,0 4,3 4,4	<= 4 <= 4 <= 4
	Vietnam Cambodia Mongolia India	70,0 66,7 61,0 60,0 50,4 46,4 42,5	4,7 4,7 3,0 4,3 4,4 3,8	<= 4 <= 4 <= 4 5 <= 4
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0	<= 4 <= 4 <= 4 2 5 <= 4 <= 4
Asia	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3	<pre>&lt; = 4 &lt; = 4 &lt; = 4 &lt; = 4 &lt; = 4 &lt; = 4 &lt; = 4</pre>
Asia 30,7 / 3,2 (74)	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal	70,0 66,7 61,0 50,4 46,4 42,5 40,0 32,5 30,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0	<= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0	<pre>&lt; = 4 &lt; = 4</pre>
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2	<= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan	70,0 66,7 61,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0 11,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5	<= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0 11,0 10,8	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6	<= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste	70,0 66,7 61,0 60,0 50,4 46,4 42,5 30,0 32,5 30,0 20,0 12,0 11,0 10,8 10,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0	<= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2 <= 2
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste China	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0 11,0 10,8	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0 2,5	<pre>&lt;= 4 &lt;&lt; 4</pre>
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste	70,0 66,7 61,0 60,0 50,4 46,4 42,5 30,0 32,5 30,0 20,0 12,0 11,0 10,8 10,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0	<pre>&lt;= 4 &lt;&lt; 4</pre>
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste China	70,0 66,7 61,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0 11,0 10,8 10,0 5,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0 2,5	<pre>&lt; = 4 &lt; = 4</pre>
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste China Bhutan	70,0 66,7 61,0 60,0 50,4 46,4 42,5 40,0 32,5 30,0 20,0 12,0 11,0 10,8 10,0 5,0 2,0	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0 2,5 2,0	<pre>&lt;= 4 &lt;= 4 &lt;= 4 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$</pre>
	Vietnam Cambodia Mongolia India Indonesia Sri Lanka Laos Philippines Nepal Malaysia Korea, South Taiwan Hong Kong Timor-Leste China Bhutan Macao, China	$\begin{array}{c} 70,0\\ 66,7\\ 61,0\\ 60,0\\ 50,4\\ 46,4\\ 42,5\\ 40,0\\ 32,5\\ 30,0\\ 20,0\\ 12,0\\ 11,0\\ 10,8\\ 10,0\\ 5,0\\ 2,0\\ 2,0\\ 2,0\\ 2,0\\ 2,0\\ \end{array}$	4,7 4,7 3,0 4,3 4,4 3,8 4,0 4,3 3,0 2,0 2,2 2,5 2,6 2,0 2,5 2,0 3,0	<pre>&lt;= 2 &lt;= 2</pre>

# Validation of our country-level data with external criteria

For this survey, we gathered new data on a variety of subjects relating to society, the criminal justice system and violence. The results already shown seem to fit well with existing criminological knowledge of poverty, firearms and corruption. Nonetheless, because our feelings and expectations about how data should spread might be misleading, there was a need to test them in a more systematic way.

One way to test the validity of our data was to compare the results for one of our questions to other available data that seemed to measure the same concept. This is known as external validity. To be certain, there are only a few of our variables for which any other data available for a large number of countries exists. However, the argument can be made that if our data do replicate other official measures developed by international agencies, the same can be assumed for other variables in our dataset. We used two of our variables for which we could find worldwide estimates.

### Poverty

In our survey, we had two questions tapping into the concept of poverty. One was more direct, and one was more general and was asked in the context of the importance of various social problems. The questions were:

- For the whole country, what would be the proportion of the population living in extreme poverty (have difficulty feeding themselves)?
- To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Poverty.

How would our results for these variables, aggregated at the country level, correlate with other external data on poverty?

There is no single indicator for the concept of poverty. One way to measure it is to look at the overall economic performance of the country and divide it by its population. This is the per capita gross domestic product (per capita GDP; ppp method). While this informs us of the wealth of the country, it is not a measure of the prevalence of poverty. There are rich countries with a significant portion of the population that can be described as poor. A second method is to use a proxy variable such as the proportion of child deaths. While interesting, this variable is not perfect either, since some countries, given their climate and location, are more likely to experience premature death caused by various viruses. A third measure is to estimate the proportion of people who have to live with less than 2\$ a day. That measure, however, makes no sense outside of certain regions of the world (i.e. you are still poor if you live in America on 5\$ a day).

The next figure shows the relationship between our two measures of poverty and the 2013 per capita GDP (ppp). The GDP measure is logged (natural) to provide a normal distribution which facilitates the analysis.

Figure 5: Relationship between our two measures of poverty and countries' per capita GDP (ppp, natural log)



The left side of figure 5 is a representation of the relationship between the perceived proportion of the population having difficulty feeding themselves with the **(per capita?)** GDP.

The correlation coefficient stands at a very strong -0.81. On the right side we find a correlation of -0.64 between the appreciation of poverty as an important social problem and the per capita GDP. To be certain, the perception of poverty as a social problem and the percentage of the poor among the population are two different concepts. In some countries, there might be widespread poverty, but other social problems might be more important, such as violence or war.

In summary, based on the large correlation with an external measure, it can be said that our questions on poverty have a good level of external validity.

### Firearms

The prevalence of firearm ownership within countries is a subject of great importance. Clearly, the availability of firearms might be a strong causal influence on the prevalence of homicides, but the opposite effect could also exist. More violence and homicide could explain why more citizens acquire firearms.

In our survey, we have asked our respondents to tell us:

- The proportion of households that possessed a firearm.
- The proportion of men that frequently carried a firearm with them (on them or in their car).
- Per 100 homicide victims, what was the weapon causing death: Firearms.

Hopefully, the responses to these questions are related to other existing measures of firearm possession.

There is no definitive list of the number of firearms in circulation in every country around the world. The most used source is the one produced by the Small Arms Survey in their "Estimated Civilian Owned Firearms" (2011, 2007). They base their estimations on gun registration systems in some countries, household surveys, proxy indicators (such as the proportion of suicides

committed with a firearm), analogous comparisons (estimating the value of a country given its similarities with another one for which they have reliable information) and expert estimates.

The next table presents the correlation coefficients between our three measures of firearm ownership and the Small Arms Survey (SAS) estimates.

	Firearms per 100 (SMA)	Proportion of households with firearm	The proportion of men who carry	Per 100 victims of homicide, by a firearm
Firearms per 100 (SMA)	1.00	0.40	0.19	0.25
Proportion of households with firearm		1.00	0.81	0.51
The proportion of men who carry			1.00	0.56
Per 100 victims of homicide, by a firearm				1.00

Table 14: Correlation between our firearm prevalence estimates and other estimates

As can be seen in Table 14, there is a moderate correlation between our survey estimates of the proportion of households that possess a firearm and the SAS estimates; the linear correlation stands at 0.40. The question about men who often carry a firearm is only slightly related to the SAS estimate (0.19) and the question about the proportion of homicides committed with a firearm is also only slightly related to the SAS estimate.

The fact that our data are only moderately related to SAS's does not mean that they are useless. Our data might very well measure something other than what was measured by the SAS, or alternatively, our data might be a better measure of firearm ownership than the SAS's.

Ultimately, we think that our measure of "men who carry firearms" is more important in understanding homicide than the total possession rate. This is because while there are a lot of firearms in countries such as Canada or Switzerland, they are mostly long hunting rifles securely stored in people's basements. By contrast, our data showed that in countries such as Guatemala, almost all firearms are out on the street.

### **SECTION 4: MODEL AND CONSTRUCTION OF THE FINAL DATA SET**

The present section aims at explaining the steps, decisions and analyses that have shaped the final variables of the World Homicide Survey as they appear in the final data set. As we have seen in earlier sections, the survey has been completed by 1201 experts in 149 countries.

### Theoretical framework

In the last years, our researchers have worked on various problems and subjects using the evolving database of the WHS. The final iteration of the conceptual model is based on numerous analyses. It is shown in figure B1:



Figure B1: Conceptual model of the World Homicide Survey

Adverse social conditions:

There is a wealth of research on the social conditions associated with increased levels of violence (Pratt and Cullen, 2005; Pridemore and Trent, 2010; Nivette, 2011). The nation's economic and demographic statistics have been shown to co-vary quite strongly with the countries homicide rate. We decided to use four well known variables that measure social conditions believed lay the background on which other crime pushes and pulls can take roots. In terms of analysis, we think that the more fundamental social forces should being put together in the general concept of adverse social conditions.

In our model, we consider the following dimensions, than can be measured by data produced by international agencies (our data come from the UN Human Development Index current dataset) as well as data from our own study:

- Collective poverty: All cross national studies of homicide have some measure of the general wealth of the population as measured by variables such as the gross national product per capita. It is often thought as a measure of poverty, which is contested by some researchers (Pridemore, 2008, Ouimet, 2012). We think that general wealth plays on violence mostly through the quality of the criminal justice system; richer countries being able to have a better and less corrupt police, as well as better civil and criminal courts and incarceration system. It is here measured by the log value of the Gross Domestic Product per capita (method ppp). The variable was reversed in order to co-vary positively with other variables; therefore it appears as collective poverty in our schema and in analyses.
- Poverty: At the individual level, the link between poverty and violence has not been clearly established using self-reported data. Although at the country level, there is a strong association between levels of poverty and the homicide rate (Ouimet, 2012), we don't believe that poverty in itself increases violence. In our theory, poverty will reduce the efficiency of the criminal justice agencies as well as increase the social conditions that can lead to violence. Since there is simply no clear measure of poverty produced by international agencies and those who approximate it (such as child mortality) are plagued by problems, we use two questions that were in our WHS questionnaire.
- Inequality: Income inequality has often been linked to the level of violence (Lafree, 1999), presumably because the people at the bottom of the income distribution feel frustration, which might lead to agression. Most crossnational study of homicide do include a measure of income disparity. We believe that inequality does not play a direct rôle on homicide but has its effect mediated by formal social control and violence triggers. We use as a measure of inequality the standard Gini coefficient produced by the World Bank.
- Age of the population: Almost all cross national studies of homicide include one demographic predictor (Nivette, 2011). At the individual level, age and crime are strongly linked, which makes us think that the younger is the population of a country, the more crime and violence there will be. We measure, in our study, this dimension by using the median age of the population. The variable was reversed in order to co-vary positively with other variables, therefore it appears as youthful population in our schema and in analyses.

### Formal social control:

While, there are many agencies that perform formal social control (such as schools, organized religion, government services, the military), matters of theft, rape and murder usually are handled by the three major criminal justice agencies, which are the police, the courts and the prisons. It is hypothesized here that weak criminal justice institutions will produce a great deal of violence and homicide for two main reasons. First, would be criminals will feel that their risks are low and therefore will decide to act upon their impulse. Second, if the system does not protect people, then citizens will arm themselves and react promptly and forcefully when threatened, or may exact vengeance after the fact. A good police and the application of the Rule of Law will ensure that homicides are less frequent, and are restricted mostly to cases that undeterred by the law, such as by a women with severe mental problems killing her children, murder-suicide and organized crime related homicides.

Based on preliminary analyses, we have divided the concept of formal social control in four dimensions.

- Rule of law: The rule of law protects individuals from possible abuses of the state and therefore encourages solidarity and prevents rebellion. The application of the rule of law will make citizens less likely to take justice into their own hands, therefore preventing violence. For this dimension, we use data from the WHS.
- Corruption: There are many reasons why corruption of the police and other agencies of the criminal justice system lead to more violence. Corruption makes the formal social control less effective. We use data from the WHS that have been validated in Ouimet (2016). The variable was reversed in the model, making it therefore a measure of low level of corruption.
- Effectiveness of the CJ system: Effectiveness of the criminal justice system was measured in the WHS by asking respondents about their perception of the clearance rate and the conviction rate for several types of homicides. It is assumed that when there are low risks of apprehension or conviction, there would be more crime.
- Appreciation of the CJ system: People that have a more positive attitude towards the police, courts and corrections are more likely to resort to these agencies when a situation develops, therefore avoiding taking justice in their hands.

### Violence precipitators:

Violence precipitators are social facts that may contribute to homicide. They are more closely related to homicides than more diffuse factors such as poverty because they can be considered as proximal causes of violence, as often being the real explanations for the crime committed.

- Availability of firearms: Criminological research, as well as common sense, has shown that the availability of firearms is making homicides more likely (Hemenway et al., 2000). Conflicts when firearms are present are simply more likely to be lethal. Therefore a country where more people have access to firearms should have a higher homicide rate. Our data on the availability come from two questions we asked our experts.
- Fear of crime: Fear of the other is a well known cause of ethnic enmity and violence (Rotberg, RI, 2010). Fear lead to violence in many ways. First, fear promotes isolation and therefore decreases informal social controls, leaving the streets to criminal elements. Second, fearful people, families and communities may act disproportionately when threaten (Cusson, 1999, RICPT). In our survey, we have measured fear of men and women in walking in the street in their neighborhood using the standard criminological question.
- Drug trafficking: The importance of local and international drug trafficking should be related to homicide levels because the drug industry is a highly violent one (Ousey et Lee, 2002). For once, theft, robbery and killings are frequent because risks of detection and official punishment are limited. Also, those markets are violent since crime syndicates members have no access to traditional justice, they must therefore take justice in their own hands. Turf wars and clan feuds are also frequent. We have measured the importance of drug trafficking using two questions in the expert survey.
- Armed conflict: Actual of recent civil war should be related to elevated levels of homicides for a number of reasons: poverty, despair, ethnic tensions, availability of firearms, etc (Kalyvas et al., 2006). To measure war, we use both an official source and a question from the WHS.
## The homicide rate

The WHS aims at understanding factors that account for the variations in the prevalence of homicide around the world. Hence, the WHS does not measure the prevalence of homicide, although we had questions about the prevalence of rare forms of homicide. The dependent variable, the homicide rate, has to be taken from official sources. There are actually two different sources of data on the homicide rate that are being used by researchers, the UNODC and the WHO data.

#### UNODC data:

UNODC, the United Nations Office on Drugs and Crime, has published a report in 2011 called "Global Study on Homicide 2011" which presents the data from their own going data set based on criminal justice and public health sources. That is to say that in some countries, with good record keeping, the data is taken from the governmental sources, while in other countries the data is taken from the WHO estimates.

In fact, UNODC people examine and present the various sources of data available on homicide in a given country. The researcher can choose which data he think is best for one country. For example, for Sudan, the report list a homicide rate of 4,1 per 100,000 for one source and of 24,2 from another source. The WHO estimates can be larger than the national police ones, and sometimes the WHO data is lower than the national police figures. Sometimes the only rate available is highly suspect, as is the 1,5 rate for Somalia which is in a region where the rate for other countries is usually in the 20-30 range. UNODC has published "Global Study on Homicide 2013" which presents data for 2012 for most countries. It still contains strange values such as a rate of 3,2 for Liberia and 0,6 for Indonesia.

#### WHO data:

The World Health Organization uses a variety of sources for its estimation of prevalence of homicide; mortality data (by cause of death), official police or government agency. For some countries with insufficient data, they use an estimation model to compute a predicted homicide rate. The model includes covariates such as poverty, inequality and so on.

## Figure B2: WHO source of data for homicide (See Explanatory notes, WHO, 2016)

Table 8: Estimation method by country

Estimation method	Country <sup>a</sup>
Vital registration data	Argentina, Austria, Bahamas, Barbados, Belarus, Belgium, Brazil, Canada, Chile, China, Colombia, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Ecuador, El Salvador, Estonia, Finland, Guyana, Hungary, Iceland, India, Israel, Japan, Jordan, Kazakhstan, Latvia, Luxembourg, Malta, Mauritius, Mexico, Netherlands, New Zealand, Norway, Panama, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Serbia, Singapore, Slovenia, Suriname, Sweden, The former Yugoslav Republic of Macedonia, Trinidad and Tobago, Ukraine, United Kingdom, United States of America, Venezuela (Bolivarian Republic of)
Criminal justice data	Australia, Belize, Bulgaria, Costa Rica, France, Germany, Greece, Guatemala, Ireland, Italy, Kyrgyzstan, Lithuania, Paraguay, Slovakia, Spain, Switzerland, Uruguay
Adjusted criminal justice data	Armenia, Azerbaijan, Bangladesh, Bhutan, Bolivia (Plurinational State of), Botswana, Cambodia, Dominican Republic, Georgia, Honduras, Jamaica, Kenya, Malawi, Mongolia, Morocco, Mozambique, Namibia, Nepal, Nicaragua, Pakistan, Papua New Guinea, Peru, South Africa, Sri Lanka, Swaziland, Syrian Arab Republic, Tajikistan, Thailand, Turkey, Uganda, Yemen
Modelled estimate with country data	Albania, Bahrain, Fiji, Iraq, Kuwait, Lesotho, Montenegro, Philippines, Uzbekistan
Modelled estimate without country data	Afghanistan, Algeria, Angola, Benin, Bosnia and Herzegovina, Brunei Darussalam, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Democratic People's Republic of Korea, Democratic Republic of the Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Haiti, Indonesia, Iran (Islamic Republic of), Lao People's Democratic Republic, Lebanon, Liberia, Libya, Madagascar, Malaysia, Maldives, Mali, Mauritania, Myanmar, Niger, Nigeria, Oman, Oatar, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Timor-Leste, Togo, Tunisia, Turkmenistan, United Arab Emirates, United Republic of Tanzania, Viet Nam, West Bank and Gaza Strip, Zambia, Zimbabwe

a Not listed here are 22 Member States with populations less than 300 000 for which homicide estimates were included in regional tables but not reported separately.

Table 9: Covariates considered for homicide rate regression model

Category	Included in cross validation	Excluded after initial tests
Absolute and relative deprivation	<ul> <li>Infant mortality rate</li> <li>Gini index</li> </ul>	<ul> <li>Proportion of income in the highest quintile</li> <li>Proportion of income in the lowest quintile</li> <li>Ratio of upper and lower income quintiles</li> </ul>
Demographic	<ul> <li>Percentage of urban population</li> <li>Proportion of population aged 15–30 years old and male</li> </ul>	<ul> <li>Population density</li> <li>Population growth rate</li> <li>Sex ratio in 15–30 year old age groups</li> </ul>
Social (dis)organization	<ul> <li>Adolescent birth rate</li> <li>HIV prevalence</li> <li>Religious fractionalization</li> </ul>	<ul> <li>Percentage of households headed by female</li> <li>Divorce rate</li> <li>Health system access</li> <li>Ethnic fractionalization</li> <li>Language fractionalization</li> </ul>
Deterrence	<ul> <li>Corruption index 2012</li> </ul>	
Routine activity		Unemployment rate
Economic and social development	<ul> <li>Lagged gross national income</li> <li>Gender inequality index</li> </ul>	<ul> <li>Gross domestic product</li> <li>Literacy rate</li> <li>Mean years of education</li> </ul>
Selected individual risk factors	Alcohol drinking pattern	<ul> <li>Alcohol consumption rate</li> <li>Child stunting</li> <li>Firearms per capita</li> </ul>

As it can be seen from figure B3, the correlation between both sources of information on homicide is quite large (correlation of 0,87 between both natural logged variables).

Figure B3: The relationship between UNODC and WHO logged homicide rate



The fact that the correlation is large does not distract from the fact that for some countries, the information is very different from both sources.

	UNODC	WHO		UNODC	WHO
Liberia	3,2	37,5	Togo	10,3	9,3
Haiti	10,2	26,6	Burundi	8	6,7
Honduras	90,4	103,9	Ivory Coast	13,6	12,2
Colombia	30,8	43,9	Norway	2,2	0,6
Libya	1,7	11,2	Benin	8,4	6,3
Brasil	25,2	32,4	Somalia	8	5,5
Trinidad - Tobago	28,3	35,3	Madagascar	11,1	8,1
Mauritania	5	11,3	Lithuania	6,7	2,6
Luxembourg	0,8	6,7	Cambodia	6,5	2,4
Jamaica	39,3	45,1	Tanzania	12,7	8
Saudi Arabia	0,8	6,5	Sudan	11,2	6,5
Niger	4,7	10,3	Botswana	18,4	12,4
Senegal	2,8	7,9	Antigua and Barbuda	11,2	4,4
South Africa	31	35,7	Turkmenistan	12,8	4,3
Zimbabwe	10,6	15,1	Mozambique	12,4	3,4
Indonesia	0,6	4,7	Nigeria	20	10,1
Cameroun	7,6	11,7	Myanmar	15,2	4,2
Ghana	6,1	10	Rwanda	23,1	5,8
Russia	9,2	13,1	Congo RD-Kinshasa	28,3	10,4
Venezuela	53,7	57,6	Saint Kitts - Nevis	33,6	13,8

Table B1: Largest differences between UNODC and WHO estimates

There are no simple answers as to what source of data provides the most valid measure. It is it probable that the Liberia homicide rate is not around 3,2, there is no way to know whether the rate for Saudi Arabia is closer to 0,8 or to 6,5. The solution we adopt is to use the average UNODC and WHO homicide rate for our analyses.

Figure B4 shows the final histogram of the average homicide rate (left) and its logged version (right).

## Figure B4: Distribution of the average WHO-UNODC homicide rate



We can see in figure B4 that the original distribution is asymmetric, which is to be expected. Most countries have a rather low homicide rate (in the 1 to 10 per 100,000) while a few countries have a very large rate. In order to proceed to statistical analysis, the variable used should follow a normal distribution. A common practise is to log the variables, making it normal and then useable in correlation and regression analysis.

## **Rare homicides**

The expert questionnaire had questions about the prevalence of rare forms of homicide. They were asked to estimate the frequency of various uncommon forms of homicide and to score their response using a Likert-type scale (from almost never to almost every week). Important to keep in mind is that these questions are related to population size; rare homicides should be more frequent in a larger country than in smaller ones. Table 2 presents the data at the country level, which means that for each country the mean responses of the experts was computed, and table 2 presents the mean of the country values.

V6. Provide an estimate of the frequency of the following types of homicides in your country.

Choice of responses (internal value): Almost never (1), Maybe a case a year (2), A few cases a year (3), A case a month (4), Almost every week (5)

		Correlation	
	Mean of	with the	
	country	homicide	
	values	rate	Ν
The killing of a judge, a mayor or an elected official	1,6	,34**	149
A killing during a kidnapping	2,0	,37**	149
A massacre (10 victims +) by an armed gang	1,7	,43**	149
Person killed by a mob (lynching)	2,0	,45**	149
Heinous killing of a minority	1,9	,09	149
Killing linked to witchcraft	1,7	,33**	149
Killing of an on-duty police officer	2,4	,48**	148
Person killed by a security guard	2,1	,44**	149
Person killed by a group of organized vigilantes	2,0	,42**	149

By looking at the mean of the distribution, we can state that respondents thought that most of these rare crimes happened at a rate of "Maybe a case a year," except for homicides linked to witchcraft and the killing of an on-duty police officer, which occurred at a rate of "A few cases a year."

Table 2 also shows the correlation between the country's mean for each type of rare form of homicide and the homicide rate (which is the log of the average WHO-UNODC 2012 homicide rate). Those correlations can be qualifies as strong or large, meaning that the rare forms of homicides tends to appear more often in countries that have a higher homicide rare.

For analytic purposes, we have constructed a scale that grasps the general prevalence of prevalence rare forms of homicide. We created a simple average of all 9 items for each country, the scale providing an alpha of 0,90 which is very high (and all items are strongly associated with the total). We also created a factorial score using the 9 items and the resulting variable was correlated at 0,996 with the more simple average scale. We then decided to keep the simpler scale. Figure B5 presents the distribution of the rare homicide scale and the scatterplot of the rare homicide scale and the homicide rate (correlation of  $0.50^{**}$ ).

0 4 00. 15 2 00. 10 ,00

Figure B5: Distribution of the rare homicide scale and scattergram with the homicide rate



The 10 countries with the largest rare homicide scale value are: Uganda, Sudan, South Africa, Brazil, Burundi, Honduras, Yemen, Oman, Afghanistan and Central African Republic.

#### Adverse social conditions

The theoretical model shown in figure 1 proposes that there are social conditions that promote violence, either directly or through other mechanisms (formal social control and precipitating or violence triggers). In the previous years, we have proceeded to many analyses of the relationship between social conditions and violence and have ended up with four distinct dimensions. There are several pieces of research linking social conditions and the homicide rate, but they tend to include all sorts of variables that are all tied up statistically: child mortality, education levels, illiteracy, life expectancy, and so on. Having too many variables that are conceptually or statistically related causes problems of multicolinearity and overspecification. Multicolinearity is caused by having variables too strongly related to each other, rendering the statistical estimates unstable. Overspecification is having two or more variables taping the same dimension, seeing the effect of this dimension split into two or more variables, making each statistically weak.

## **Collective poverty**

A country with more general wealth should have less violence. Maybe it is because when people in the country are well off, they are less likely to act violently. Maybe it is because in richer countries there are less poor people who may act violently. Maybe it is that in richer countries there is a better social net and better health services. Maybe it is the police in richer countries are less corrupt. There are many ways to account for the strong reverse relationship between a nation's general wealth and violence and homicide.

We have come to qualify as general wealth of a country its measure of economic productivity, such as the Gross national product or Gross national income. Countries with a larger economic productivity may well have citizens that are better off, but we think that the relationship between GDP and homicide is more a function of better institutions. Poorer countries have a difficult time to gather enough economic resources to assure solid social welfare, health and criminal justice institutions. In some countries, the government has simply not enough money to have psychiatric and health services, a professional and uncorrupt police force, efficient criminal courts and good prisons.

The usual measure of general wealth of a country is its Gross Domestic Product, that is a measure of all goods and services produced in a country during a year. Of course there are many problems and limitations with such a measure. For example it does not take into account bartering and does not include value for people producing their own food. Also, the measure does not take fully into account the costs of living. Yet, almost all crossnational study on violence has a measure of global economic performance such as the GDP, that can be thought as a measure of the standards of living in a country.

In our study, we use the value produced by the International Monetary Fund for the year 2014. We use the measure known as the GDP per capita, method ppp (the purchasing power parity is a currency conversion tool). In order to work with a normally distributed variable (and to take into account the conceptually log-normal nature of the phenomenon), we use the natural log distribution of the GDP. The distribution of the log GDP follows a normal distribution.

Figure B6 presents the relationship between GDP and our two measures of homicide.



The scatterplot on the left in figure 6 clearly shows that countries with a larger GDP have a lower homicide rate. The correlation is -0,49\*\*, which is quite high. By examining the diagram, we can see that almost all countries with a log GDP of less than 9 (that would be less than 8,000\$ a year) have a moderate to high homicide rate, while almost all countries with a GDP of more than 10,5 (that is 35,000\$) have a low homicide rate. Countries that are not poor nor wealthy show the largest variations in the homicide rate, including the largest rates.

For analytic purposes, we wanted to have all dimensions of the concept of Adverse social conditions going the same way. Therefore we reversed (i.e. \* -1) the Log GDP, making it a measure of collective poverty. Countries with a highest value have more collective poverty (i.e. low economic wealth).

#### Poverty

Although the link between poverty and crime seems natural, the notion is in fact contentious. At the individual level, not all researchers have found a relationship between socio-economic status and participation in crime. However, and it seems to be true everywhere, paupers constitute the largest proportion of people arrested and incarcerated. A quite large proportion of people who have killed someone else could be qualified as poor (well there are many wealthy people who have killed hundreds of thousands of people through selling poisonous substances, such as cigarettes, but that is another story).

At the cross national level, there are simply no good measure of the prevalence of poverty. The general economic measures such as GDP does not measure poverty (there are countries that can be describes as rich that have a large proportion of their population that live in poverty). There are some other measures like the proportion of the population having to live with less than 2\$ a day, but that measure means nothing outside very specific regions. Other researchers have used child mortality as a proxy, but this solution is imperfect since in some regions it is insect born disease that kills children.

The World Homicide Survey has decided to ask directly the experts about the problem of poverty in their country.

The first question was a more direct one:

For the whole country, what would be the proportion of the population living in extreme poverty (have difficulty feeding themselves)?

The choice of responses were (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93).

The second question was more general and asked within the context of social problems:

To what extent might the following problems significantly affect the quality of life for a segment of the population in your country? Poverty.

The choice of responses were (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5).

Our data show that the correlation between both measures of poverty is a very strong  $(0,68^{**})$ .

We created a scale of poverty by putting the two expert questionnaire questions together. We tried many ways to create a scale, by added them, by multiplying them and by forcing them in a single factorial solution and saving the factor score. We kept the fourth solution which was to Z-score both poverty questions (proportion of people living in poverty and poverty as a social problem) and calculating the mean value. The correlation between the poverty measure and the homicide rate is 0,55\*\* and the correlation with the rare forms of homicides is 0,65\*\*.

## Inequality

Inequality in the present study is really economic inequality as measured by the Gini coefficient gathered on the database of the World Bank. The correlation between the Gini coefficient and the log of the homicide rate is ,63.

## Youthful population

The variable that we use to measure the age structure of the population is the median age of the population. We reversed it (\* -1) making the dimension a measure of the youthfulness of the population. The correlation between the youthfulness of the population and the log of the homicide rate is ,62.

## **Social conditions**

In our model, there are four main dimensions that are fundamentals social conditions influencing social control and violence: Wealth, poverty, inequality and age. For some analyses, we are using the dimensions while for other analyses we could use a single factor that measure all those dimensions.

A factorial analysis was performed to see how the dimensions fit together and the result was one factor generated (explaining 67,9% of the variance) with a KMO of 0,68. The factor loadings for each dimension was ,91 for collective poverty, ,88 for poverty, ,53 for inequality and -,91 for youthful population. A factor score was produced for each country. Table B3 presents the correlations between all variables of this dimension. Figure B7 illustrates the distribution of the adverse social conditions factor and its correlation with the homicide rate.

	Collective poverty	Poverty	Inequality	Youthful population	Adverse social conditions	Homicide rate (log)
Collective poverty	1	,78	,25	,81	,91	,49
Poverty		1	,35	,68	,88	,55
Inequality			1	,42	,53	,63
Youthful population				1	,91	,62
Adverse social						,67
conditions						

Table B3: Correlations between the dimensions of adverse social conditions

Note: all correlations are significant at P < 0.01.





The countries with the highest values on the adverse social conditions factor are: Central Afr. Rep., Congo RD-Kinshasa, Liberia, Madagascar and Haiti). the countries with the lowest value are: Norway, Austria, Sweden, Finland and Denmark). The correlation between the adverse social conditions and the log of the homicide rate is ,67\*\*.

## Formal social control

Formal social controls are usually thought as the anti-crime forces that are produced by criminal justice related agencies such as the police, courts and corrections. The fear of arrest, conviction and sanction prevents many from acting out on their instincts. Also, the fact that wrongdoers are punished makes the victims less likely to take justice into their own arms and themselves sanction transgressors.

## Rule of law

There is no available measure of the rule of law for most countries of the world. We asked a several questions to the experts.

V12. For the whole country, what would be...

V12E: The proportion of the population living in areas where the police are virtually absent Choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93)

V11. Give your opinion on the following questions: Choice of responses (internal value): Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), Strongly agree (5)

V11A Judges are independent and are not subject to external pressures

V11B Civil courts protect property rights (land, goods)

V11C People charged before the courts have access to a fair trial

V11D The police protect the interests of people in power rather than the interests of the population

V11E The police are intimidated by criminal organizations

V11F People are afraid of the police

A factorial analysis was conducted and only one factor was produced, with a KMO of ,90 and 64,4% of the variance explained. All items were moderately to strongly related to the factor with factors loadings of ,76 for V12E, -,88 for V11A, -,87 for V11B, -,92 for V11C, ,76 for V11D, ,62 for V11E and ,77 for V11F. A factor score was produced for each country. The dimension then measure the level of application of the rule of law. The correlation between the resulting factor, the rule of law and the homicide rate is -,58\*\*.

## Corruption

Corruption was defined here as the perceived levels of corruption of the criminal justice system. In the questionnaire, we had two questions measuring an aspect of corruption.

Police bribery:

V10. For the whole country, what would be...

V10C: The proportion of the population that are sometimes required to pay a bribe to police officers

Choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93)

Corruption as a problem:

V12. To what extent might the following problems significantly affect the quality of life for a segment of the population in your country?

V12F: Corruption of the criminal justice system

Choice of responses (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5)

The correlation between both expressions of corruption was ,68. To create a single measure of corruption, we Z-scored both measures and averaged them. Then, the variable has been reversed (\* -1). The correlation between the low level of corruption (cleanliness) and the log of the homicide rate stands at -,58.

## Effectiveness of the CJ system

Effectiveness of the criminal justice system is about its ability to identify the authors of criminal acts, to arrest and judge them and to sanction them. There is no measure of the effectiveness in most countries of the world. In the questionnaire, there were questions about the perceived probability that a given homicide ends up in an arrest/solution (clearance rate) and the pei4rceived probability that someone charged with homicide is find guilty.

V7. What would be the probability of a suspect being identified or charged for the following types of homicides (clearance rate)?

V8. What would be the probability of a suspect identified or charged with homicide eventually being convicted by the courts (conviction rate)?

Choice of responses (internal value): 10% and less (7); 20% (20), ... 80% (80), 90% and more (93)

Those two questions were asked for five different types of homicides:

Intra-family, spousal and crimes of passion During a fight During a theft During a rape Conflict between criminals

In order to construct a general scale of the concept, we multiplied both responses for each type of crime (for example, in the case of intra-family homicides, 60% clearance \* 70% conviction, providing a 42% chance of conviction per homicide committed). We then took the average for the five forms of homicide. The correlation between effectiveness and homicide is -,56.

The 10 countries with the lowest values are: Honduras (country with the lowest estimated rate), Guyana, Tajikistan, Guatemala, Bolivia, Afghanistan, Somalia, Pakistan, Venezuela, Yemen.

## Appreciation of the CJ system

In some countries, the public is satisfied by the work of the criminal justice agencies and this brings trust and collaboration that are important ingredients of social control. The police cannot function well if citizens don't trust them. We have asked respondents to assess their perception of the public's approval of four agencies.

V9. What would be the population's level of satisfaction with these agencies? Choice of responses (internal value): Very dissatisfied (1), Dissatisfied (2), Neither satisfied nor dissatisfied (3), Satisfied (4), Very satisfied (5)

-Police -Criminal courts -Civil courts -Prisons and correctional services

Since all items were strongly correlated, we created a scale by taking the mean value for all four items. The correlation between the level of appreciation and the homicide rate is -,57.

## **Formal social control**

There are four dimensions in the formal social control construct: rule of law, low level of corruption, effectiveness and appreciation. We ran a factor analysis on these four dimensions and

one factor came out with a KMO of ,82 explaining 78,4% of the variance. The factor loading for low level of corruption is ,90, the one for rule of law is ,94, the one for effectiveness is ,82 and the one for appreciation is ,88. A country with a large factor score on the formal social control capital is a country where there is little corruption, a good application of the rule of law, and an efficient and appreciated criminal justice system. The correlation between the formal social control scale and the log of the homicide rate is -,64.

	Rule of law	Absence of corrupti on	Effectivene ss	Appreciatio n	Formal social control	Homicide rate (log)
Rule of law	1,00	,84	,69	,77	,94	-,58
Absence of corruption		1,00	,62	,71	,90	-,58
Effectiveness			1,00	,64	,82	-,56
Appreciation				1,00	,88	-,57
Formal Social control						-,64

Table B4: Correlations between the dimensions of formal social control

Note: all correlations are significant at P < 0.01.



Figure B8: Distribution of formal control concept and relationship with the homicide rate

## Violence precipitators

After the concept of adverse social conditions and of formal social control, our theory recognizes the role that some factors can play more directly on violence. Violence precipitators are facts of life that can promote the occurrence of conflicts and that can make conflicts more deadly. The dimensions of firearms availability, fear of crime, organized crime and wars are interrelated, but may also be caused by social conditions or even the level of formal social control. For example, if the police are corrupted and not interested in enforcing the law for certain individuals, others might develop fear, get guns (more easily available in countries with a recent history of armed conflicts) and do their own deadly justice.

## Firearms

The availability of firearms may be linked to the homicide rate. However, not all studies found a link at the cross-national level since some countries have a large gun ownership without having a large homicide rate. The availability of firearms has been measured in our expert questionnaire.

V10. For the whole country, what would be... Choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93)

V10A The proportion of households that possess a firearm V10B The proportion of men that frequently carry a firearm with them (on them or in their car)

An analysis of correlation between both measures show the first one (proportion of households) is not statistically related to the log of the homicide rate (r = ,16). However, the second question (proportion of men who carry) is related to homicide (r = ,36\*\*). We then decided to keep only this second question of our questionnaire as a measure of firearm availability.

## Fear of crime

Fear of crime can lead to more violence since fearful citizens can arm themselves, create vigilantes organisations or simply act preventive violence. There are no data on fear of crime in most countries of the world, but we asked respondents the standard question to measure fear of crime.

V10. For the whole country, what would be...

Choice of response (internal value): 2% and less (1), 5% (5), 10% (10), ... 80% (80), 90% and more (93)

V10F The proportion of women afraid to walk alone in their neighborhood at night

V10G The proportion of men afraid to walk alone in their neighborhood at night

In order to construct a scale we simply took the average between both questions. The fear dimension is correlated at  $,62^{**}$  with the homicide rate.

## **Drug trafficking**

Two questions to the experts were measuring the importance of drug trafficking as a social problem.

V12. To what extent might the following problems significantly affect the quality of life for a segment of the population in your country?

Choice of responses (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5)

V12H Local drug trafficking V12I International drug trafficking

In order to compute a scale, we took the mean of both questions. The correlation of the scale with the homicide rate is ,50.

## Armed conflicts

In order to measure the actual impact of the war in a given country, we asked respondents a question about it.

V12. To what extent might the following problems significantly affect the quality of life for a segment of the population in your country?

Choice of responses (internal value): Not at all (1), A little bit (2), Somewhat (3), Quite a bit (4), Very much (5)

V12G Actual or past civil war

We ran some checks using an official list of countries that have had more than 1000 deaths in 2014-2015, or more than 50,000 in 15 years and the overlap was important but not perfect. In order to create a scale, we added both variables (one in a 1-5 scale, one in a 0-1 scale). The correlation with the homicide is  $,24^{**}$ .

## Violence precipitators

In order to construct a general factor that represent the impact of the four dimensions (fear, drug trafficking, war and firearms) we ran a factorial analysis with these 4 dimensions and created a factorial scored that we call violence precipitators. One factor was created with a KMO of ,65 and 47.9% of explained variance. The factor loadings were ,75 for fear, ,74 for firearms, 49 for war and ,76 for drug trafficking.

	Firearms	Fear of crime	Drug trafficking	Armed conflict	Violence precipitat ors	Homicide rate (log)
Firearms	1	,33	,37	,31	,74	,36
Fear of crime		1	,48	,16	,75	,62
Drug trafficking			1	,13	,76	,50
Armed conflict				1	,49	,24
Violence precipitators						,64

Table B5: Correlations between the dimensions of violence precipitators





### Références

- Acock, Allan C. (2005). Working with missing Values. Journal of marriage and family, 67 (4) 1012-1028.
- Alesina, Alberto, Arnaud Devleeschauwer, William Easterly, Sergio Kurlat and Romain Wacziarg (2003). Fractionalization. Journal of Economic Growth. 8: 155-194.
- Allison, Paul (2002) Missing Data. Thousand Oaks: CA. Sage.
- Altheimer, Irshad (2008). Social support, ethnic heterogeneity, and homicide: A cross-national approach. Journal of Criminal Justice, 36, 103-114.
- Antonaccio, Olena and Charles R. Tittle (2007). A cross-national test of Bonger's theory of criminality and economic conditions. Criminology, 45, 925-958.
- Archer D. & R. Gartner (1984). Violence and Crime in Cross-National Perspective. New Haven: Yale University Press.
- Avison, William R. and Pamela L. Loring (1986). Population diversity and cross-national homicide: The effects of inequality and heterogeneity. Criminology. 24: 733-750
- Baker, B. 2008. Multi-Choice Policing in Africa. Uppsala: Nordisk Africainstitutet.
- Bennett, Richard and James Lynch. 1990. "Does a Difference Make a Difference: Comparing Cross-National Crime Indicators." Criminology 28:153-82.
- Bjerregaard, Beth and John. K. Cochran (2008). A cross-national test of institutional anomie theory: Do the strength of other social institutions mediate or moderate the effects of the economy on the rate of crime. Western Criminology Review, 9, 1-48.
- Black, Donald (1976). The Behavior of Law. New York: Academic Press.
- Black, Donald (1983). Crime as Social Control, American Sociological Review, vol. 48, no 1, pp. 34-45.
- Black, Donald (1989). Sociological Justice. New York: Oxford University Press.
- Blau, Judith R., and Peter M. Blau. 1982. The cost of inequality: Metropolitan structure and violent crime. American Sociological Review 47:114–29.
- Bourguignon, Francois (1998). Crime as a Social Cost of Poverty and Inequality: A Review focusing on Developing Countries. Paris: DELTA.
- Brantingham, Paul and Mary Brantingham (1984). Patterns in Crime. New York, McMillan.
- Brillon, Yves (1985). Crime, justice and culture in Black Africa. Centre International de Criminologie Comparée.
- Chamlin, Mitchell B.; Cochran, John K. (2005) Ascribed economic inequality and homicide among modern societies: Toward the development of a cross-national theory. Homicide Studies 9: 3-29.
- Chevigny, Paul (1995) Edge of the knife: Police violence in the Americas. New York: New Press.
- Cingranelli, David and David Richards (2008). Human Rights Data Project Coding Manual Version 2008.3.13. (http://www.humanrightsdata.org)
- Cole, Julio H. and Andres M. Gramajo, A. M. (2009), Homicide Rates in a Cross-Section of Countries: Evidence and Interpretations. Population and Development Review. 35 (4) 749-776.
- Cusson, M., Cusson, F., Beaulieu, N. (2003). Les homicides. Dans LeBlanc, M., Ouimet, M., Szabo, D. (Dir.) Traité de criminologie empirique, 3e édition, Montréal, Presses de l'Université de Montréal, 281-334.
- Cusson, Maurice (2010). L'art de la sécurité. Montréal: Hurtubise.
- Daly, Martin, Margo Wilson and Shawn Vasdev (2001). Income inequality and homicide rates in Canada and the United States, Canadian Journal of Criminology, April 2001: 219-236
- Deaton, Angus (2005). Measuring Poverty in A Growing World. The Review of Economics and Statistics, 87 (1) 1-19.
- Fajnzylber, P., Lederman, D., & Loayza, N. (2002). Inequality and violent crime. The Journal of Law and Economics 45: 1-39.
- Forde, David, Leslie Kennedy et Robert Silverman (1991). Homicide in urban Canada: Testing the impact of economic inequality and social disorganization. Canadian Journal of Sociology; 16 (4) 397-411.
- Frühling, Hugo, Joseph S. Tulchin, Heather A. Golding (2003) Crime and violence in Latin America: citizen security, democracy, and the state. Washington, DC: Woodrow Wilson Center Press.
- Gartner, Rosemary (1990). The victims of homicide: A temporal and cross-national comparison. American Sociological Review. 55:92-106.
- Gerber Theodore and Sarah Mendelson (2008). Public Experiences of Police Violence and Corruption in Contemporary Russia: A Case of Predatory Policing? Law and Society Review, 42 (1) 1-44.
- Geveva Declaration (2008). Global Burden of Armed Violence. Report. Geneva: GD Secretariat.
- Gurr, Ted Robert (2000). Ethnic Warfare [is] on the Wane. Foreign Affairs. May\_June. 79 (3) 52-64.

- Howard, Gregory, Graeme Newman and William Pridemore (2000). Theory, Method and Data in Comparative Criminology. Dans David Duffee (Eds) Criminal Justice 2000 (p. 139-211). Washington, DC: National Institute of Justice.
- Hsieh, Ching-Chi et M.D. Pugh (1993) Poverty, income inequality, and violent crime: a meta-analysis of recent aggregate data studies. Criminal Justice review 18: 182-202.
- Huggins, M. K. ed. 1991. Vigilantism and the State in Modern Latin America. New York: Praeger.
- Huntington, Samuel P., The Clash of Civilizations and the Remaking of World Order, New York, Simon and Schuster, 1996
- Jacobs, David and Amber Richardson (2008). Economic Inequality and Homicide from 1975 to 1995: A Cross-National Fixed-Effects Test. Homicide Studies. 12 : 28-45.
- Johnson, Holly (). Violence against women: an international perspective.
- Kalyvas, S. 2006. The Logic of Violence in Civil War. Cambridge: Cambridge University Press.
- Koonings, K.; Kruijt, D. eds. 1999. Societies of Fear. The Legacy of Civil War, Violence and Terror in Latin America. London, New York: Zed Books.
- Koonings, K.; Kruijt, D. Eds. 2004. Armed Actors. Organized Violence and State Failure in Latin America. London, New York: Zed Books.
- Krahn, Harvey, Timothy Hartnagel and John Gartrell (1986). Income inequality and homicide rates: Crossnational data and criminological theories. Criminology. 24: 269-295.
- Kruijt, D. Eds. 2004. Armed Actors. Organized Violence and State Failure in Latin America. London, New York: Zed Books.
- La Free, Gary (1999) Comparative cross-national studies in homicide. In M. Dwayne Smith and Margaret A. Zahn (eds.) Homicide Studies: A Source Book of Social Research. Beverly Hills, California: Sage.
- LaFree, Gary and Andromachi Tseloni (2006). Democracy and Crime: A Multilevel Analysis of Homicide Trends in Forty-Four Countries, 1950-2000. The Annals of the American Academy of Political and Social Science. 605 : 26-49.
- Lee, Matthew R. and William B. Bankston (1999). Political structure, economic inequality, and homicide: A cross-national analysis. Deviant Behavior. 19:27-55
- Lin, Ming-Jen (2007). Does democracy increase crime? The evidence from international data. Journal of Comparative Economics, 35, 467-483.
- Londono, Jan Luis and Rodrigo Guerrero (1999). Violencia en América Latina Epidemiología y Costos. Report R-375, Banco Interamericano de Desarrollo.
- Mauro, Paolo (1998). Corruption: Causes, consequences, and agenda for future Research. Finance and Development, 35 (1).
- Messner, Steven F. and Richard Rosenfeld (1997) Political Restraint of the Market and Levels of Criminal Homicide: A Cross-National Application of Institutional-Anomie Theory. Social Forces 75: 1393-1416.
- Messner, Steven F.; Lawrence E. Raffalovich; Peter Shrock (2002) Reassessing the Cross-National Relationship between Income Inequality and Homicide Rates: Implications of Data Quality Control in the Measurement of Income Distribution. Journal of Quantitative Criminology 18: 377-395.
- Muggah, Robert and Ryan Nichols (2007). Quoi de neuf sur le front Congolais. Small Arms Survey, Special Report.
- Neapolitan, Jerome L. (1997) Cross-National Crime: A Research and Review Sourcebook. Westport, Connecticut: Greenwood Press.
- Nédélec, Serge (1999): Etat et délinquance juvénile au Sénégal contemporain, in: Bernault, Florence (ed.): Enferment, prison et châtiment en Afrique. Paris : Karthala.
- Neumayer, Eric (2003) Good policy can lower violent crime: Evidence from a cross-national panel of homicide rates, 1980-97. Journal of Peace Research 40: 619-640.
- Oquist, P. 1980. Violence, Conflict, and Politics in Colombia, N. Y. : Academic Press.
- Ouimet (forthcoming-a). A world of homicides: The effect of economic development, excess poverty and income inequality on the homicide rate for 167 countries in 2008. Article submitted to Homicide Studies.
- Ouimet (forthcoming-b). The luxury of punishment : How crime and money explain the variations in adult imprisonment rates across the world. Article submitted to Punishment and Society.
- Ouimet Marc et Pierre Tremblay (1996) A Normative Theory of the Relationship Between Crime Rates and Imprisonment Rates: An Analysis of the Penal Behavior of U.S. States from 1972 to 1992. Journal of Research on Crime and Delinquency. v33, n 1: 109-125.
- Ouimet, Marc (2011). L'homicide à travers le monde: Tendances et configurations. Champ pénal : Nouvelle revue internationale de criminologie. Vol 8, n 1.

- Pare, Paul-Philippe (2006) Income inequality and crime across nations re-examined. Doctoral Dissertation. Pennsylvania State University.
- Pécaut, D. 1999. From the Banality of Violence to Real Terror: the Case of Columbia. in Koonings, K.; Kruijt, D. eds. Societies of Fear. The Legacy of Civil War, Violence and Terror in Latin America. London, New York: Zed Books.

Pérouse de Monclos, M.-A. (2008). États faibles et sécurité privée en Afrique Noire. Paris: L'Harmattan.

- Pratt, Travis C.; Timothy W. Godsey (2003) Social support, inequality, and homicide: A cross-national test of an integrated theoretical model. Criminology 41: 611-643.
- Pridemore William Alex and Carol Trent (2010). Do the invariant findings of Land, McCall, and Cohen generalize beyond the United States? A review of the cross-national literature on the structural covariates of homicide. Homicide Studies, 14,296-335.
- Pridemore, William Alex (2008) A methodological addition to the cross-national literature on social structure and homicide: A first test of the poverty-homicide thesis. Criminology 46: 133-154.
- Rosenberg, T. 1991. Children of Cain, Violence and the Violent in Latin America. New York: Penguin Books.
- Shaw, M. 2002. Crime and Policing in Post Apartheid in South Africa. London : Hurst & Co.
- Soares, Rodrigo (2002). Development, Crime and Punishment: accounting for the international differences in crime rates. Journal of Development Economics. 73 : 155-184.
- United Nations (2008) Intentional Homicide Statistics. Office on Drugs and Crime. University Press, New-York and Oxford.
- UNODC (2011). Global Study on Homicide. United Nations Office on Drugs and Crime. Vienna.

Van Dijk, Jan (2008). The World of Crime. Thousand Oaks, CA: Sage.

- Van Evera, S (1994) 'Hypotheses on nationalism and war', International Security, 18 (4), 1994, pp 5–39.
- Van Reeven, P. 2004. Policing extensions in Latin America. In Koonings, K.; Kruijt, D. Eds. 2004. Armed Actors. Organized Violence and State Failure in Latin America. London, New York: Zed Books.
- Walmsley, Rick (2011) World Prison Briefs. International Centre for Prison Studies. University of Essex.
- Wilkinson, Richard and Kate Pickett (2009) The Spirit Level: Why More Equal Societies Almost Always Do Better. London: Penguin.

## Appendix 1: The original SSHRC application

#### 2. Proposed Research (6 pages)

#### A. Objectives:

The goal of our research project is to contribute to the understanding of the factors that explain why violence is more prevalent in some societies than in others. Hopefully, establishing those factors might help, in the long run, in reducing its prevalence. In this project, we will pursue two objectives.

Our first objective is to generate new data related to violence and homicide and to the functioning of the criminal justice system for most countries of the world. These data will complement the recently produced estimates of the homicide rate for most countries of the world based on WHO "Cause of deaths" statistics that represent a leap forward from those produced by the CIA (based on government reports). We will pursue two endeavors. First, we will work towards establishing a breakdown in homicide by gender and by type of homicide (the most important types being family, organized crime, felonious and quarrelsome/vindictive). A breakdown in the total homicide is important since factors related to the variations in one form of homicide might be different than factors related to another form of homicide. Second, we will gather new data measuring precipitating and endogenous factors; which are hypothesized to be the mediating factors producing violence. Figure 1 illustrates our analytical framework.

#### Figure 1: The general analytical framework of the study



Our second and main objective is to test a new model of understanding the variations in the prevalence of homicide. Although there is a rich tradition of empirical work criminologists showing why nations vary in their levels of homicide, this tradition is based on macro level factors (under background in Figure 1). Our conceptualization goes beyond the black box thinking assumed in current research by specifying operating or proximal factors. We propose to examine three broad categories of mediators that can help explain why and how macro level factors are ultimately linked with the homicide rate across nations: (1) precipitating factors such as the availability of firearms, the presence of organized crime or general corruption; (2) endogenous factors such as trust in and availability of the police to help citizens and the functioning of criminal courts and prisons; (3) the prevalence of general crime as a predictor of the homicide rate.

More generally, we will make every efforts to make our results and data available to other researchers. We will create and maintain a web site named "The World Homicide Project" that we would like to see interactive (with people contributing to posting analysis for specific countries). We will also organize an international conference with contributors in 2015.

#### B. Context

The variations in the world distribution of the homicide rate -- a fair measure of the level of violence -- are spectacular, ranging from 0,5 per 100,000 in Japan to more than 50 per 100,000 in Jamaica, Côte d'Ivoire,

El Salvador and Guatemala. Although there are numerous studies examining the determinants of the homicide rate across nations, almost all use only a sample of the 40-60 more developed nations.

Homicide can be defined as the intentional killing of another human being without proper justification or excuse (as self defense, during a war, as application of the death penalty). The homicide rate is frequently used as an indicator of the level of violence in cross-national studies. Many reasons justify its use as an indicator. First, most homicides are generally known to authorities because bodies are hard to hide. In countries in which the reporting system for crime is deficient, there are good estimates available from health sources (i.e. cause of death). Second, the definition of homicide is very close from one country to the other. Finally, the homicide rate is a good indicator of the general level of violence in a given society because homicide is often the end result of lesser forms of crimes: the more robberies, rapes and thefts, the more homicides there are (Gartner, 1990; Ouimet & Tremblay, 1996). Homicide, or the homicide rate per 100,000 habitants, is the most often used indicator of violence in cross-national comparison. The early data, those collected from governments and disseminated by Interpol were suspect and unreliable (Howard, Newman and Pridemore, 2000). That has changed when the World Health Organization started to produce statistics coming from health surveys, namely statistics on the cause of deaths. The WHO data are being now widely used and are believed to be good estimates of lethal violence in most countries (Bennett and Lynch, 1990; Chamlin and Cochran, 2005; Pridemore and Trent, 2010).

#### Explaining homicide: Background factors

In almost all cross-national comparisons of homicide, there are economic factors considered. Although there is considerable confusion in the literature regarding the question of poverty (in many studies, poverty is measured by the GDP), we follow the conceptualization made by Pridemore (2008) in distinguishing wealth, poverty and inequality.

General wealth of a nation can be measured by the per capita GDP, a measure of the standards of living. Most recent studies including this variable on homicide across nations did find a strong negative relationship (Fajnzylber, Lederman and Loayza, 2002; Messner, Raffalovitch and Shrock, 2002; Neumayer, 2003; Lafree and Tseloni, 2006; Antonaccio and Tittle, 2007; Lin, 2007; Bjerregaard and Cochran, 2008; Altheimer, 2008; Ouimet, 2011; UNODC, 2011). General wealth is related to homicide for three main reasons. First, there tends to be less absolute poverty in wealthier countries (although some high GDP countries such as the USA or Equatorial Guinea have lots of absolute poverty). Second, the social safety net is more developed in wealthier countries, thus providing basic services to every citizens. A third explanation is that richer countries have the means to consolidate their criminal justice infrastructure, with well-organized police forces, tribunals and an effective prison system. Brillon (1985) explained relatively high homicides rates in West Africa by crumpling institutions of justice. For him, the governments simply do not have the financial resources to maintain an always costly criminal justice system. As a result, in some poor countries, the police will not get involved in mundane crimes, courts will deal with exceptional cases only and there are few prisons with little space, from which it is easy to escape or to buy a way out.

Poverty is a different notion than wealth as defined by the general economic development of a nation computed from national accounts. One nation can be relatively wealthy while still have a large number of people living in poverty. For Pridemore (2008), it is unclear exactly how levels of absolute deprivation lead to higher homicide rates because several theories (e.g., strain, social disorganization, subcultural theories and critical theories) claim poverty as one of their central elements. However, it is relatively easy to comprehend that in a country in which a sizeable portion of the population lives in absolute poverty, there will be more homicides. Poverty, as a distinct concept from general wealth, has not been considered in many studies (Pridemore and Trent, 2010) for two major reasons. First, measures of poverty are not readily available. Direct measures such as the proportion of people living under the poverty line or the proportion of people living with less than 2\$ a day are not without serious limitations (Deaton, 2005). Indirect measures, such as life expectancy or literacy rate (maybe combined as in the Human Development Index) are an interesting alternative to direct measures, but are not perfect measures of the prevalence of poverty. The second reason why poverty is not found in many cross-national studies is that measures of poverty tend to be highly correlated with measures from national accounts. Ouimet (forthcoming-a) has created a measure of excess poverty that is measured as the infant mortality rate over the GDP, or the deviation in infant mortality from the value predicted using the GDP.

For many researchers, it is not poverty *per se* that is criminogenic but rather the inequality of resource allocation (Blau and Blau, 1982; Krahn, Hartnagel and Gatrell, 1986; Forde, Kennedy and Silverman, 1991; Hsieh and Pugh, 1993; Neapolitan, 1997; Bourguigin,, 1998; La Free, 1999; Messner, Raffalovich and Shrock, 2002; Fajnzylber, Lederman and Loayza, 2002; Soares, 2002; Pratt and Godsey, 2003; Chamlin and Cochran, 2005; Jacobs and Richardson, 2008). For Wilkinson and Pickett (2009), inequality increases stress across all society, not just among the poor. Inequality erodes social cohesiveness. The link between inequality and homicide can be interpreted in a frustration-aggression model, in a strain perspective and in a critical perspective (Krahn, Hatnagel, and Gartrell, 1986). Income inequality might also be interpreted using an anomie perspective in which high levels of inequality leads to a weak attachment to the dominant normative system (Messner and Rosenfeld, 1997). Inequality in resource allocation might fuel tension across social groups and might provide crime inducing rationale for those at the bottom of the scale. For Daly, Wilson and Vasdev (2001), much of the variability in homicide between time and space "reflects the variable severity of interpersonal competition for limited material and social resources".

In the literature on cross-national variations in homicide, a large number of variables have been considered. Among others, we find population growth, population density, extent of urbanization, school achievement, health related measures, gender equality variables and so on. A preliminary analysis of those variables, studied dimension by dimension, can be found in Ouimet (2011). The retained final conceptual model used here consists of variables that best represent the diversity of potential factors while avoiding overspecification and multicolinearity. In our research, we have identified important demographic variables, such as percent youths in the population, population growth, urbanization.

A few studies also include some measure of racial, religious or linguistic heterogeneity of the population in their design (Avison and Loring, 1986; Fajnzylber, Lederman, and Loayza; 2002; Cole and Gramajo, 2009). Of course, the history of wars show that identity questions are often at the base of civil unrest. The link between identity heterogeneity of the population and violence can be interpreted by concepts such as discrimination, exclusion, poverty, social control or integration. We can confidently assume that everything being equal, countries with larger identity heterogeneity will have more violence than others (Van Evera, 1994; Huntington, 1996; Gurr, 2000). For Huntington's thesis of civilizational clash (1996), cultural and religious identities are sources of conflicts within and between nations.

Governance is another dimension often considered in cross-national studies of violence (Lee and Bankston, 1999; Neumayer, 2003). However, since in many studies only developed and mostly democratic nations are included in the analysis, this concept may not have appeared to be important. Also, if it is clear that countries in which government agencies participate in violence, often via death squadrons, are likely to produce more violence overall (Pécaut, 1999; Huggins, 1991; Koonings and Kruit, 2004; Van Reeven, 2004; Cingranelli and Richards, 2008), it is not clear what style of governance produces more or less violence. Do democratic countries -- or dictatorships -- have less violence? Ouimet (2011; forthcoming-a) found that both full democracies and dictatorships have in fact lower homicides rates than failed democracies and hybrid systems.

#### Explaining homicide: Precipitating factors

If the presence of recent wars between countries might impact on the level of violence, it is mostly the presence of actual or recent civil war that might inflate the homicide rate (Archer and Gartner, 1984; Gartner, 1990; Rosenberg, 1991; Mauro, 1998; Koonings and Kruijt, 1999; Kalyvas, 2006; Geneva Declaration, 2008). Civil wars fuel violence because of hatred, discrimination and retaliatory actions by the certain groups. In some countries, opponents use common crime to finance their operations. Perhaps more important in the long run is the fact that civil wars episodes have often brought small arms and light weapons widely available in a population, thus arming criminal elements.

A related argument involves the organized crime and criminal groups and gangs. Lethal violence is used by these groups to facilitate their other activities like drug trafficking, gambling, prostitution, protection racket, etc. In fact, Van Dijk (2008) found a positive relationship between a measure of the prevalence of mafia-type activity and the proportion of unresolved homicides across 51 nations. Organized crime members who have been victimized by someone cannot hope that the police or the courts will help, therefore leading to crime as self-help (Black, 1983). In many studies of Central american countries, it has

been shown that the presence of armed bands, large crime syndicates, cartels and insurgent movements are the primary cause of high levels of violence (Koonings and Kruijt, 1999; Frühling, Tulchin,Heather & Golding, 2003).

In many countries, corruption appears as an important social problem. When corruption spreads through the criminal justice system, people without resources are left unattended by the system and the police will not act on their behalf (Chevigny, 1995). Gerber (2008) has shown that predatory policing (police officers mainly use their authority to advance their own material interests rather than to fight crime) has risen in post-communist Russia. As a result, victimized citizens have to take justice in their own hands, leading to more violence. Also, when the police is corrupted, organized crime often have a free ride.

According to the Geneva Declaration on armed violence (2008), almost 60% of all violent deaths in the world are committed with firearms. Many of the countries with a large homicide rate are also ones in which access to firearms is relatively easy (UNODC, 2011). According to the organization Small Arms Survey, there are more than 650 millions firearms in private hands in the world. As an example, Muggah & Nichols (2007) estimate that the 30k-40k firearms (often AK47) in circulation in the city of Brazzaville (Congo) constitutes a major security risk for the population.

It is worth mentioning that at current time, the data for a large number of countries on the presence of organized crime and on the availability of firearms are sketchy, There are however good data on general corruption from Transparency International and good data on wars and civil unrests available through the United Nations different offices.

#### Explaining homicide: Criminal justice institutions

Our research project is aimed at developing a whole new path in investigating the role that criminal justice institutions play in determining the country to country variations in the homicide rate. It is our argument that the general forces of the background factors only play a role in determining violence levels through the functioning of criminal justice institutions. There are at least two reasons why criminal justice institutions should matter: the reliance on private vs. public conflict resolution and impunity (police corruption is a third reason, but we already presented this argument in the section on political factor).

In countries where the criminal justice institutions are weak, individuals should be more likely to resort to private revenge or self help to solve their grievances (Black, 1976, 1989; Brillon, 1985; Nédélec, 1999). The private resolutions of interpersonal conflicts, often brutal, sometimes escalate into homicides. Also, in failed states where citizens rely heavily on private security (which is very developed in Western African countries), homicide becomes a way to deal with intruders (Shaw, 2002; Kruijt, 2004; Pérousse De Monclos, 2008; Baker, 2008) In contrast, countries with strong and effective criminal justice institutions have public mechanisms to resolve these conflicts, taking away the need for private revenge in most cases.

Impunity is also more likely in nations with weak criminal justice institutions (Van Dijk, 2008; Cusson, 2010). For example, about 70-80% of homicides are cleared by charges in industrialized democracies like Canada and the US (Pare et al 2007). In contrast, much fewer homicides are cleared by charges in impoverished nations and in nations where police corruption is high (Van Dijk 2008). Londono and Guerrero (1999) report that only 8% of homicides lead to an arrest in El Salvador. Also, Ouimet (forthcoming-b) found that most countries with a very high homicide rates have low incarceration rates (exceptions include the US, Russia and South Africa). From a deterrence perspective, the likelihood of being imprisoned for a given crime should be a major determinant of the crime level in a society. Ouimet (forthcoming-b) shows that the main determinant of countries' incarceration rate is their GDP! The poorest countries, those who have the highest homicide rate, simply do not have the means to incarcerate people.

#### C. Methodology

#### Existing data

The homicide rate that we use is always from the most recent WHO Causes of death statistics per country. For missing or uncertain estimated, the document "Global Study on Homicide" (2011) produced by

UNODC will act as a reference. This report combines valid homicide estimates from a variety of sources: UNCTS, WHO, PAHO, Eurostats, Interpol. It includes data on close to 200 nations, a much larger sample than earlier sources of homicide data. Those estimates of the prevalence of homicide are not perfect, but there is general agreement among researchers that they provide valid and reliable estimates (Bennett and Lynch, 1990; Chamlin and Cochran, 2005; Pridemore and Trent, 2010). Given the large differences in the nation's homicide rates across the world, small measurement errors will not impact much on the expected results.

Many explanatory variables are also available from official sources like the United Nations (e.g. World Development Reports), the CIA Fact Book, International Monetary Fund, World Bank, Amnesty International, and Transparency International. Also, some interesting contributions from researchers are also used, like Alesina's ethnic fractionalization index (Alesina et al., 2003) or Walmsley's World Prison Briefs (world data on incarceration). Of course, data from those international agencies and researchers are not perfect and each have their limitations (that would be too long to discuss here). However, each time we use one of these data in a publication, we review up to date discussions on the validity of the measure and report its limitations.

#### New data

Our research project aims at gathering two types of data. First, we will gather data that will shed light on the varieties of homicides in a maximum number of countries. Our objective is to provide an estimate of the breakdown in homicide for certain variables, such as the sex of the victims and the type of homicide using Cusson's (Cusson, Cusson and Beaulieu, 2003) typology (the most important types being family, organized crime, felonious and quarrelsome/vindictive). We will also try to gather information on the percentage of homicides that are cleared by the police, and the percentage of homicides involving firearms. To do that, two means will be employed. First, we will proceed in an analysis of homicide incidents appearing in local newspapers available on the Internet (simply coding age and sex of the victim, weapon used and type of homicide is explained). We pre-tested this method in at least three countries (Côte d'Ivoire, El Salvador and Morocco) and results are encouraging. Using students competent in foreign languages in University of Montréal and University of Western Ontario, we could probably gather information on 100 cases for at least 100 countries. The second means to estimate the breakdown in homicide will be to ask experts their opinion on that matter with questions such as : "For 100 homicides victims, how many would be men?". Experts will be helpful in identifying the presence of less frequent types of homicides, such as related to witchcraft or massacres.

The second type of data that we will gather relates to the functioning of the criminal justice agencies. To do that, we will ask our experts, using likert-type scales, to give us a rough estimate for a variety of questions pertaining to criminal justice agencies (a preliminary version of the questionnaire, in French, can be found here <u>http://app.fluidsurveys.com/surveys/marco/homicide</u>). Example of question: "What would be the probability that a man who kills his wife gets convicted" "What would be the probability that a person who gets his house burglarized call the police". The respondents will also be offered to write a short text describing the situation of the country and to propose an explanation for its current homicide rate. This qualitative information will be useful to interpret some of the observed patterns and also to generate new hypotheses.

In order to find contributors, we will solicit extensively our contacts, friends of friends, and we will also rely on a snowball approach. Criminology associations (such as the American Society of Criminology or the Société Internationale de Criminologie) have mailing lists and directories. Respondents can be university professors in sociology, law, criminology, political sciences as well as journalists or other experts in a given country. Through the Internet, we have made several pre-tests and successfully located crime experts on nations like Laos, Equatorial Guinea, and Kirghizstan. Some still live in the country and some are expatriates. In order to encourage participation, we will offer the following incentives: the contribution of respondents will be recognized on the official website of the project, their text will be posted, we will also offer them a preferred early access to the full dataset and they will be invited to the international conference that we will organize in 2015.

#### Analyses

The quantitative data will be analyzed using descriptive, bivariate, and multivariate techniques. The multivariate techniques will mostly involved different forms of regression based on the dependent variables (e.g. OLS, Logistic, Ordinal regressions). Since we expect some missing data, a common problem in cross-national criminology, we will also be using special techniques to address the missing data problem without generating biases or seriously reducing sample size (see Acock 2005; Allison, 2002; Paré 2006). We also expect to create some indices to combine variables that are highly correlated in order to reduce multicollinearity.

We will also complement our quantitative analyses with qualitative evidence from the texts provided by some of our contributors and by academic sources on the situation and the history of specific nations. The qualitative evidence might include for example conflicts between tribes, ecological catastrophe, invasion from a neighboring country, and so on.

# Appendix 2: The Questionnaires

# English

Université de Montréal		Western 😺	0%
	Perception Quest	ionnaire	
Country assessed	Your name	(SURNAME, Given name)	
Title and professional affiliation	EMAIL		
What is your job sector: Academia and research Government Police Judicial and correctional Journalism Other			

V1. What would be the probability that a given crime is being reported to the police (reportability rate)? This question	
is about normal crimes, NOT about homicides.	

	10% and less	20%	30%	40%	50%	60%	70%	80%	90% and more
Assault: A man beats his wife	0	0	0	0	0	$\bigcirc$	0	0	0
Rape	0	0	0	0	0	0	0	0	0
Armed robbery	0	0	0	0	0	0	0	0	0
Burglary	0	0	0	0	0	0	0	0	0

In your opinion, for a typical year in your country, what would be the distribution of homicides for the following variables? <u>Make sure to provide a total of 100 per question.</u>

V2. Per 100 homicide victims, how many are:	
Males	
Females	
V3. Per 100 murderers, how many are:	
Males	
Females	
V4. Per 100 homicide victims, what was the weapon	causing death :
Firearm	
Other (knife, blunt object, bare hands)	
V5. Per 100 homicide victims, what is the distribution	n for the following types of homicide:
Intrafamily, spousal and crimes of passion	
During a fight	
During a theft, a rape or a kidnapping	
Conflict between criminals	

V6. Provide an estimate of the frequency of the following types of homicides in your country.

	Almost never	Maybe a case a year	A few cases a year	A case a month	Almost every week
The killing of a judge, a mayor or an elected official	0	0	0	0	0
A killing during a kidnapping	0	0	0	0	0
A massacre (10 victims +) by an armed gang	0	0	0	0	0
Person killed by a mob (lynching)	0	0	0	0	0
Heinous killing of a minority	0	0	0	0	0
Killing linked to witchcraft	0	0	0	0	0
Killing of an on-duty police officer	0	0	0	0	0
Person killed by a security guard	0	0	0	0	0
Person killed by a group of organized vigilantes	0	0	0	0	0

V7. What would be the probability that a suspect is being identified or charged for the following types of homicides (clearance rate)?

	10% and less	20%	30%	40%	50%	60%	70%	80%	90% and more
Intrafamily, spousal and crimes of passion	0	0	0	0	0	0	0	0	0
During a fight	0	0	0	0	0	0	0	0	0
During a theft	0	0	0	0	0	0	0	0	0
During a rape	0	0	0	0	0	0	0	0	0
Conflict between criminals	0	0	0	0	0	0	0	0	0

V8. What would be the probability that a suspect identified or charged for homicide is eventually convicted by the courts (conviction rate)?

	10% and less	20%	30%	40%	<mark>50</mark> %	60%	70%	80%	90% and more
Intrafamily, spousal and crimes of passion	0	0	0	0	0	0	0	0	0
During a fight	0	0	0	0	0	0	0	0	0
During a theft	0	0	0	0	0	0	0	0	0
During a rape	0	0	0	0	0	0	0	0	0
Conflict between criminals	0	0	0	0	0	0	0	0	0

## V9. What would be the population's level of satisfaction with these agencies :

	Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very Satisfied
Police	0	0	0	0	0
Criminal courts	0	0	0	0	0
Civil courts	0	0	0	0	0
Prisons and correctional services	0	0	0	0	0

V10. For the whole country, what would be...

	2% and less	5%	10%	20%	30%	40%	50%	60%	70%
The proportion of households that possess a firearm	0	0	0	0	0	0	0	0	0
The proportion of men that frequently carry a firearm with them (on them or in their car)	0	0	0	0	0	0	0	0	0
The proportion of the population that are sometimes required to pay a bribe to police officers	0	0	0	0	0	0	0	0	0
The proportion of the population living in extreme poverty (have difficulty feeding themselves)	0	0	0	0	0	0	0	0	0
The proportion of the population living in areas where the police are virtually absent	0	0	0	0	0	0	0	0	0
The proportion of women afraid to walk alone in their neighborhood at night	0	0	0	0	0	0	0	0	0
The proportion of men afraid to walk alone in their neighborhood at night	0	0	0	0	0	0	0	0	0
< >>									

V11. Give your opinion on the following questions:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Judges are independent and are not subject to external pressures	0	0	0	0	0
Civil courts protect property rights (land, goods)	0	0	0	0	0
People charged before the courts have access to a fair trial	0	0	0	0	0
The police protect the interests of people in power rather than the interests of the population	0	0	0	0	0
The police are intimidated by criminal organizations	0	0	0	0	0
People are afraid of the police	0	0	0	0	0

V12. To what extent might the following problems significantly affect the quality of life for a segment of the population in your country?

	Not at all	A little bit	Somewhat	Quite a bit	Very much
Religious tensions	0	0	0	0	0
Ethnic tensions	0	0	0	0	0
Linguistic tensions	0	0	0	0	0
Political tensions	0	0	0	0	0
Poverty	0	0	0	0	0
Corruption of the criminal justice system	0	0	0	0	0
Actual or past civil war	0	0	0	0	0
Local drug trafficking	0	0	0	0	0
International drug trafficking	0	0	0	0	0

## French

Université de Montréal		Western & UNIVERSITY - CANADA ISC SIC
Questionnaire	de perception sur	
Pays en question	Votre nom (NOM, Prén	om)
Titre et affiliation professionnelle	Courriel	
Quel est votre domaine de pratique: Milieu académique et de recherche Gouvernemental Police Judiciaire et correctionnel Journalisme Autre		

	10% et -	20%	30%	40%	<b>50</b> %	<mark>60</mark> %	70%	80%	90% et +
Voies de faits: Un homme bat sa femme	0	0	0	0	0	0	0	0	0
Viol	0	0	0	0	0	0	0	0	0
Vol à main armées	0	0	0	0	0	0	0	0	0
Cambriolage	0	0	0	0	0	0	0	0	0

V1. Quelle serait la probabilité qu'un crime soit rapporté à la police (taux de déclaration) ? Les questions ici portent sur les crimes normaux, PAS sur les homicides.

Selon vous, pour une année typique dans votre pays, quelle serait la répartition des homicides selon les critères suivants. <u>Donnez une estimation pour un total de 100</u>

V2. Pour 100 victimes d'homicides, combien de :	
Hommes	
Femmes	
V3. Pour 100 meurtriers, combien de :	
Hommes	
Femmes	
V4. Pour 100 victimes d'homicide, l'arme ayant causé la mort :	
Arme à feu	
Autre (couteau, objet, mains nues)	
V5. Pour 100 victimes d'homicide, quelle serait la répartition des	types suivants:
Familial, conjugal et passionnel	
Durant une querelle ou bagarre	
Durant un vol, viol ou kidnapping	
Conflit entre criminels	

	Pratiquement jamais	Peut-être un cas par an	Quelques cas par an	Un cas par mois	Pratiquement toutes les semaines
Assasinat d'une juge, ministre ou maire	0	$\bigcirc$	0	0	0
Meurtre lors d'un enlèvement pour rançon	0	0	0	0	0
Massacre (10 victimes +) par bande armée	0	0	0	0	0
Lynchage (vindicte populaire)	0	0	0	0	0
Meurtre haineux envers minorité ethnique	0	$\bigcirc$	0	0	0
Meurtre lié à la sorcellerie	0	0	0	0	0
Meurtre d'un policier en fonction	0	0	0	0	0
Personne abattue par agent de sécurité	0	0 0		0	0
Personne abattue par citoyens regroupés (vigilante)	0	$\bigcirc$	0	0	0

#### V6. Veuillez estimer la fréquence des types d'homicides suivants pour l'ensemble de votre pays.

V7. Quelle serait la probabilité qu'un suspect soit identifié ou accusé pour les types d'homicides suivants (taux de solution) ?

	10% et -	20%	30%	<mark>40%</mark>	50%	60%	70%	80%	90% et +
Familial, conjugal et passionnel	0	0	0	0	0	0	0	0	0
Durant une querelle et bagarre	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	$\bigcirc$
Durant un vol	0	0	0	0	0	0	0	0	0
Durant un viol	0	0	0	0	0	0	0	0	0
Conflit entre criminels	0	0	0	0	0	0	0	0	0

V8. Quelle serait la probabilité qu'un suspect identifié ou accusé les types d'homicides suivants soit éventuellement condamné par un tribunal (taux de condamnation) ?

	10% et -	20%	30%	40%	50%	60%	70%	80%	90% et +
Familial, conjugal et passionnel	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	0
Durant une querelle ou bagarre	0	0	0	0	0	0	0	0	0
Durant un vol	0	0	0	0	0	0	0	0	0
Durant un viol	0	0	0	0	0	0	0	0	0
Conflit entre criminels	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	$\bigcirc$

#### V9. Quel est selon vous le niveau de satisfaction de la population pour ces agences:

	Très insatisfaits	Insatisfaits	Neutre	Satisfaits	Très satisfaits
Police	0	0	$\bigcirc$	0	0
Tribunaux criminels	0	0	$\bigcirc$	$\bigcirc$	0
Tribunaux civils	0	0	0	0	0
Prisons et services correctionnels	0	0	0	0	0

#### V10. Pour l'ensemble du pays, quelle est selon vous ...

	2% et -	5%	10%	20%	30%	<mark>40%</mark>	<mark>50%</mark>	60%	70%	80%	
La proportion des ménages qui possède une arme à feu	0	0	0	0	0	0	0	0	0	0	
La proportion des hommes qui ont fréquemment une arme à feu sur eux ou dans leur véhicule	0	0	0	0	0	0	0	0	0	0	
La proportion de la population qui doit parfois payer un "pot-de-vin" à des policiers	0	0	0	0	0	0	0	0	0	0	
La proportion de la population vivant dans une grande pauvreté (ayant de la difficulté à se nourrir)	0	0	0	0	0	0	0	0	0	0	
La proportion de la population vivant dans des zones où les policiers sont pratiquement absents	0	0	0	0	0	0	0	0	0	0	
La proportion des femmes qui ont peur de marcher seule dans leur quartier le soir	0	0	0	0	0	0	0	0	0	0	
La proportion des hommes qui ont peur de marcher seul dans leur quartier le soir	0	0	0	0	0	0	0	0	0	0	
<										3	>

#### V11. Donnez votre avis sur les questions suivantes:

	Fortement en désaccord	En désaccord	Moyennement d'accord	Plutôt d'accord	Fortement d'accord
Les juges sont indépendants et à l'abri des pressions extérieures	0	0	$\bigcirc$	$\bigcirc$	0
Les tribunaux civils assurent le respect des droits de propriété (biens, terres).	0	0	$\bigcirc$	$\bigcirc$	0
Les personnes accusées devant les tribunaux bénéficient d'un procès juste et équitable	0	0	0	0	0
Les policiers servent davantage les intérêts du pouvoir en place que ceux des citoyens	0	0	0	0	0
Les policiers sont intimidés par les organisations criminelles	0	0	0	0	0
Les policiers sont craints par la population	0	0	$\bigcirc$	$\bigcirc$	0

## V12. Jusqu'à quel point les problèmes suivants nuisent-ils à la qualité de vie d'une partie de la population?

	Pas du tout	Un peu	Modérément	Beaucoup	Fortement
Tensions religieuses	0	0	0	0	0
Tensions ethniques	0	$\bigcirc$	0	0	$\bigcirc$
Tensions linguistiques	0	0	0	0	0
Tensions politiques	0	0	0	0	0
Pauvreté	0	0	0	0	0
Corruption du système de justice	0	$\bigcirc$	0	0	$\bigcirc$
Guerre civile actuelle ou passée	0	0	0	0	0
Trafic de drogues local	0	0	0	0	0
Trafic de drogues international	0	0	0	0	0

# Spanish

Université de Montréal	Western 家
Encues	ta mundial sobre el homicidio
País en cuestión	Su Nombre (Apellido, Nombre)
Título y afiliación profesional	Correo electrónico
Cuál es su campo de trabajo: Académico y de investigación Gubernamental Policial Judicial y correccional Periodismo Otro	

V1. ¿Cuál sería la probabilidad de que la policía esté informada de los casos en cada uno de los siguientes
tipos de crímenes (tasa de reportabilidad)? Aquí se trata de delitos no relacionados con homicidios

	10% o menos	20%	30%	40%	50%	60%	70%	80%	90% o más
Agresión: Un hombre golpea a su mujer	0	0	0	0	0	0	0	0	0
Violación sexual	0	0	0	0	0	0	0	0	0
Robo a mano armada	0	0	0	0	0	0	0	0	0
Robo en domicilio	0	0	0	0	0	0	0	0	0

En su opinión, en un año típico en su país, cuál sería la repartición de los homicidios según los criterios siguientes. <u>Dé una estimación que totalice 100.</u>

V2. Por un total de 100 víctimas de homicidio, cuántos/as son:

Back Next

lujeres	
/3. Por un total de 100 autores de hon :uántos/as son:	nicidio,
lombres	
fujeres	
In arma de fuego Dra (cuchillo, objeto contundente, a mano	
/5. Por un total de 100 víctimas de hor ipos sería:	
amilial, conyugal y pasional	
amilial, conyugal y pasional elea o altercación	
	al,

	Casi nunca	Quizás un caso por año	Algunos casos por año	Quizás un caso por mes	Casi cada semana
Asesinato de juez, ministro o alcalde	0	$\bigcirc$	0	0	0
Asesinato cometido durante secuestro para exigir rescate	0	0	0	0	0
Masacre (10 víctimas o +) por pandilla armada	0	0	0	0	0
Linchamiento (vindicta popular)	0	0	0	0	0
Asesinato de odio hacia minoría étnica	0	0	0	0	0
Asesinato relacionado con hechicería	0	0	0	0	0
Policía asesinado en sus funciones	0	0	0	0	0
Persona asesinada por agente de seguridad privada	0	0	0	0	0
Persona asesinada por ciudadanos agrupados (vigilantismo)	0	$\circ$	0	0	0

#### V6. Dé una estimación de la frecuencia de los siguientes tipos de homicidios en su país.

V7. ¿Cuál sería la probabilidad de que un sospechoso sea identificado o acusado por cada uno de los siguientes tipos de homicidios reportados a la policía (tasa de esclarecimiento)?

	10% o menos	20%	<mark>30</mark> %	40%	50%	60%	70%	80%	90% o más
Familiar, conyugal y pasional	0	0	0	0	0	0	0	0	0
Pelea o altercación	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	0
Asociado a un robo	0	0	0	0	0	0	0	0	0
Asociado a una agresión sexual	0	0	0	0	0	0	0	0	0
Conflicto entre delincuentes	0	0	0	0	0	0	0	0	0

V8. ¿Cuál sería la probabilidad de que un sospechoso identificado o acusado de homicidio sea eventualmente condenado a una pena de cárcel (tasa de condenación)?

	10% o menos	20%	30%	40%	50%	60%	70%	<mark>80%</mark>	90% o más
Familiar, conyugal y pasional	0	0	Ο	Ο	0	0	0	0	0
Pelea o altercación	0	0	0	0	0	0	0	0	0
Asociado a un robo	0	0	0	0	0	0	0	0	0
Asociado a una violación sexual	0	0	0	0	0	0	0	0	0
Conflicto entre delincuentes	0	0	$\bigcirc$	0	0	0	0	0	0

### V9. Según usted, cuál es el nivel de satisfacción del pueblo hacia las instituciones siguientes:

	Muy insatisfechos	Insatisfechos	Medianamente satisfechos	Satisfechos	Muy satisfech
La policía	0	0	0	0	0
Los tribunales penales	0	$\bigcirc$	0	0	0
Los tribunales civiles	0	0	0	0	0
Las cárceles y los servicios correccionales	0	0	0	0	0

V10. Para el país entero, cuál es, según usted...

	2% o menos	5%	10%	20%	30%	40%	50%	60%	70%
La proporción de familias que poseen un arma de fuego	0	0	0	0	0	0	0	0	0
La proporción de hombres que frecuentemente llevan consigo un arma de fuego (o en el auto)	0	0	0	0	0	0	0	0	0
La proporción de la población que ocasionalmente debe pagar soborno/mordida a policías	0	0	0	0	0	0	0	0	0
La proporción de la población que vive en extrema pobreza (que tiene dificultad para alimentarse)	0	0	0	0	0	0	0	0	0
La proporción de la población que vive en zonas donde los policías están casi siempre ausentes	0	0	0	0	0	0	0	0	0
La proporción de mujeres que tienen miedo de caminar solas de noche en su barrio/vecindario	0	0	0	0	0	0	0	0	0
La proporción de hombres que tienen miedo de caminar solos de noche en su barrio/vecindario	0	0	0	0	0	0	0	0	0
<									>

V11. Dé su e	opinión	sobre la	as cuestiones	siguientes:
--------------	---------	----------	---------------	-------------

	Fuertemente en desacuerdo	En desacuerdo	Neutral	De acuerdo	Fuertemente de acuerdo
Los jueces son independientes y están protegidos de presiones exteriores	0	0	0	0	0
Los tribunales civiles aseguran el respeto de los derechos de propiedad (bienes, tierras)	0	0	0	0	0
Las personas acusadas en los tribunales gozan de un proceso justo y equitativo	0	0	0	0	0
Los policías sirven más los intereses del poder que los de los ciudadanos	0	0	0	0	0
Los policías son intimidados por las organizaciones criminales	0	0	0	0	0
La población no confía en la policía	0	0	0	0	0

V12. ¿Perjudican de manera significativa los problemas sociales siguientes a la calidad de vida de una parte de la población de su país?

	Nada	Un poco	Moderamente	Mucho	Fuertemente
Las tensiones religiosas	0	0	0	0	0
Las tensiones étnicas	0	0	0	0	0
Las tensiones lingüísticas	0	0	0	0	0
Las tensiones políticas	0	0	0	0	0
La pobreza	0	0	0	$\bigcirc$	0
La corrupción del sistema judicial	0	0	0	0	0
La guerra civil actual o pasada	0	0	0	0	0
El tráfico de drogas local	0	0	0	0	0
El tráfico de drogas internacional	0	0	0	0	0

## Portuguese

Université de Montréal	Vestern v UNIVERSITY - CANADA UNIVERSITY - CANADA SCOLONIA SCOLONIA O% rcepção sobre a violência
Queenenane ae pe	
País em questão	Vosso nome (SOBRENOME, Nome)
Título e afiliação profissional	Endereço electrónico
Qual é o seu domínio de prática: Meio acadêmico e de pesquisa Governamental Polícia Judicial e prisional Jornalismo Outro	

	10% e -	20%	30%	<mark>40%</mark>	<b>50%</b>	60%	<mark>70</mark> %	80%	90% e +
Assalto: Um homem bate na mulher	0	0	0	0	0	0	0	0	0
Estupro	0	0	0	0	0	0	0	0	0
Roubo a mão armada	0	0	0	0	0	0	0	0	0
Roubo	0	0	0	0	0	0	0	0	0

V1. Qual é a probabilidade de que um crime seja relatado à polícia (taxa de declaração)? As perguntas aqui referem-se a crimes normais, NÃO a homicídios.

Na sua opinião, para um ano típico em seu país, qual seria a distribuição de homicídios de acordo com os seguintes critérios. <u>Fornecer estimativas para um total de 100.</u>

V2. Em 100 vítimas de homicídio, quantos:	
Homens	
Mulheres	
V3. Em 100 assassinos, quantos:	
Homens	
Mulheres	
V4. Em 100 vítimas de homicídio, a arma que matou:	
Arma de fogo	
Outro (faca, objeto, mãos)	
V5. Em 100 vítimas de homicídio, qual seria a distribuição	dos seguintes tipos:
Familial, conjugal e de paixão	
Durante uma disputa ou luta	
Durante um roubo, estupro ou abdução	
Conflito entre criminosos	

#### V10. Por todo o país, qual é, na sua opinião ...

	2% e -	5%	10%	20%	30%	40%	50%	60%	70%	80%	90% e+
A proporção de famílias que possuem uma arma de fogo	0	0	0	0	0	0	0	0	0	0	0
A proporção dos homens que frequentemente têm uma arma de fogo neles ou no veículo deles	0	0	0	0	0	0	0	0	0	0	0
A proporção da população que, por vezes, tem de oferecer um suborno aos polícias	0	0	0	0	0	0	0	0	0	0	0
A proporção da população que vive em situação de pobreza (com dificuldade de alimentação)	0	0	0	0	0	0	0	0	0	0	0
A proporção da população que vive em áreas onde a polícia está praticamente ausente	0	0	0	0	0	0	0	0	0	0	0
A proporção de mulheres que têm medo de andar sozinhas no seu bairro à noite	0	0	0	0	0	0	0	0	0	0	0
A proporção de homens que têm medo de andar sozinhos no seu bairro à noite	0	0	0	0	0	0	0	0	0	0	0

#### V11. Comente sobre as seguintes questões:

	Discordo totalement	Discordo	Concordo partialmente	Concordo	Concordo totalmente
Os juízes são independentes e livres de pressões externas	0	$\bigcirc$	0	0	0
Os tribunais civis asseguram o respeito dos direitos de propriedade (propriedade, terra)	0	0	0	0	0
Os acusados no tribunal beneficiam de um julgamento justo e equitativo	0	0	0	0	0
A polícia serve mais os interesses de quem está no poder do que os interesses dos cidadãos	0	0	0	0	0
A polícia é intimidada por organizações criminosas	0	0	0	0	0
A polícia é temida pela população	0	0	0	0	0

### V12. Até que ponto os seguintes problemas prejudicam a qualidade de vida de uma parte da população?

	De modo nenhum	Um pouco	Com moderação	Muito	Muitíssimo
Tensões religiosas	0	0	0	0	0
Tensões étnicas	0	0	0	0	0
Tensões linguísticas	$\bigcirc$	0	0	$\bigcirc$	0
Tensões políticas	0	0	0	0	0
Pobreza	0	0	0	0	0
Corrupção do sistema de justiça	0	0	0	0	0
Guerra civil atual ou passada	0	0	0	$\bigcirc$	0
O tráfico de drogas local	0	0	0	0	0
O tráfico internacional de drogas	0	0	0	0	0

V6. Estimar a frequência dos seguintes tipos de homicídios em todo o país.

	Quase nunca	Talvez um caso por ano	Alguns casos por ano	Um caso por mês	Quase todas as semanas
Assassinato de um(a) juiz, ministro ou prefeito	0	0	0	0	0
Assassinato durante uma abdução em troca de resgate	0	0	0	0	0
Massacre (+ de 10 vítimas) por grupo armado	0	0	0	0	0
Linchamento (vindicta popular)	0	0	0	0	0
Assassinato vicioso contra uma minoria étnica	0	$\bigcirc$	0	0	0
Assassinato relacionado à feitiçaria	0	0	0	0	0
Assassinato de um polícia de serviço	0	0	0	0	0
Pessoa assassinada por um agente de securidade	0	0	0	0	0
Pessoa assassinada por cidadãos agrupados (vigilante)	0	0	0	0	0

V7. Qual seria a probabilidade de que um suspeito seja identificado ou acusado para os seguintes tipos de homicídios (taxa de solução)?

	10% e -	20%	30%	40%	50%	60%	70%	80%	90% e+
Familial, conjugal e de paixão	0	0	0	0	0	0	0	0	0
Durante uma disputa ou luta	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	$\bigcirc$
Durante um roubo	0	0	0	0	0	0	0	0	0
Durante um estupro	0	0	0	0	0	0	0	0	0
Conflito entre criminosos	0	0	0	0	0	0	0	0	0

V8. Qual seria a probabilidade de que um suspeito identificado ou acusado para os seguintes tipos de homicídios seja eventualmente condenado por um tribunal (taxa de condenação)?

	10% e -	20%	30%	40%	50%	60%	70%	80%	90% e+
Familial, conjugal e de paixão	0	0	$\bigcirc$	Ο	0	0	0	0	0
Durante uma disputa ou luta	0	0	0	0	0	0	0	0	0
Durante um roubo	0	0	0	0	0	0	0	0	0
Durante um estupro	0	0	0	0	0	0	0	0	0
Conflito entre criminosos	0	0	$\bigcirc$	$\bigcirc$	0	0	0	0	$\bigcirc$

#### V9. Na sua opinião, qual é o nível de satisfação da população para estas agências:

	Muito insatisfeita	Insatisfeita	Neutra	Satisfeita	Muito satisfeita
Police	0	0	$\bigcirc$	$\bigcirc$	0
Tribunaux criminels	0	0	$\bigcirc$	$\bigcirc$	0
Tribunaux civils	0	0	0	0	0
Prisons et services correctionnels	0	0	0	0	0

## Russian

Université de Montréal	Western & UNIVERSITY - CANADA
Анкета п	о восприятию насилия
Страна опроса	Ваше имя (ФАМИЛИЯ, Имя)
Профессия-должность и место работы (принадлежность к организации)	Адрес електронной почты
Какова область вашей деятельности: Научная и исследовательская Государственная Полиция Судебная и исправительная журналистика Другая	

# V1. Какая вероятность в процентном соотношение, что о преступлении будет заявлено в полицию? Здесь вопросы имеют отношение к преступлениям, не включающим убийства.

	10% и-	20%	30%	<mark>40</mark> %	50%	60%	70%	80%	90% и+
Нападение: мужчина бьёт свою женщину	0	0	0	0	0	0	0	0	0
Изнасилование	0	0	0	0	0	0	0	0	0
Вооружённое ограбление	0	0	0	0	0	0	0	0	0
Кража со взломом (в отсутствие хозяев)	0	0	0	0	0	0	0	0	0

На ваш взгляд, в среднем, в вашей стране какое будет распределение убийств в год по отношению к следующим критериям. <u>Учитывайте 100 случаев при ответе на каждый вопрос.</u>

V2. На 100 жертв убийств, сколько:	
Мужчин	
Женщин	
V3. Из 100 убийц, сколько:	
Мужчин	
Женщин	
V4. На 100 жертв убийств, орудия убийства:	
Огнестрельное оружие	
Любое другое (нож, тупым предметом, голыми руками)	
V5. На 100 жертв убийств, какое распределение типов убийс	тв:
Убийство внутрисемейное, супружеское и в порыве страсти	
Во время драки	
Убийство во время совершения другого уголовного	
преступления (во время кражи, изнасилования или	
похищения человека)	
Сведения счетов в преступном мире	

#### V6. Оцените частоту следующих типов убийств в вашей стране.

	Почти никогда	Может быть, один случай в год	Несколько случаев в год	Один случай в месяц	Почти каждую неделю
Убийство судьи, мэра или выборного должностного лица	0	0	0	0	0
Убийство во время похищения человека за выкуп	0	0	0	0	0
Убийство (10 жертв +) выполненное вооруженной бандой	0	0	0	0	0
Убийство человека толпой (линчевание)	0	0	0	0	0
Убийство человека из национальных меньшинств (из-за ненависти)	0	0	0	0	0
Убийство, связанное с колдовством (совершенное колдуном или против колдуна)	0	0	0	0	0
Убийство полицейского при исполнение служебных обязанностей	0	0	0	0	0
Человек, убитый охранником	0	0	0	0	0
Человек, убитый группой лиц (вигилантами) по соображению борьбы с преступностью	0	0	0	0	0

V7. Какая вероятность того, что подозреваемый будет разоблачен или обвинен за каждое из следующих видов убийств (процент разоблачения) ?

	10% и-	20%	30%	40%	50%	60%	70%	80%	90% и+
Убийство внутрисемейное, супружеское и в порыве страсти	0	0	0	0	0	0	0	0	0
Во время драки	0	0	0	0	0	0	0	0	0
Убийство во время другого уголовного преступления: во время кражи	0	0	0	0	0	0	0	0	0
Убийство во время другого уголовного преступления: во время изнасилования	0	0	0	0	0	0	0	0	0
Сведения счетов в преступном мире	0	0	0	0	0	0	0	0	0

V8. Какая будет вероятность того, что разоблаченный подозреваемый в конечном итоге получит приговор в суде (процент получения приговора)?

	10% и-	20%	30%	40%	50%	60%	70%	80%	90% и+
Убийство внутрисемейное, супружеское и в порыве страсти	0	0	0	0	0	0	0	0	0
Во время драки	0	0	0	0	0	0	0	0	0
Убийство во время другого уголовного преступления: во время кражи	0	0	0	0	0	0	0	0	0
Убийство во время другого уголовного преступления: во время изнасилования	0	0	0	0	0	0	0	0	0
Сведения счетов в преступном мире	0	0	0	0	0	0	0	0	0

#### V9. Каким будет уровень удовлетворенности населения этими учреждениями:

	Очень недовольно	Недовольно	Ни недовольно, ни довольно (нетрально)	Довольно	Очен доволь	
Полиция	0	0	0	0	0	
Уголовные суды	0	0	0	0	0	
Гражданские суды	0	0	0	0	0	
Тюрьмы и исправительные учреждения	0	0	0	0	0	

## V10. Для всей страны, каков будет ...

	2%и	5%	10%	20%	30%	40%	50%	60%	70%	
Процент домашних хозяйств, имеющих огнестрельное оружие	0	0	0	0	0	0	0	0	0	
Процент мужчин, которые часто имеют при себе или в своей машине огнестрельное оружие	0	0	0	0	0	0	0	0	0	
Процент населения, которому иногда приходится давать взятку сотрудникам полиции	0	0	0	0	0	0	0	0	0	
Процент населения, который живёт в крайней нищете (испытывает трудности, чтобы прокормить себя)	0	0	0	0	0	0	0	0	0	
Процент населения, проживающий в районах и регионах, где полиция практически отсутствует	0	0	0	0	0	0	0	0	0	
Процент женщин, которые боятся ходить в одиночку в их районе ночью	0	0	0	0	0	0	0	0	0	
Процент мужчин, которые боятся ходить в одиночку в их районе ночью	0	0	0	0	0	0	0	0	0	
< >										

## V11. Какое ваше мнение по следующим вопросам:

	Категорически не согласен	Не согласен	Частично согласен	Скорее	Полностью согласен
Судьи независимы и не находятся под внешним давлением	0	0	0	0	0
Гражданские суды защищают право на собственность (земля, имущество)	0	0	0	0	0
Люди, которым предъявлено обвинение, пользуются правом на справедливый суд	0	0	0	0	0
Полиция защищает интересы людей у власти, а не интересы населения	0	0	0	0	0
Полиция находится под страхом перед преступными организациями	0	0	0	0	0
Люди боятся полиции	0	0	0	0	0

#### V12. В какой мере следующие проблемы ухудшают качество жизни части населения вашей страны?

	Нисколько	Немного	Отчасти	Довольно много	Очень много
Религиозные трения	0	0	0	0	0
Этнические трения	0	0	0	0	0
Языковые трения	0	0	0	0	0
Политические трения	0	0	0	0	0
Бедность	0	0	0	0	0
Коррупция в системе правосудия	0	0	0	0	0
Настоящая или прошлая гражданская война	0	0	0	0	0
Местный наркотрафик	0	0	0	0	0
Международный наркотрафик	0	0	0	0	0