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2010

How Many Global Deaths from Arms? Reasons to Question the 740,000 Factoid being used to Promote the Arms Trade Treaty

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How Many Global Deaths from Arms? Reasons to Question the 740,000 Factoid being used to Promote the Arms Trade Treaty

by David B. Kopel,¹ Paul Gallant² & Joanne D. Eisen³

ABSTRACT: *Currently, the United Nations is drafting an Arms Trade Treaty to impose strict controls on firearms and other weapons. In support of hasty adoption of the Treaty, a UN-related organization of Treaty supporters is has produced a report claiming that armed violence is responsible for 740,000 deaths annually. This Article carefully examines the claim. We find that the claim is based on dubious assumptions, cherry-picking data, and mathematical legerdemain which is inexplicably being withheld from the public. The refusal to disclose the mathematical calculations used to create the 740,000 factoid is itself cause for serious suspicion; our own calculations indicate that the 740,000 figure is far too high.*

Further, while the report claims that 60% of homicides are perpetrated with firearms, our review of the data on which report claimed to rely yields a 22% rate. The persons responsible for the report have refused to release their homicide calculations, or any other calculations.

This Article also shows how a narrow focus on restricting firearms ownership continues to distract international attention from life-saving, viable solutions. We propose some practical alternatives which have already saved lives in war-ravaged areas.

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Introduction

Life or death matters of global policy must be based on accurate data. This Article presents a discussion of inaccuracies present in the *Global Burden of Armed Violence*⁴ (GBAV), a document which is currently being used to influence policy makers as to the immediate need for an Arms Trade Treaty (ATT).⁵

In June 2006, forty-two states⁶ and seventeen non-government organizations (NGOs)⁷ met in Geneva⁸ for a conference hosted by Switzerland

⁴ GLOBAL BURDEN OF ARMED VIOLENCE, The Geneva Declaration (2008) [hereinafter GBAV], available at <http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-full-report.pdf> (visited Dec. 13, 2009).

⁵ For a more extensive discussion of the background and ramifications of the proposed ATT, see David B. Kopel, Paul Gallant & Joanne D. Eisen, *The Arms Trade Treaty: Zimbabwe, the Democratic Republic of the Congo, and the Prospects for Arms Embargoes on Human Rights Violators*, 114 PENN STATE L. REV. (forthcoming 2010).

⁶ See Annex to Letter dated 16 June 2006 from the Permanent Representative of Switzerland to the United Nations addressed to the secretariat of the United Nations Conference to Review Progress made in the Implementation of the Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects, available at [http://74.125.93.132/search?q=cache:N1S6YMzCVLgJ:www.un.org/events/smallarms2006/pdf/RC2-](http://74.125.93.132/search?q=cache:N1S6YMzCVLgJ:www.un.org/events/smallarms2006/pdf/RC2-Switzerland.doc+ministerial+review+summit+global+burden+armed+violence&cd=25&hl=en&ct=clnk&gl=us)

[Switzerland.doc+ministerial+review+summit+global+burden+armed+violence&cd=25&hl=en&ct=clnk&gl=us](http://74.125.93.132/search?q=cache:N1S6YMzCVLgJ:www.un.org/events/smallarms2006/pdf/RC2-Switzerland.doc+ministerial+review+summit+global+burden+armed+violence&cd=25&hl=en&ct=clnk&gl=us) (visited Dec. 19, 2009).

and the United Nations Development Programme (UNDP).⁹ The conference created a new group, the Geneva Declaration Organization (GDO), for the purpose of promoting a global Arms Trade Treaty.¹⁰ In September 2008, the GDO released a report, *Global Burden of Armed Violence*.¹¹

The statistics presented in this new report were lauded in Geneva by representatives of 70 countries.¹² GBAV claims that 250,000 of these deaths are due to direct and indirect conflict (that is, wars and the consequences of

Signatory countries were: Afghanistan, Australia, Austria, Bulgaria, Brazil, Canada, Chile, Costa Rica, El Salvador, Finland, France, Germany, Ghana, Greece, Guatemala, Honduras, Indonesia, Ireland, Jamaica, Japan, Jordan, Kenya, Lebanon, Liberia, Mali, Mexico, Morocco, Mozambique, Netherlands, New Zealand, Nigeria, Norway, Papua New Guinea, Republic of Korea, Senegal, Slovenia, South Africa, Sweden, Switzerland, Thailand, Timor-Leste, United Kingdom of Great Britain, and Northern Ireland.

⁷ Among the organizations and NGOs present were the United Nations Development Programme, the Small Arms Survey, and the Quaker UN Office. See *Geneva Declaration on Armed Violence and Development* pamphlet, Geneva Declaration Secretariat, available at <http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Leaflet.pdf> (visited Dec. 19, 2009).

⁸ At this meeting, *The Geneva Declaration on Armed Violence and Development* (hereafter referred to as the Geneva Declaration) was introduced by the group we shall refer to as the Geneva Declaration Organization.

⁹ See *The Geneva Declaration on Armed Violence and Development*, Newsletter, Issue 1, Apr. 2008, at Background, available at <http://74.125.113.132/search?q=cache:c4ye3O4Ll2YJ:www.gppac.net/uploads/File/Programmes/Interaction%2520a%2520Advocacy/GD%2520News%2520Letter%25201.doc+ministerial+review+summit+global+burden+armed+violence&cd=4&hl=en&ct=clnk&gl=us> (visited Dec. 19, 2009).

¹⁰ We made repeated inquiries as to the proper name of the parent body of the Geneva Declaration. We sent our first query to the “Contact Us” E-Mail address provided at the Geneva Declaration web site (info@genevadeclaration, which also listed a mailing address: Geneva Declaration Secretariat, c/o Small Arms Survey, Geneva)(E-Mail from Paul Gallant and Joanne D. Eisen to info@genevadeclaration.org, Jan. 14, 2010)(on file with the authors). We received a reply from “Elisabeth Gilgen, Geneva Declaration Secretariat, c/o Small Arms Survey” (E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen, Jan. 15, 2010, 5:03:13AM EST)(on file with the authors), from the E-Mail address elisa.gilgen@genevadeclaration.org.(Subsequent replies from Ms. Gilgen were signed as “Elisabeth Gilgen, Associate Researcher, Small Arms Survey.”) However, our question went unanswered, and Ms. Gilgen’s reply only provided the number of current signatories to the Geneva Declaration. Other additional queries likewise went unanswered (e.g. E-Mail to elisa.gilgen@genevadeclaration.org from Paul Gallant and Joanne D. Eisen, Jan. 21, 2010, (on file with the authors). Therefore, we shall refer to that un-named parent body as the “Geneva Declaration Organization,” heretofore referred to by the acronym “GDO,” in order to minimize confusion between the Geneva Declaration document, itself, and the parent organization.

¹¹ GBAV, at iii. See also SMALL ARMS SURVEY 2001: PROFILING THE PROBLEM ii (Small Arms Survey, Geneva, 2001). The Small Arms Survey is a research center at the Graduate Institute of International Studies in Geneva Switzerland. It aims as to “be the principal source of public information on all aspects of small arms....”

¹² *Geneva summit to fight armed violence*, SWISSINFO.CH, Sept. 12, 2008, available at http://www.swissinfo.ch/eng/politics/index/Geneva_summit_to_fight_armed_violence.html?cid=6915670 (visited Dec. 24, 2009).

wars), while 490,000 are due to non-conflict-related homicide (criminal murders). The report introduced a new statistic: 740,000 people, worldwide, fall victim to armed violence each year.

Violent death of the innocent is unacceptable, and there is a moral imperative to deal with such violence. The search for solutions should be based on accurate data; indeed, using inaccurate data might cause the adoption of ineffective or harmful policies.

In recent years, the United Nations has promoted regional arms trade treaties in an attempt to suppress violence. These regional treaties, such as East Africa's Nairobi Protocol,¹³ have utterly failed.¹⁴ Accordingly, there is now a major push for a global Arms Trade Treaty.

The *Global Burden of Armed Violence* (GBAV) report is the empirical foundation of the push to ratify an Arms Trade Treaty quickly. Unfortunately, GBAV is riddled with data discrepancies, and is filled with conclusions that its own data do not support. Even worse, crucial data and calculations for the GBAV report are being withheld from the public.

In this Article, we show that GBAV overstates the number of global deaths due to violence, and particularly overstates the number of violent deaths due to firearms. We also show how some governments use the global gun control issue to distract world attention from those governments' own responsibility for violent deaths.

In Part I, we describe the history of the Geneva Declaration Organization and its publications. We also show how the GDO has worked with credulous media to promote its factoid about 740,000 deaths.

In Part II, we describe the difficulty of accurately estimating the number of deaths accruing to "direct conflict." We show how the GBAV authors almost always accept the higher estimates of casualties arrived at by the researchers they cite.

In Part III we explain the challenges of accurately estimating the number of deaths accruing to "indirect conflict." These deaths are not directly caused by weapons, but instead result from damage to social institutions and infrastructure, or from warriors preventing civilians from receiving life-saving relief supplies.

We point out definitional problems, and discrepancies in the methodology of studies used, from which incorrect conclusions can easily be drawn. We

¹³ *The Nairobi Protocol for the Prevention, Control and Reduction of Small Arms and Light Weapons in the Great Lakes Region and the Horn of Africa*, signed April 21, 2004, available at

http://www.iss.co.za/dynamic/administration/file_manager/file_links/SAAF12.PDF?link_id=19&slink_id=6546&link_type=12&slink_type=13&tmpl_id=3 (visited Jan. 24, 2010).

¹⁴ See SMALL ARMS SURVEY 2009: SHADOWS OF WAR 165 (Small Arms Survey, Graduate Institute of International Studies, Geneva, 2005). For example, during the attempted disarmament of the Democratic Republic of Congo, only one percent of the weapons was collected.

show how these indirect deaths are more attributable to government abuse than to weapons.

In Part IV, we discuss the exaggerated number of non-war homicides claimed by GBAV. We explain how GBAV's figure for firearm-related homicide may have been inflated by data-torturing. We show how raw data and detailed methodology are being withheld from outside scrutiny.

I. The Creation of the Claim of 740,000 Annual Armed Deaths

A. The Geneva Declaration Organization (GDO)

In Geneva, on June 7, 2006, a new organization was born, the Geneva Declaration Organization.¹⁵ The birth was announced at a conference hosted by the government of Switzerland and the United Nations Development Programme (UNDP).¹⁶ The founding document of the new Geneva Declaration Organization was *The Geneva Declaration on Armed Violence and Development*¹⁷ (AVD). The AVD signatories agreed to “promote sustainable security and a culture of peace.”¹⁸

In a statement of just over 800 words, the AVD adverts five times to problems caused by small arms,¹⁹ and never once mentions any other type of

¹⁵ *Geneva summit to fight armed violence*, SWISSINFO.CH, Sept. 12, 2008, available at http://www.swissinfo.ch/eng/politics/index/Geneva_summit_to_fight_armed_violence.html?cid=6915670 (visited Dec. 24, 2009) (“The meeting is organised by Switzerland and the United Nations Development Programme (UNDP) to examine progress on the Geneva Declaration....”); see also supra n. __ .

¹⁶ See *The Geneva Declaration on Armed Violence and Development*, Newsletter, Issue 1, April 2008, at Background, available at <http://74.125.113.132/search?q=cache:c4ye3O4Ll2YJ:www.gppac.net/uploads/File/Programmes/Interaction%2520a%2520Advocacy/GD%2520News%2520Letter%25201.doc+ministerial+review+summit+global+burden+armed+violence&cd=4&hl=en&ct=clnk&gl=us> (visited Dec. 19, 2009).

¹⁷ *The Geneva Declaration on Armed Violence and Development*, June 7, 2006, Geneva, Switzerland, available at <http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Armed-Violence-Development-091020-EN.pdf>. This document of approximately 800 words is not the focus of this Article, but is a separate position paper.

¹⁸ See *The Geneva Declaration on Armed Violence and Development*, June 7, 2006.

¹⁹ For a discussion of the definition of Small Arms and Light Weapons (SALW), and the confusion surrounding its definition, see David B. Kopel, Paul Gallant & Joanne D. Eisen, *Global Deaths from Firearms: Searching for Plausible Estimates*, 8 TEX. REV. L. & POLITICS 114, 114 n. 1 (2003):

The Small Arms Survey 2002 defined “small arms” as “revolvers and self-loading pistols, rifles and carbines, assault rifles, sub-machine guns, and light machine guns.” *Id.* “Light weapons” are “heavy machine guns, hand-held under-barrel and mounted grenade launchers, portable antitank and

arms—such as tanks, artillery, airplanes with bombs, helicopter gunships, and so on.²⁰ The Secretariat²¹ (executive office) of the Geneva Declaration explains that the Declaration was “largely inspired by the UN *Programme of Action*” on gun control, which was adopted at a UN conference in 2001.²² The AVD advocates gun control programs such as “weapons collection activities, weapons in exchange for development projects, reforms to firearm legislation and regulation, training for responsible firearms use, neighbourhood watch initiatives, and others.”²³

anti-aircraft guns, recoilless rifles, portable launchers of anti-tank and anti-aircraft missile systems, and mortars of less than 100mm caliber.”

However, definitional inaccuracies and ambiguities abound, and the distinctions between types of weapons are often blurred or obliterated. As Small Arms Survey 2002 pointed out: “This is an issue that was deliberately avoided at the 2001 UN Small Arms Conference. . . .” Further, “The *Survey* uses the terms ‘small arms,’ ‘firearms,’ and ‘weapons’ interchangeably. Unless the context dictates otherwise, no distinction is intended between commercial firearms (e.g. hunting rifles), and small arms and light weapons designed for military use (e.g. assault rifles).”

Canadian activist Wendy Cukier pointed out the political advantage gun control advocates gain by conflating “firearms” with “small arms.” “Despite the domestic concerns of the United States and of many Americans writing on the issue, small arms-affected regions have insisted that eroding artificial boundaries between small arms and firearms are critical . . . suggesting that ‘firearm’ be used instead to encompass the full range of weapons.”

Thus, Cukier in another article used “firearms” as a term for all SALW: [T]he total mortality from firearms is believed to exceed 500,000 deaths per year worldwide. . . . This article will focus on exploring the global health effects of firearms including handguns, rifles, shotguns and military weapons. The UN Panel of Governmental Experts on Small Arms has defined firearms as: “Revolvers and self-loading pistols; rifles and carbines; submachine-guns; assault rifles; light machine guns.” For the purposes of this paper, the term small arms will be considered synonymous with firearms.

Cukier’s unusual definition creates the false impression that all SALW deaths are caused by small arms (which she calls “firearms”), even though academic estimates of SALW deaths also include deaths from light weapons, such as anti-aircraft missiles and mortars. [citations omitted].

²⁰ See *The Geneva Declaration on Armed Violence and Development*, June 7, 2006 (e.g. “stem the proliferation, illegal trafficking and misuse of small arms and light weapons and ammunition, and lead to effective weapons reduction....We will take further action to deal effectively both with the supply of, and the demand for, small arms and light weapons.”)

²¹ Our several queries concerning what exactly constitutes the Geneva Declaration “Secretariat,” which is mentioned numerous times in GBAV and in the Geneva Declaration website, went unanswered. In international organizations, “Secretariat” is usually the executive office of an organization.

²² See *Armed Violence Prevention and Reduction: A Challenge for Achieving the Millennium Development Goals, Background Paper*, Geneva Declaration Secretariat, June 2008, at 27, available at <http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Millennium-Development-Goals.pdf> (visited Dec. 23, 2009).

²³ See *Armed Violence Prevention and Reduction*, at 41.

The Geneva Declaration works closely with the United Nations Development Programme (UNDP).²⁴ For years, the UNDP has been the most aggressive United Nations office in the promotion of international gun control. The UNDP has been quick to integrate GDO statements about gun control into its own public information campaigns.²⁵

The Geneva Declaration Organization is intimately related to the Small Arms Survey (SAS). The Small Arms Survey is a research center at the Graduate Institute of International Studies, in Geneva, and is funded by private and government grants. The SAS produces much research in support

²⁴ See *The Geneva Declaration on Armed Violence and Development*, available at <http://www.genevadeclaration.org/en/the-geneva-declaration/how-does-it-work.html> (visited Dec. 23, 2009) (“The United Nations Development Programme (UNDP) has been involved in the Geneva Declaration process since its beginning in 2006.... Small Arms Survey - a Geneva-based reserach [sic] institute - was mandated by teh [sic] Geneva Declaration Core Group to cordinate [sic] national and international efforst [sic] to enhance the knowledge about the distribution, causes and consequences of armed violence.”); see also GBAV, at ii (“Enquiries concerning reproduction outside the scope of the above should be sent to the Publications Manager at the address below. Geneva Declaration Secretariat, c/o Small Arms Survey....”).

²⁵ A pamphlet entitled “*Fast Facts*” opens with the new Geneva Declaration statistic of 740,000 annual deaths due to armed violence. *Fast Facts, Bureau for Crisis Prevention and Recovery, Armed Violence and Small Arms and Light Weapons (SALW)*, UNDP (undated), available at http://www.undp.org/cpr/documents/Fastfact_armed_violence_sept08.pdf. In its “Call to Action” segment, the UNDP focuses almost entirely on SALW:

Governments, donors and development actors must:

Promote a comprehensive approach to armed violence reduction issues, recognizing the different situations, needs and resources of men and women as well as boys and girls; Take action to deal effectively both with the supply of, and the demand for small arms and light weapons; Stem the proliferation, illegal trafficking and misuse of small arms and light weapons and ammunition, and support the implementation of effective weapons reduction and small arms control initiatives; and Enhance the financial, technical and human resources devoted to addressing armed violence and small arms and light weapons related issues.

Fast Facts, Bureau for Crisis Prevention and Recovery, Armed Violence and Small Arms and Light Weapons (SALW), UNDP (undated), available at http://www.undp.org/cpr/documents/Fastfact_armed_violence_sept08.pdf.

of international gun control.²⁶ The GDO and SAS share personnel²⁷ as well as data.²⁸ When we asked about this relationship,²⁹ no answer was forthcoming.

B. Media Dissemination of the GDO's Factoid

The Geneva Declaration Organization produced a report titled *The Global Burden of Armed Violence*, which estimated that 740,000 people per year die because of armed violence. The report was quickly deployed by international gun prohibition lobbies.

For example, Oxfam, using data from GBAV,³⁰ called for an immediate Arms Trade Treaty. Oxfam made its announcement at the United Nations headquarters in New York City, in a briefing attended by over 200 policymakers and press.³¹ The briefing paper featured a picture of the sculpture that adorns the UN plaza: a revolver whose barrel is twisted into a dysfunctional knot.³²

Oxfam's conference coincided with the consideration by the UN General Assembly of a draft resolution to complete an Arms Trade Treaty (ATT) by 2012.³³ According to Oxfam, "While diplomacy dawdles, the problem gets worse."³⁴ Oxfam's key point was to use the GBAV data to claim that since the ATT negotiation process began in December 2006, 2.1 million people died of

²⁶ See SAS web site, <http://www.smallarmssurvey.org/>.

²⁷ For example, we received e-Mails from both elisa.gilgen@genevadeclaration.org, and elisa.gilgen@smallarmssurvey.org (E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen, Jan. 15, 2010 5:03:13 AM EST, on file with the authors, and E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen, Feb. 10, 2010 10:29:29 AM EST, on file with the authors). In the first instance, Ms. Gilgen's E-Mail signature specified "Elisabeth Gilgen, Geneva Declaration Secretariat, c/o Small Arms Survey...Geneva", and in the second instance, Ms. Gilgen's E-Mail signature specified "Elisabeth Gilgen, Associate Researcher, Small Arms Survey... Geneva." In each E-Mail, the signature line contained the respective organizational E-Mail address and the organizational web site address (i.e. www.smallarmssurvey.org, and www.genevadeclaration.org).

²⁸ See *The Geneva Declaration on Armed Violence and Development* web site, <http://www.genevadeclaration.org/> (visited Dec. 23, 2009); GBAV, at iii.

²⁹ E-Mail to elisa.gilgen@genevadeclaration.org from Paul Gallant and Joanne D. Eisen (Jan. 21, 2010)(on file with the authors).

³⁰ Oxfam is a major supporter of two international gun confiscation NGOs—ControlArms, and the International Action Network on Small Arms (IANSA).

³¹ *Dying for Action: Decision time for an urgent, effective Arms Trade Treaty*, Briefing note, OXFAM International, Oct. 7, 2009, available at http://www.oxfam.org/sites/www.oxfam.org/files/bn_dying_for_action.pdf (visited 12/14/09).

³² The sculpture, named "Non-Violence," or "The Knotted Gun," was designed by Fredrik Reuterswäld, and was given by the government of Luxembourg to the United Nations, <http://www.un.int/luxembourg/knotted%20gun.htm>. Luxembourg is one of the very few nations which entirely prohibits the ownership of firearms by citizens.

³³ Patrick Worsnip, *Armed violence kills 2,000 a day worldwide – groups*, Reuters, Oct. 7, 2009.

³⁴ *Dying for Action*, at 6.

direct or indirect armed violence. Oxfam restated the data into sound bites: “2,000 deaths a day, nearly 100 an hour, more than one every minute.”³⁵

Jan Egeland, a Norwegian diplomat who was formerly a high-ranking UN official,³⁶ spoke by video at the conference. In an animated voice, almost begging for an Arms Trade Treaty, he stated: “Today, defenseless civilians will be killed, tomorrow they will be killed, in the thousands, because the arms were so readily available There has to be an agreement against this,”³⁷ for “The millions who have died from the senseless proliferation of Small Arms and Light Weapons...urge us to not cease in this quest for such a treaty.”³⁸

Another speaker, Francis Mutuku Nguli, the CEO of PeaceNet in Kenya, repeated the sound bite: “As we have already heard today, there are an estimated 2,000 deaths out of gun or gun related incidents around the world. My organization sees this impact of armed violence day by day and urges governments here to move quickly to achieve a robust Arms Trade Treaty to start to reduce this terrible toll.”³⁹ Like many gun control advocates, Nguli claimed that all the deaths were due to firearms, even though the underlying data are based on all sorts of weapons (e.g., grenades, knives, rocket launchers).

The first talking point of conference panelist Debbie Hillier’s⁴⁰ presentation was “2.1 million people have died from armed violence since the UN started discussing the ATT in 2006.”⁴¹ She reiterated: “So we need an Arms Trade Treaty now.... the pace of international diplomacy is too slow for many. 2.1 million people have died due to armed violence since the UN started its deliberations on an ATT - that is 2000 per day.”⁴²

The headline for Oxfam’s press release announced that “over 2,000 die per day from armed violence.”⁴³ The press release was accompanied by a photo of a graveyard filled with tombstones. On each tombstone was written “ONE PERSON EVERY MINUTE KILLED BY ARMS.” The message was repeated

³⁵ *Dying for Action*, at 3 (italics in original).

³⁶ Egeland is Director of Norwegian Institute for International Affairs, and former UN Undersecretary General for Humanitarian Affairs.

³⁷ *Dying for Action*.

³⁸ *Dying for Action*.

³⁹ See speech by Mr. Francis Mutuku, available at http://www.ony.unu.edu/Mr_Mutuku%27s_Speech.pdf (visited Dec. 18, 2009).

⁴⁰ Panelist Debbie Hillier is Policy Advisor, Oxfam International.

⁴¹ See Debbie Hillier’s Presentation, http://www.ony.unu.edu/Ms_Debbie_Hillier_Presentation.pdf (visited Dec. 18, 2009).

⁴² See Debbie Hillier’s speech, http://www.ony.unu.edu/MS_Debbie%27s_Speech.pdf (visited Dec. 18, 2009).

⁴³ *Talks for an arms trade deal going at snail’s pace as figures show over 2,000 die per day from armed violence*, Oxfam International, Oct. 7, 2009, available at <http://www.oxfam.org/en/pressroom/pressrelease/2009-10-07/arms-trade-talks-snails-pace-over-2000-die-day-armed-violence> (visited Jan. 13, 2010).

verbatim by Reuters.⁴⁴ Newspapers which ran the Reuters story usually illustrated it with a photo of firearms.⁴⁵ From Canada to Malaysia to China to the Netherlands to England, the Oxfam/GBAV figure of 2,000 deaths per days was published as an established fact.⁴⁶

While the Reuters story, and derivatives thereof, was the main source of dissemination of the 2,000 persons per day figure, the same line was also

⁴⁴ Patrick Worsnip, *Armed violence kills 2,000 a day worldwide – groups*, Reuters, Oct. 7, 2009.

⁴⁵ See Patrick Worsnip, *Armed Violence kills 2,000 a day worldwide: Advocacy groups*, THE GAZETTE (Montreal), available at <http://www.montrealgazette.com/news/Armed+violence+kills+worldwide+Advocacy+groups/2073158/story.html> (visited Jan. 13, 2010).

It is well understood in the field of psychology that photographic images can influence public opinion. See, e.g., Eszter Balázs & Phil Casoar, *An Emblematic Picture of the Hungarian 1956 Revolution: Photojournalism during the Hungarian Revolution*, 58 EUROPE-ASIA STUDIES 1241, 1243 (2006) (“Still photographs are usually treated as illustrations and even if some importance is attributed to them, they are presented as visual testimony without any analysis, calling for only an emotional approach.... ‘From the early 1900s, governments of Europe, the Soviet Union and America were actively involved in using photography to manipulate public opinion....’”) (Internal references omitted); see also David L. Eckles, *Priming Risk and Policy Change*, Working Paper, at Abstract, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1449902 (“Public opinion plays an important role in affecting policy outcomes.... We find that even a subtle risk prime induces significant changes in attitudes on some policy issues and that the effect is particularly pronounced for individuals with less political knowledge and less tolerance for risk.”).

When a firearms photograph is juxtaposed with a newspaper article stating that “armed violence kills 2,000 a day worldwide,” the firearms photograph can act as a priming factor; most readers of such articles in the general media would likely fall into the category of “citizens [who] tend to forego an exhaustive search for information and rely instead on considerations that are most accessible to them at that moment.” See generally THE SCIENCE OF COURTROOM LITIGATION: JURY RESEARCH AND ANALYTICAL GRAPHICS (Samuel H. Solomon, Joanna Gallant, John P. Esser, eds. (ALM Publishing, New York, 2008) (detailing how graphics can profoundly influence and frame human behavior and attitudes).

⁴⁶ See *Armed Violence kills 2,000 a day worldwide*, THE MALAYSIAN INSIDER, Jan. 14, 2010, available at <http://www.themalaysianinsider.com/index.php/world/39638-armed-violence-kills-2000-a-day-worldwide-> (visited Jan 13, 2010); *Patrick Worsnip, Armed violence kills 2,000 a day worldwide: groups*, CONGONEWSCHANNEL.COM, Oct. 7, 2009, available at <http://cncblog.congonewschannel.net/2009/10/armed-violence-kills-2000-day-worldwide.html> (visited Jan. 13, 2010); *Violence kills 2,000 a day worldwide: groups*, THE NATION (Pakistan), Oct. 8, 2009, available at <http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/International/08-Oct-2009/Violence-kills-2000-a-day-worldwide-groups> (visited Jan. 13, 2010); *Armed Violence Kills 2,000 A Day Worldwide: Groups*, ALL AROUND THE WORLD: CHINA NEWS, Oct. 7, 2009, available at <http://china.allaroundworld.com/2009/10/07/Armed-Violence-Kills-2000-A-Day-Worldwide-Groups/> (visited Jan. 13, 2010); *Weapons kill 2,000 people a day*, RADIO NETHERLANDS WORLDWIDE, News Desk, Oct. 7, 2009, available at <http://www.rnw.nl/print/30702> (visited Nov. 14, 2009) (“Oxfam director Jeremy Hobbs says eight out of 10 governments and the vast majority of ordinary people want an arms trade treaty.”); *Arms Trade veto ‘would weaken treaty’*, Oct. 16, 2009, BRITISHINFORMATION.COM, available at <http://www.britishinformation.com/news/News-Headlines/2009-10/Arms-trade-veto-'would-weaken-treaty'-19410902/> (visited Jan. 13, 2010) (“Armed violence claims 2,000 lives every day around the world....”; accompanied by a photo of two automatic firearms).

propounded by the Inter Press News Service,⁴⁷ and by two stories from the Associated Press.⁴⁸ These stories, too, were accompanied by a photo of firearms. The United Nations put out its own press release to the same effect.⁴⁹

At press conferences and in derivative media reports, the figure of 740,000 annual deaths seems impressively precise. Accordingly, around the world, people who have read about the proposed Arms Trade Treaty “know” that 2,000 people die every day from causes that would be prevented by an ATT. But is the figure true?

We tried to find out, and the rest of this paper describes what we found—and what remains hidden.

II. Direct War Deaths

In Part II, we investigate the Geneva Declaration Organization’s claim about the number of deaths that result directly from war (“conflict deaths”). GBAV estimated a total of 52,000 direct conflict deaths annually, while acknowledging that other researchers’ estimates are as low as 15,000. In Parts III and IV, we will examine the Geneva Declaration Organization’s claims about deaths from other causes.

A. Methodology: Incident Reporting and Retrospective Surveys

GBAV describes methods which have been devised to estimate conflict deaths; GBAV acknowledges that all of these methods are flawed. One method of determining total fatalities is “incident reporting.” Incident reporting compiles reported deaths from multiple sources, such as media reports, morgues, and hospital records. Incident reporting may suffer from under-counting, especially if reporters and researchers do not have access to

⁴⁷ Suzanne Hoeksema, *NGOs Hold Arms Exporters to Account for Abuses*, INTER PRESS SERVICE, Oct. 8, 2009, available at <http://ipsnews.net/news.asp?idnews=48780> (visited Jan. 13, 2010).

⁴⁸ Edith M. Lederer, *Campaign Begins to Start Gun Treaty Negotiations*, ASSOCIATED PRESS, Oct. 10, 2009. (“Seven countries have launched a campaign for the U.N. to start negotiations on a new treaty regulating the global arms trade to help prevent the illegal transfer of guns that kill and maim thousands every day....According to a report published this week by the British relief agency Oxfam....”); Edith M. Lederer, *UN committee backs arms trade treaty*, ASSOCIATED PRESS, Oct. 31, 2009.

⁴⁹ See *ELIMINATING GLOBAL ARMS TRADE CRUCIAL TO SECURITY, SUSTAINABLE DEVELOPMENT, SPEAKERS STRESS AS DPI/NGO CONFERENCE ROUND TABLES CONTINUE*, UN press release, US STATE NEWS, Sept. 13, 2009.

the conflict zone.⁵⁰ As GBAV notes, “documentation-based approaches to reporting often greatly underestimate direct conflict deaths.”⁵¹

Another approach is to take a survey.⁵² Teams of researchers are sent door-to-door in, hopefully, representative neighborhoods asking families about past events, including deaths.⁵³ Total deaths are then extrapolated from these data.

However, in areas without accurate population counts, it is extremely difficult to make reliable projections. In other words, if there were three reported deaths, and the neighborhood’s true population were 500, the death rate would be very different than if the true population were 800. If the “denominator” of the neighborhood population is inaccurate, then the neighborhood death rate (which is then extrapolated to produce a national death rate) will also be inaccurate.

Moreover, if the neighborhoods are not truly representative, other inaccuracies are introduced.⁵⁴ For example, if a researcher trying to discover the death rate in America used extrapolations from neighborhood samples consisting of South Central Los Angeles, the Ninth Ward of New Orleans, and Detroit, the result would yield an inaccurately national rate for the United States. To produce an accurate national rate, the researchers must be sure that the most-violent neighborhoods are not sampled out of proportion to the national population.

The retrospective surveys can suffer from other inaccuracies.⁵⁵ Questions are dissimilarly worded, coding protocols vary, and there are time lapses between the conflict and the survey, rendering human recall less accurate (e.g., did a relative die seven years ago or nine years ago?).⁵⁶ Social scientists

⁵⁰ GBAV, at 11; SMALL ARMS SURVEY 2005: WEAPONS AT WAR, 235-37 (Small Arms Survey, Graduate Institute of International Studies, Geneva, 2005). *See also Press Releases Friday 13 June 2008*, BRIT. MED. J., available at http://www.bmj.com/content/vol336/issue7658/press_release.dtl (visited Jan. 7, 2010) (“high levels of war deaths occur in dangerous areas where eyewitnesses are least likely to go.”).

⁵¹ GBAV, at 12.

⁵² SMALL ARMS SURVEY 2005, at 239-41.

⁵³ *Iraqi Death Estimates Called Too High; Methods Faulted*, 314 SCIENCE 396 (Oct. 20, 2006).

⁵⁴ GBAV, at 12 (“Without so-called denominator data, it is extremely difficult to make reliable projections from a small sample of the population to the national level.”). *See also* Richard S. Cooper et al., *Disease burden in sub-Saharan Africa: what should we conclude in the absence of data?* 351 THE LANCET 208 (Jan. 17, 1998).

⁵⁵ GBAV, at 12.

⁵⁶ Michael Spagat et al., *Estimating War Deaths: An Area of Contestation*, 53 J. CONFLICT RESOLUTION 934 (2009); *see also The Conflict Over War Deaths*, Human Security Report Project (undated), Human Security Research Group, Simon Fraser University, Vancouver, Canada, available at <http://www.hsrgroup.org/index.php?option=content&task=view&id=469> (visited Jan. 9, 2010) (“no research has ever independently validated the accuracy of nationwide estimates of violent conflict deaths derived from surveys.”). Michael Spagat is Professor of Economics, Royal Holloway, University of London.

have long been aware of the problem of “telescoping.”⁵⁷ That is, if a person is asked “Did event X happen to your family in the last year?” he may answer “yes” even if the event happened several years ago.

Thus, estimates based on surveys tend to report many more deaths than do estimates based on reported incidents. For example, the Obermeyer research group⁵⁸ used World Health Organization (WHO) surveys and WHO population statistics. Their calculation of the number of conflict deaths—over a period of five decades—was three hundred percent greater than the results using incident-reporting methodology.⁵⁹

Moreover, surveys in the same country can produce wildly different estimates.⁶⁰ Just how discrepant the survey method can be is shown by two surveys that attempted to estimate deaths in Iraq after the 2003 invasion. One survey reported 151,000 deaths due to violence after the U.S.-led invasion.⁶¹ But another survey reported 601,027 violent deaths.⁶² Obviously, at least one of the estimates is very wrong.

B. The Numbers

As the Small Arms Survey forthrightly acknowledges: “A complete dataset on people killed in conflict—directly or indirectly—does not exist.” So “All published figures are estimates based on incomplete information.”⁶³

⁵⁷ E.g., Seymour Sudman & Norman M. Bradburn, *Effects of Time and Memory Factors on Response in Surveys*, 68 J. AM. STAT. ASS’N 808 (1973).

⁵⁸ Ziad Obermeyer et al., *Fifty years of violent war deaths from Vietnam to Bosnia: analysis of data from the world health survey programme*, 336 BRIT. MED. J. 1482 (June 28, 2008).

⁵⁹ Obermeyer, at Table 3 (“The average ratio of survey estimates to Uppsala/PRIO data is 3, implying that media estimates [incident reports] capture on average a third of the number of deaths estimated from population based surveys.”).

⁶⁰ *The Conflict Over War Deaths*.

⁶¹ *Violence-Related Mortality in Iraq from 2002 to 2006*, 358 NEJM 484 (Jan. 31, 2008); see also John Bohannon, *Calculating Iraq’s Death Toll: WHO Study Backs Lower Estimate*, 319 SCIENCE (Jan 18, 2008, No. 5861); *Iraqi Death Estimates Called Too High; Methods Faulted*, 314 SCIENCE 396 (Oct. 20, 2006).

⁶² Gilbert Burnham, Riyadh Lafta, Shannon Doocy & Les Roberts, *Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey*, 368 THE LANCET 1421 (Oct. 21-Oct. 27, 2006). Burnham also reported that 56% of these deaths were firearm-related. *See infra*

⁶³ SMALL ARMS SURVEY 2005: WEAPONS AT WAR, at 233, Small Arms Survey, Graduate Institute of International Studies, Geneva, 2005. Small Arms Survey also notes, at 235: “According to an assessment by WHO, only 64 countries submitted data that was considered complete in 2003 and coverage was minimal in sub-Saharan Africa, where deaths from violent conflict are concentrated.”

According to GBAV, “For the purposes of this report, armed violence is the intentional use of illegitimate force (actual or threatened) with arms or explosives, against a person, group, community, or state, that undermines people-centred security and/or sustainable development.” *See* GBAV, at 2.

Table 1.2 of GBAV is entitled “Estimates of the regional distribution of direct conflict deaths, 2004–07.” *See* GBAV, at 18-19. The notes at the bottom of Table 1.2 state that the statistics “includes all information on direct conflict deaths available for 62 conflicts;” (*Cf* J.

Of course gathering data during a war can be difficult or impossible.⁶⁴ As for “conflict deaths,” there is not even a generally-accepted definition. Social scientists who attempt to enumerate conflict-related deaths arrive at different totals in part because they define “conflict” differently.⁶⁵ Some researchers may eliminate conflicts from their database if there is not at least one state involved,⁶⁶ or if fewer than 1,000 battle deaths are reported.⁶⁷ Some studies report post-conflict deaths and some do not; some report terrorism deaths and others do not.⁶⁸

Examining the Methodological Annexe of GBAV highlights the problem. In Table 1, not only are the definitions of terms used in the database in conflict with each other, but the parameters used in the databases are dissimilar.⁶⁹

The variety of data-gathering methodologies and diverse definitions of “conflict” cause discrepancies in the totals. For example, the number of Iraqi soldiers killed in Operation Desert Storm (1990-1991) varies from as few as 1,500 to as many as 100,000, depending on the database used.⁷⁰ Likewise, the estimates of deaths from the war in Kosovo range from 2,000 to 12,000.⁷¹

The GBAV meta-database is derived from a combination of sources,⁷² which GBAV uses to produce a mortality estimate for the conflicts in 2004-

JOSEPH HEWITT, JONATHAN WILKENFELD, & TED ROBERT GURR, PEACE AND CONFLICT 2008, at 1 (2008). In 2005, the number of states around the globe engaged in “armed conflict” was twenty-five.)

⁶⁴ See SMALL ARMS SURVEY 2005, at 235 (“In many cases...data collection systems cease to function during conflict, if they ever functioned before.”).

⁶⁵ See Colin D. Mathers, Alan D. Lopez, and Christopher J. L. Murray, *The Burden of Disease and Mortality by Condition: Data, Methods, and Results for 2001*, at 65, in GLOBAL BURDEN OF DISEASE AND RISK FACTORS (Alan D. Lopez, Colin D. Mathers, Majod Ezzati, Dean T. Jamison, & Christopher J.L. Murray, eds, Oxford University Press and the World Bank, 2006).

⁶⁶ For example, in the case of sub-state violence.

⁶⁷ See Mathers, et al., at 65.

⁶⁸ See Mathers et al., at 65.

⁶⁹ See *Methodological Annexe* to the *Global Burden of Armed Violence, Geneva, March 2009*, Table 1, at 4-8, available at <http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-Methdological-Annexe.pdf> (visited Jan. 3, 2010).

⁷⁰ SMALL ARMS SURVEY 2005, at 234:

The 1990-91 US-Iraq conflict (Operation Desert Storm) provides an example of how casualty figures may be employed for political aims both during and after a conflict. In 1991, the US Defense Intelligence Agency (DIA) estimated with an error factor of 50 per cent that 100,000 Iraqi soldiers had been killed....In 1993, former DIA analyst John Heidenrich estimated that as few as 1,500 Iraqi soldiers had been killed....

⁷¹ SMALL ARMS SURVEY 2005, at 242.

⁷² GBAV, at 13.

2007.⁷³ Yet the GBAV authors do *not* reveal how they used their sources to create the final figure of 52,000 “direct conflict deaths” per year.⁷⁴

The GBAV authors did, however, provide two tables showing the totals from eight databases over the period 2000-2007 for Sudan.⁷⁵ The GBAV authors also included their own estimate in the tables. One can see that, except for occasional outliers in a particular dataset, GBAV’s own estimate tends to run high.

GBAV acknowledges that other datasets show lower estimates of direct conflict deaths.⁷⁶ For example, the Human Security Report found an average yearly total of 15,000-20,000 deaths, while Obermeyer et al.,⁷⁷ reported 36,000.

Given the acknowledged variability of the total estimates presented by GBAV, the authors should have disclosed the detailed methodology used to estimate the number of direct conflict deaths.

Among the many reasons why an accurate total for conflict deaths is important is that the total number of indirect conflict deaths is dependent upon it. The figure for indirect deaths (e.g., a civilian starves because the war prevented food deliveries) is really just a guesstimated multiple of the direct deaths. So if the direct deaths figure is wrong, the indirect deaths figure will be even more wrong.

It is difficult to understand why GBAV refuses to disclose the methods, calculations, and assumptions that it used to produce its high estimate of direct deaths.

III. Indirect Deaths

Indirect conflict deaths are those that do not result directly from the conflict. For example, during a war, a bomb misses a military base and hits a nearby canal. Nobody is killed immediately by the bomb (and therefore, no “direct conflict deaths”). Because the canal was destroyed, people search for an alternative source of water, drink from a contaminated source, and die of cholera, two years after the bomb hit and months after the war ended.

Almost by definition, indirect conflict deaths are non-violent.⁷⁸ GBAV states that “These indirect victims of war do not die violently.”⁷⁹ Wars cause supply problems for human necessities as food, water, and basic health

⁷³ GBAV, at 18-19.

⁷⁴ GBAV, at 9.

⁷⁵ GBAV, at 25, Tables 1.4 and 1.5.

⁷⁶ GBAV, at 13, Box 1.2.

⁷⁷ Ziad Obermeyer et al., *Fifty years of violent war deaths from Vietnam to Bosnia: analysis of data from the world health survey programme*, 336 BRIT. MED. J. 1482.

⁷⁸ GBAV, at 31.

⁷⁹ GBAV, at 31.

care.⁸⁰ And so the victims die because of inadequate societal infrastructure.⁸¹ Or they die in refugee camps where filthy conditions breed contagious disease.⁸² Children are disproportionately likely to die in indirect deaths.⁸³

The indirect deaths—slow deaths in agonizing, inhumane circumstances—are much greater than the direct deaths from war.⁸⁴ Estimating indirect deaths is even more difficult than estimating direct deaths.⁸⁵ An extreme example of how indirect deaths can outnumber direct deaths is the wars in Sudan from 1983-2002: there were approximately 55,000 direct-conflict deaths, which accounted for just 3% of the total of 2 million deaths.⁸⁶ However, Sudan was atypical, in that the Sudanese government was perpetrating genocide and ethnic cleansing, so the enormous number of

⁸⁰ GBAV, at 31; *see also* Ruwan Ratnayake et al., METHODS AND TOOLS TO EVALUATE MORTALITY IN CONFLICTS: CRITICAL REVIEW, CASE-STUDIES AND APPLICATIONS, Complex Emergency Database, July 2008, WHO Collaborating, Centre for Research on the Epidemiology of Disasters (CRED), at 4 (“**Indirect deaths** are defined as deaths which are caused by the worsening of social, economic and health conditions in the conflict-affected area.”). The authors note “This report was commissioned by the Small Arms Survey for the Global Burden of Armed Violence....”

⁸¹ GBAV, at 31.

⁸² HUMAN SECURITY REPORT 2005: WAR AND PEACE IN THE 21ST CENTURY 129 (2005).

⁸³ For example, although children under the age of 5 comprise 19.4% of the sample population studied in the DR Congo, they accounted for 47.2% of the deaths. Benjamin Coghlan et al., *Mortality in the Democratic Republic of Congo: An Ongoing Crisis*, International Rescue Committee, 2007, at 7, available at http://www.ircuk.org/fileadmin/user_upload/Reports/2006-7_congomortalitysurvey.pdf (visited Jan. 17, 2010); *see also Study on the impact of armed conflict on the nutritional situation of children*, Food and Agriculture Organization of the United Nations, Rome 1996, available at <http://www.fao.org/docrep/005/W2357E/W2357E00.htm#ack> (visited Jan 18, 2010).

⁸⁴ HUMAN SECURITY REPORT 2005, at 128 fig. 4.1.

⁸⁵ *See People’s Tribunal on Sri Lanka*, Permanent People’s Tribunal, Trinity College, Dublin Ireland, Jan 14-16, 2010, at 13, available at <http://www.swp.ie/Resources/PeoplesTribunalOnSriLankaFinalReport.pdf> (visited Jan. 26, 2010). In Sri Lanka, journalists were killed by “unknown assassins;” no weapon was specified. These murders made it easier for the government of Sri Lanka to cover up the vicious ethnic destruction of Tamil civilians. Squeezed into camps with inadequate water and food (*id.* at 9), they are presently dying as we write, with no one to mark the end to their lives. Whatever weapons eventually get blamed for these indirect conflict deaths, the fault should be laid directly in Colombo, the seat of the Sri Lankan government; *see also* Urgent international scrutiny needed in Sri Lanka, say UN Human Rights Experts, United Nations Press Release, May 8, 2009, available at <http://www.unhchr.ch/hurricane/hurricane.nsf/view01/57D5CC3A9B1271B2C12575B000492130?opendocument> (visited Jan. 26, 2010)(According to Philip Alston, the UN’s expert on summary executions: “ the Sri Lankan Government has yet to account for the casualties, or to provide access to the war zone for journalists and humanitarian monitors of any type.”).

For background of the ongoing conflict in Sri Lanka, *see* David B. Kopel, Paul Gallant & Joanne D. Eisen, “Lions vs. Tigers: The Precarious State of Sri Lanka,” NAT’L REV. ONLINE, Mar. 3, 2004, available at http://www.nationalreview.com/kopel/kopel_gallant_eisen200403030918.asp.

⁸⁶ HUMAN SECURITY REPORT 2005, fig. 4.1, at 128.

civilian deaths was the result of conscious government policy, rather than an unintended consequence of combat.⁸⁷

GBAV estimates that 200,000 people die annually as indirect victims,⁸⁸ deriving that figure from the GBAV estimate of 52,000 direct conflict deaths. The GBAV authors suggest that a ratio of 4 indirect deaths to 1 direct death would be reasonable.⁸⁹

Thus, GBAV's high estimate for direct conflict deaths leads to a high estimate for indirect deaths. If we instead used the Human Security Report⁹⁰ estimate of 15,000 to 20,000 direct conflict deaths, then the estimate for indirect conflict deaths, would be 60,000 to 80,000. Or if the Obermeyer et al. estimate of 36,000 direct conflict deaths per year was used, then indirect conflict deaths would be 144,000.

In sum, GBAV claims 252,000 combined annual deaths from direct and indirect conflict. GBAV has provided *no* explanation for how or why its high-side claim is more accurate, or based on better calculations, than are the estimates from other experts, whose figures would suggest a combined annual death toll as low as 75,000.

A. The War on Aid Workers

The United Nations' obsession with gun control serves a political purpose: distracting public attention from dictatorships that cause violent deaths. In our example of the accidental canal bombing, the destruction of the canal, and the subsequent cholera epidemic, might not have been intended by anyone. Yet the truth is that a huge number of indirect deaths are deliberately caused by governments or by other warring factions.

Governments or other warring groups use armed force to block humanitarian aid.⁹¹ Even worse, the humanitarian workers themselves are often violently attacked.⁹² For example, aid workers in Afghanistan reported especially high victimization rates, with locally hired staff three times more likely to be victimized than foreign workers.⁹³ GBAV puts the blame on guns,

⁸⁷ See, e.g., David B. Kopel, Paul Gallant & Joanne D. Eisen, *Is Resisting Genocide a Human Right?* 81 NOTRE DAME L. REV. 1275 (2006).

⁸⁸ GBAV, at 4 (“A *minimum* estimate is that an average of 200,000 people have died annually in recent years as indirect victims during and immediately following recent wars.”).

⁸⁹ GBAV, at 32.

⁹⁰ GBAV, at 13, Box 1.2.

⁹¹ 25m *INTERNALLY DISPLACED BY CONFLICT*, Global IDP Project, Sept. 23, 2002, available at http://www.idpproject.org/IDP_project/news23_9_02.pdf (visited Jan. 19, 2010); HUMAN SECURITY REPORT 2005, at 104.

⁹² HUMAN SECURITY REPORT 2005, at 106 (internal footnotes deleted).

⁹³ NO RELIEF, at 10; see also Max P. Glaser, *Negotiated Access: Humanitarian Engagement with Armed Non-State Actors*, at footnote 11, available at <http://www.hks.harvard.edu/cchrp/pdf/NegotiatedAccess.pdf>

since more than 50% of violent incidents against aid workers occurred in the “presence of guns.”⁹⁴

There is a growing body of literature on the topic of negotiating access by aid workers to at-risk civilians trapped in a war.⁹⁵ Humanitarian workers know that they must first negotiate with warring parties prior to entering the theater of war; and that the workers’ security depends entirely on the strength of the agreement.⁹⁶

Although humanitarian principles are almost universally accepted on paper, they are breached constantly, and with impunity, on the ground.⁹⁷

⁹⁴ GBAV, at 138, *citing* Cate Buchanan & Robert Muggah, NO RELIEF: SURVEYING THE EFFECTS OF GUN VIOLENCE ON HUMANITARIAN AND DEVELOPMENT PERSONNEL 7, 14 (joint project of The Centre for Humanitarian Dialogue (HD Centre), and Small Arms Survey, undated), *available at* http://www.smallarmssurvey.org/files/sas/publications/co_publi_pdf/2005/2005-no_relief_full_text.pdf (visited Jan. 19, 2010); *see also* SMALL ARMS SURVEY 2005, at 251 (“the widespread proliferation and misuse of small arms during and after conflict reduces the ability of governments, NGOs, and aid agencies to maintain or restore essential services....The continued suppression of these services due to small arms-related insecurity must therefore be considered a factor in the resulting preventable deaths.”); GBAV, at 139 (“The costs of armed violence against aid workers are therefore high both for those who need the assistance *and* for those who provide it.”).

⁹⁵ *See generally* Max P. Glaser, *Negotiated Access: Humanitarian Engagement with Armed Nonstate Actors*, Carr Center for Human Rights Policy, Kennedy School of Government, Harvard University, 2003, *available at* <http://www.hks.harvard.edu/cchrp/pdf/NegotiatedAccess.pdf> (visited Jan. 31, 2010); *see also* Daniel Toole, *Humanitarian Negotiation: Observations from Recent Experience*, Harvard Program on Humanitarian Policy and Conflict Research, Jan. 2001, *available at* http://www.hpcrresearch.org/pdfs/HumanitarianNegotiation_Toole.pdf (visited Jan. 31, 2010); Mark Cutts, *Negotiating with Warring Parties*, 18 REFUGEE SURVEY QUARTERLY 43 (1999).

⁹⁶ *See* Cutts, at 43:

Access to civilian victims of conflict is often dependent on negotiations which are carried out between the ‘humanitarian community’ on the one hand, and ‘warring parties’ on the other. However, these two groups are often neither unified nor homogeneous, and the negotiation process is far more complex than is often assumed....Within all this confusion, how good are humanitarian personnel at negotiating? Unfortunately, they often negotiate from positions of weakness, being entirely dependent on those with whom they are negotiating for their own security.

⁹⁷ Imogen Foulkes, *Geneva Conventions’ struggle for respect*, BBC NEWS, Aug. 12, 2009; *see also* *The Geneva Conventions of 1949*, ICRC Mar. 9, 2009, *available at* <http://www.icrc.org/Web/Eng/siteeng0.nsf/html/genevaconventions> (visited Jan. 31, 2010). *See especially* the Fourth Geneva Convention: “The Geneva Conventions, which were adopted before 1949, were concerned with combatants only, not with civilians. The events of World War II showed the disastrous consequences of the absence of a convention for the protection of civilians in wartime. The Convention adopted in 1949 takes account of the experiences of World War II.”

Government responsibility was virtually ignored by GBAV. Unfortunately, this is nothing new for the United Nations itself, or its allied NGOs. After all, the United Nations is composed of governments, about half of them dictatorships. At the United Nations, blaming guns might have irritated some members of the United States delegation during 2001-2008, but was otherwise politically costless. In contrast, blaming large numbers of governments is never popular at the UN.

B. Democratic Republic of the Congo & Sierra Leone

In the Democratic Republic of the Congo, the blame for the millions of direct and indirect deaths⁹⁸ should not be placed on guns, but on the UN's stubborn reliance, for decades, on a failed policy premised on the existence of a sovereign, unitary DR Congo.⁹⁹ Although the government may be sovereign in Kinshasa, the capital of DRC, it is non-existent throughout much of the rest of the country. The United Nations armed forces in the DR Congo (MONUC¹⁰⁰) has been a reluctant, and not very successful, proxy sovereign in the disputed Kivu provinces of the east.¹⁰¹ Alain Le Roi, Under-Secretary-General for Peacekeeping Operations, complained: "Monuc forces cannot serve as a substitute for the Congolese army to fight a war or impose peace."¹⁰²

But that is exactly what occurred, and the outcome was disastrous.¹⁰³ Participants of a UN policy meeting expressed concern that MONUC would be considered complicit in the human rights violations committed by the Congolese army.¹⁰⁴ MONUC troops also engaged in arms smuggling to

⁹⁸ GBAV, at 31.

⁹⁹ See UN Sec. Council Res. 1279 ("Reaffirming the sovereignty, territorial integrity and political independence of the Democratic Republic of the Congo...."). A decade, and several million deaths, later, Security Council Resolution 1906 (S/Res/1906 (2009, adopted by the Security Council on Dec. 23, 2009) stated: "*Reaffirming* its commitment to the sovereignty, territorial integrity and political independence of the Democratic Republic of the Congo....").

¹⁰⁰ MONUC is the French acronym for the United Nations Organization Mission in the Democratic Republic of the Congo. It was established by UN Security Council Resolution 1279, adopted Nov. 30, 1999. The history of MONUC can be found at <http://www.un.org/en/peacekeeping/missions/monuc/index.shtml> (visited Feb. 7, 2010).

¹⁰¹ See Mark Turner, *Doing the Work: an Overview of United Nations Missions*, in A GLOBAL AGENDA: ISSUES BEFORE THE UNITED NATIONS, 2009-2019, at 18 (Dulcie Leimbach, ed., 2009) ("The eastern conflict erupted dramatically once more in late October 2008, when a renegade Tutsi general came close to toppling the eastern city of Goma. Government troops all but melted away, and the UN force was effectively all that stood between some semblance of a political process and a new war.")

¹⁰² See Turner, *Doing the Work*, at 20.

¹⁰³ YOU WILL BE PUNISHED: ATTACKS ON CIVILIANS IN EASTERN CONGO 11-12 (Human Rights Watch, 2009), available at http://www.hrw.org/sites/default/files/reports/drc1209web_1.pdf (visited Feb. 7, 2010),

¹⁰⁴ YOU WILL BE PUNISHED, at 139.

warlords (!) and sexual abuse of civilians.¹⁰⁵ In a Hobbesian world with foreign armies, local militias, the army of the DR Congo, and the UN army all running rampant over the rights and lives of civilians,¹⁰⁶ it should come as no surprise that humanitarian workers would also come under fire.¹⁰⁷

The United Nations remains stuck on a nation-centric approach. MONUC cooperates with the government in Kinshasa, which has no real sovereignty or legitimacy over much of the country. MONUC allies with the Congolese national army, even though that army is itself mostly a collection of independent warlords, who commit just as many human rights atrocities as do the “non-government” warlords. MONUC itself is notably ineffective in combat, generally retreating at the first sign of resistance.

Meanwhile, the United Nations has imposed arms embargoes on the DR Congo—yet at least a dozen UN member governments are participants in arms smuggling into the Congo. It would certainly be better if the Congo warlords had no guns, but gun control in the Congo has been a decade-long failure of the UN.¹⁰⁸

Is there an alternative? Yes, but it offends certain sensibilities: the sensibility that every faction which takes over a national capital is the legitimate “government” of the entire nation, and the sensibility that the solution to warlords in the Congo is not gun control, but rather is the destruction of the warlords and their armies—or least keeping them far away from the relief workers.

Historical events in Sierra Leone provide an interesting alternative to UN incompetence. The people of Sierra Leone had long been victimized by an especially brutal warlord army called the RUF (Revolutionary United Front). There is a United Nations military mission in Sierra Leone. Like MONUC in the DR Congo, the UN mission in Sierra Leone had been notably ineffective and unwilling to fight, often running away when the RUF showed up, and leaving civilians behind to be attacked, mutilated, and enslaved by the RUF.

The RUF kept itself in business by taking over diamond mines. These are the “blood diamonds” that are then sold into the world market. After years of UN failure, a different solution was tried. The mine owners hired 150 mercenaries from Executive Outcomes, a mercenary corporation based in South Africa. The mercenaries “swiftly removed the RUF from mining

¹⁰⁵ See Turner, *Doing the Work*, at 19.

¹⁰⁶ YOU WILL BE PUNISHED, at 10 (“The attacks against civilians have been vicious and widespread. Local populations have been accused of being ‘collaborators’ by one side or the other and deliberately targeted, their attackers saying they are being ‘punished.’”)

¹⁰⁷ See *Security Incidents against humanitarian workers*, OCHA North Kivu (DR Congo), United Nations Office for the Coordination of Humanitarian Affairs, available at http://www.irinnews.org/pdf/Security_Incidents_against_humanitarian_workers.pdf (visited Feb. 7, 2010).

¹⁰⁸ See David B. Kopel, Paul Gallant & Joanne D. Eisen, *The Arms Trade Treaty: Zimbabwe, the Democratic Republic of the Congo, and the Prospects for Arms Embargoes on Human Rights Violators*, 114 PENN STATE L. REV (2010, forthcoming).

areas.”¹⁰⁹ The mercenaries also provided “emergency evacuation services to UN staff members and escort services to humanitarian aid organizations....”¹¹⁰ This is considerably more than the UN soldiers ever accomplished.

Although the use of mercenary troops has not been universally accepted,¹¹¹ soldiers-for-hire have been successfully used throughout history.¹¹²

To put it bluntly, the UN’s own “army” is, in essence, itself a mercenary army, albeit an especially bad one. The UN forces are overwhelmingly composed of soldiers from countries such as Pakistan, Sri Lanka, India, Morocco, and Bangladesh that rent their soldiers to the UN. The governments pocket the difference between their soldiers’ low rate of pay, and the rental rate which the UN pays the governments.

The contrasting performance of the large, near-worthless UN mercenary army and the highly effective Executive Action mercenary army directly points to a solution for protection of humanitarian aid workers. Instead of relying on the UN’s mercenaries, hire mercenaries who have a proven record of success.

A politically incorrect solution, to be sure. But as events in Sierra Leone demonstrated, it is a solution which can save many innocent civilians, and which can help protect the humanitarian workers and thereby save civilian lives.

C. Sudan

The Government of Sudan has a long history of obstructing humanitarian aid to its civilians.¹¹³ Arab nomads, the Janjaweed, are armed by Khartoum, and used as proxy forces.¹¹⁴ These Janjaweed attack and loot humanitarian convoys, forcing foreign staff to withdraw.¹¹⁵ Sudan’s President Bashir denies

¹⁰⁹ See Dena Montague, *The Business of War and the Prospects for Peace in Sierra Leone*, 9 BROWN JOURNAL OF WORLD AFFAIRS 233 (2002).

¹¹⁰ See Khareen Pech, *Executive Outcomes—A Corporate conquest*, in PEACE, PROFIT OR PLUNDER?: THE PRIVATISATION OF SECURITY IN WAR-TORN AFRICAN SOCIETIES 93 (Jakkie Cilliers and Peggy Mason, eds., 1999).

¹¹¹ See Pech, *Executive Outcomes*, at 91 (“In 1996, EO was forced to relinquish a lucrative contract with the Angolan government following pressure from the US government and calls from the United Nations for its withdrawal.”)

¹¹² See Pech, *Executive Outcomes*, at 81.

¹¹³ SUDAN: Peace talks, humanitarian action, IRINNEWS, Dec. 2002, available at <http://www.irinnews.org/IndepthMain.aspx?IndepthId=32&ReportId=70683> (visited Jan. 17, 2010).

¹¹⁴ SELLING JUSTICE SHORT: WHY ACCOUNTABILITY MATTERS FOR PEACE 71 (Human Rights Watch, 2009), available at <http://www.hrw.org/en/node/84262/section/1> (visited Jan. 20, 2010).

¹¹⁵ *Threatened UN staff leave Darfur*, BBC NEWS, Mar. 16, 2005; see also Anne Edgerton, *Denial of Humanitarian Access, Protection, and R2P*, at 1c Catholic Conference on

the need for humanitarian workers and complains that they are “fabricating reports of attacks and mass rape in order to expand their operation.”¹¹⁶

When the International Criminal Court issued an arrest warrant against President Bashir, he expelled thirteen relief missions and demanded that the remaining seventy groups leave within the year.¹¹⁷ As *BBC News* reported: “President Bashir described the aid workers as ‘thieves’ and ‘spies’. According to well-informed sources, some of them were subjected to mock executions before being flown out of the country.”¹¹⁸

Notably, the United Nations has never even attempted to impose an arms embargo on Sudan. There is a 2005 embargo applied solely to Darfur. In other words, the embargo prohibited the acquisition of defensive arms by all the victims (the Darfuris) while allowing the entity that was in charge of the genocide (the Khartoum government) to keep acquiring more arms for more genocide.

It is ludicrous for the United Nations (acting through its Geneva proxy) to wail about how arms are used to attack humanitarian workers in Darfur, when the United Nations itself refuses to take any steps against the government in Khartoum which is legally acquiring those arms and then shipping them to its own aid-attacking proxies in Darfur.

IV. Non-Conflict Armed Violence

All experimental procedures...[should be] described in detail sufficient for another researcher to reproduce the findings. This section must be accurate and complete if the discoveries are to be validated and then extended by others.¹¹⁹

The basic institutional assumption of the traditional scientific paper is that the method of investigation should be fully and accurately

Protection, Oct. 23, 2009, available at <http://symposia.crsprogramquality.org/wp-content/uploads/2009/10/Talking-Points-Protection-and-Access-and-R2P.pdf> (visited Jan. 20, 2010) (“Without access, the humanitarian mission fails and populations at risk can endure undue suffering and death”); *id.* at 3a (“It is strategic – used by states instrumentally to further foreign policy goals”); *Threatened UN staff leave Darfur*, BBC NEWS, Mar. 16, 2005; NO RELIEF, at 7 (“As this report went to press, large numbers of UN and NGO relief workers were being evacuated from...Western Darfur due to threats from militia there.”).

¹¹⁶ *Sudan president rejects UN troops*, BBC NEWS, Nov. 28, 2006.

¹¹⁷ *Sudan to ‘expel all aid groups’*, BBC NEWS, Mar. 16, 2009.

¹¹⁸ *UN expert finds grounds for optimism*, BBC NEWS, May 10, 2009; see also *Arab States: Press Sudan on Darfur Aid*, Human Rights Watch, Mar. 29, 2009, available at <http://www.hrw.org/en/news/2009/03/29/arab-states-press-sudan-darfur-aid> (visited Jan. 20, 2010).

¹¹⁹ See Natalie H. Kuldell, *Scientific Writing: Peer Review and Scientific Journals*, VISIONLEARNING Vol. SCI (2), 2004, available at http://www.visionlearning.com/library/module_viewer.php?print=1&mid=123&mcid=123 (visited Feb. 22, 2010).

described within the paper itself in sufficient detail to enable a competent colleague to replicate the experiment, and that the data should be presented in sufficient detail to enable the reader to judge the validity of the conclusions drawn (and many journals also require the deposit of original data as a protection against fabrication of results).¹²⁰

The above quotations are standard statements of basic rules of scientific integrity. There is nothing controversial about them. But the Geneva Declaration Organization is not obeying these standards. GBAV claims there are 490,000 deaths annually from homicide. Yet GBAV has refused to disclose the methods it used to produce this “fact.”

A. Reproducing Country-Level Data

In order to evaluate the accuracy of GBAV’s conclusion of 490,000 deaths from homicide,¹²¹ we needed to replicate GBAV’s calculations which produced country-level estimates of homicide totals and rates. However, the Geneva Declaration Organization did not provide sufficient data for any outsider to do so. The Organization has rejected our repeated requests to make their calculations public.

GBAV acknowledges that for homicide estimates, “Existing statistics and data–gathering mechanisms are underdeveloped.”¹²² An endnote directs the reader to an “on-line appendix” for “a comprehensive account of the methodology used to arrive at the figures...including an explanation of data sources and the calculations of subregional estimates...”¹²³

There are several more references in GBAV to an “on-line appendix,” and other references to a “Methodological Annexe.” However, only the Methodological Annexe¹²⁴ can be found. We asked Elisabeth Gilgen, the Geneva Declaration contact person, whether there was a difference between the “on-line appendix” and the “Methodological Annexe.” She responded: “As you have correctly pointed out, we have used the words appendix/annex as

¹²⁰ Scientific Writing and New Patterns of Scientific Communication, Half day workshop, Maternushaus, Cologne, June 24, 2009, at Background, *available at* http://www.ncess.ac.uk/conference-09/workshopsandtutorials/scientific_communication/ (visited Feb. 22, 2010).

¹²¹ GBAV, at 67, 75 (“Approximately 490,000 deaths from homicide are estimated to have occurred in 2004”) (“around 490,000 people who were killed in homicides in 2004....”).

¹²² GBAV, at 67.

¹²³ GBAV, at 87 n. 3.

¹²⁴ See *Methodological Annexe*, *available at* <http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-Methodological-Annexe.pdf> (visited Dec. 13, 2009).

synonyms. We shall adjust the online version to avoid any misunderstanding in the future.”¹²⁵

We had expected the Methodological Annexe to provide the means with which we could replicate the country-level homicide estimates, but the most precise primary data found in the Annexe was sub-regional homicide data—not even the national data from which the sub-regional figures were calculated.¹²⁶

Likewise missing were the primary data sources GBAV statisticians used to make the national-level estimates. If the national estimates were incorrectly based on skewed data from high-crime areas within a nation, the resulting values would tend to be highly inflated. No-one can tell whether this is the case, because these data, too, are also not disclosed. There is no information about the weighting process, nor about the statistical methodology. So no one can evaluate GBAV’s claims.

The Methodological Annexe states that for countries where homicide data are not recorded, GBAV used World Health Organization (WHO) data as the “preferred data source.”¹²⁷ GBAV adds that many sources were used, from which GBAV produced a single estimate.¹²⁸

When there was insufficient country data, “logical decision flowcharts” were used.¹²⁹ “Each region required a different logical decision process due to differences in the coverage and quality of data available....The logical decision flowcharts applied a series of operations to arrive at the final country/territory estimate.”¹³⁰

In other words, there were many countries where there were major problems in obtaining accurate data. For these countries, GBAV used “logical decision flowcharts” to produce an estimate. The flowcharts varied from subregion to subregion.

Accordingly, in order to evaluate whether GBAV used sound methods to produce its national estimates, a reader needs to examine the flowchart used for each subregion.

We asked Elisabeth Gilgen for that methodology.¹³¹ No answer was forthcoming, despite repeated requests.

¹²⁵ E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen (Feb. 24, 2010, 11:39:22 AM EST)(on file with authors).

¹²⁶ See *Methodological Annexe*, at 11. The Annexe states that “Sub-regional estimates presented in this chapter were calculated from national-level homicide estimates for 201 countries or territories for the year 2004.”

¹²⁷ See *Methodological Annexe*, at 13.

¹²⁸ See *Methodological Annexe*, at 13. (“In order to generate regional and sub-regional data for the GBAV report, methodology was developed for the production of one single homicide estimate for each country or territory for which data had been collected.”)

¹²⁹ See *Methodological Annexe*, at 13.

¹³⁰ See *Methodological Annexe*, at 13.

¹³¹ E-Mail to Elisabeth Gilgen to Paul Gallant (Nov. 26, 2009, 4:47:19 AM EST)(on file with authors).

Simply put, GBAV claims about global homicide rates are based on statistical models which GBAV has chosen not to publish, and which GBAV has declined to reveal even when directly requested.

GBAV says that the data and calculation were “subject to external academic verification by an expert criminologist from the University of Lausanne, Switzerland.”¹³² We asked GBAV who the expert was, and were told by Elisabeth Gilgen, in response: “We are not able to share the name of the expert criminologist as the data was peer reviewed - as per any other academic publication - anonymously.”¹³³

To say the least, this is *not* typical of the peer-review process. It is common that authors are never told the names of the peer reviewers of their draft articles. However, if the author is told who the peer-reviewer is, then there is no general policy of keeping the peer-reviewer’s name secret from the public.¹³⁴

Besides looking (in vain) for the mathematical models that GBAV used, we also attempted to locate the country-level homicide data which GBAV built from those models. We asked Elisabeth Gilgen to provide us with the country-level homicide data, and she directed us to the *International Homicide Statistics*¹³⁵ for the year 2004, from the United Nations Office on Drugs and Crime (UNODC).¹³⁶

¹³² *Methodological Annexe*, at 15.

¹³³ E-Mail from Elisabeth Gilgen to Joanne D. Eisen and Paul Gallant (Jan. 15, 2010, 5:03:13 AM EST)(on file with authors).

¹³⁴ We note that Martin Killias is a Professor of Criminology at the University of Lausanne. He writes frequently on firearms policy issues, usually from the perspective of the benefits of greater restrictions on firearms ownership. We sent him the following E-Mail: “We noticed the Annex [referenced in our E-Mail] referred to a criminologist, whom we presume can only be you. However, this criminologist was not credited. We are intensely curious about why you apparently did not wish to be cited. We would appreciate your response. Isn’t it customary to credit authorities, especially one with as much gravitas as you?”(E-Mail from Paul Gallant and Joanne D. Eisen to Martin Killias (Jan. 13, 2010)(on file with authors). His response was: “Sorry, I do not remember what this all is about, nor do I understand why I should appear without citation.”(E-Mail from Martin Killias to Paul Gallant (Jan. 14, 2010, 9:02:34 EST)(on file with authors). We sent a follow-up E-Mail to Martin Killias stating: “We recently sent you a query concerning a statement made in the Methodological Annexe to the *Global Burden of Armed Violence: Methodological Annexe to the Global Burden of Armed Violence*, Geneva, March 2009, available at <http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-Methodological-Annexe.pdf>. Our original note to you is below, as is your reply. And the link to the Annexe is noted above for your convenience. Is it possible that one of your colleagues was the “expert [but un-named] criminologist [sic]”? We would like to be able to ask him or her some questions in relation to the methodology used.” (E-Mail from Paul Gallant and Joanne D. Eisen to Martin Killias (Mar. 15, 2010)(on file with authors). Thus far, no response has been received.

¹³⁵ E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen (Feb 10, 2010, 10:29:29 AM EST)(on file with authors).

¹³⁶ See UNITED NATIONS, OFFICE ON DRUGS AND CRIME, INTERNATIONAL HOMICIDE STATISTICS (IHS), available at <http://www.unodc.org/documents/data-and-analysis/IHS-rates->

Although the UNODC publication does provide homicide rates by country, it does not provide sufficient data or methodology to show how they created the country level estimates.¹³⁷ So the UNODC claims about homicide rates must be taken on faith, without independent verification.

The GBAV claim of 490,000 annual homicides is a plausible estimate based on the UNODC data.¹³⁸ But no-one outside the UN appears to have access to the UNODC data itself. There is no way to tell if the UNODC figures are based on sound science, or are more akin to the UN's imaginative claim that all the Himalayan glaciers would melt due to global warming.

B. Public Health Data v. Criminal Justice Data

Most of the sources used to create a country-level homicide estimate are derived from public health or police sources,¹³⁹ and these figures are not equivalent. As GBAV states: "The differences between health and police statistics are especially marked in developing countries, with some analysts noting that health statistics may be up to 45 per cent higher than police-recorded figures."¹⁴⁰

GBAV explains that "Data for Africa derives primarily from public health sources...."¹⁴¹ Indeed, for Africa, police sources were not even used.¹⁴²

05012009.pdf (visited Feb. 8, 2010). This document contained high and low homicide rates for many countries, and single rates for others.

The UNODC document stated, "The results of this analysis have been published in Chapter Four of the *Global Burden of Armed Violence Report*." *Id.*, at 1.

¹³⁷ UNODC provides a chart of country-level homicide rates, derived by public health sources, but only the final result is published, not the calculations. See UNODC Homicide statistics, Criminal Justice Sources, Latest available year (2003-2008), available at http://www.unodc.org/documents/data-and-analysis/Crime-statistics/Criminal_justice_latest_year_by_country.20100201.xlsx_latest_year_by_country.20100201.xls (visited Mar. 3, 2010).

The GBAV documents themselves never provided the country-level data numerically, but instead published the information in the form of a bar-graph and an accompanying map, which could not even be deciphered by sub-region. GBAV, Map 4.2, at 74; Fig. 4.3, at 75. While these make for very impressive visual presentations, they do not transmit any exact data.

¹³⁸ The starting point of the calculation is 2004 population data. We could not afford the UN's \$800 CD with 2004 population data. So we gathered population data for 2000 and 2005 (which are publicly available), and interpolated. The populations tables we used were from World Population Prospects: The 2008 Revision Population Database, available at <http://esa.un.org/unpp/index.asp> (visited Feb. 1, 2010).

The result was a lower estimate of 410,514 annual global homicides, and a higher estimate of 606,127. The GBAV figure of 490,000 fall within this range

¹³⁹ See UNITED NATIONS, OFFICE ON DRUGS AND CRIME, INTERNATIONAL HOMICIDE STATISTICS (IHS), available at <http://www.unodc.org/documents/data-and-analysis/IHS-rates-05012009.pdf> (visited Feb. 8, 2010).

¹⁴⁰ GBAV, at 70.

¹⁴¹ GBAV, at 71.

¹⁴² See *Methodological Annexe*, at 13.

The “Ninth UN Survey on Crime Trends and Operations of Criminal Justice Systems (UN, 2006),”¹⁴³ provides country-level homicide rates for 2004, for 68 countries.¹⁴⁴ These 68 countries comprise only 16.76 percent of the world population.¹⁴⁵ So government data are missing for about two-thirds of the world’s countries¹⁴⁶ and 83% of the world’s population.

This means that there is necessarily a great deal of guesswork in the national homicide rate estimates for about 5/6 of the world.

Even in developed countries where government public health agencies and law enforcement agencies each provide detailed data about homicide rates, there can be important discrepancies between the different sources. In the United States, for example, the homicide rate as reported by the police is about .5 less per 100,000 population than is the homicide rate from public health sources.¹⁴⁷ (E.g., when the annual homicide rate according to public health data is 7.5 per 100,000 population, the police data would show 7.0.)

Although the reasons for the discrepancy in the United States remain a mystery, what we do know is that many homicides in developing countries

¹⁴³ See also <http://www.unodc.org/unodc/en/data-and-analysis/United-Nations-Surveys-on-Crime-Trends-and-the-Operations-of-Criminal-Justice-Systems.html>. This is one of a series of surveys given to countries by the UN, and returned to the UN. One of the requests for information is the country-level total of homicides and firearm-related homicides.

¹⁴⁴ See The Ninth Survey (2003-2004), available at <http://www.unodc.org/unodc/en/data-and-analysis/Ninth> (visited Feb. 13, 2010).

¹⁴⁵ See World Population Prospects: The 2008 Revision Population Database, available at <http://esa.un.org/unpp/index.asp> (visited Feb. 1, 2010). Estimated World Population = 6,432,894,000; population of countries which provided homicide statistics for 2004 = 1,078,326,000; $1,078,326,000 / 6,432,894,000 = 16.76\%$.

¹⁴⁶ UNODC reported data for 199 countries. As of 2008, there were 195 independent states. See Matt Rosenberg, *The Number of Countries in the World*, Mar. 18, 2008, ABOUT.COM, available at <http://geography.about.com/cs/countries/a/numbercountries.htm> (last visited Oct. 5, 2009) (“A very frequent geographical question is ‘How many countries are in the world?’ Different numbers pop up when one inquires or reads about the number of countries in the world. Each source you use often yields a different answer. Ultimately, the best answer is that there are 195 countries in the world.”). The U.S. Department of State counts 194. See U.S. Dep’t of State, *Independent States in the World*, July 29, 2009, available at <http://www.state.gov/s/inr/rls/4250.htm> (last visited Oct. 5, 2009). However, for reasons of *realpolitik*, the State Department pretends that Taiwan is not a *de facto* state, *id.*, despite the fact that it possesses all the standard attributes of statehood, including a defined territory, a government that exercises effective control over that territory, and the demonstrated capacity to enter into relations with other states. If we count realistically, rather than on the basis of State Department fictions, 195 appears to be the correct total.

¹⁴⁷ Criminologist Don Kates observes:

A curious phenomenon – but one that is well known to those who study homicide statistics—is that the numbers of murders which the FBI Uniform Crime Report gives are generally slightly lower (the rate per 100,000 is usually about 0.5 less) than those given by NCHS (public health statistics which come from medical examiners’ offices). No one seems to know why this is.

E-Mail from Don B. Kates to Joanne D. Eisen and Paul Gallant (Feb. 10, 2010, 12:37:09 PM EST)(on file with authors).

are committed by government. For example, in Kenya, up to 90% of firearms killings homicides are perpetrated by the police.¹⁴⁸

So one can easily imagine a government's reluctance to report homicide statistics. Thus, the public health data may be a necessary substitute for government reports on homicide.

However, public health data have a significant weakness. Often, the data are not disaggregated. That is, all firearm-related homicides are combined into one total figure. It is impossible to tell who committed them. In countries such as the Netherlands or Japan, the aggregation does not make much difference; in those countries, homicides by the police, and lawful defensive homicides by citizens are both very rare. Accordingly, one can assume for Japan and the Netherlands that almost all firearms homicides in those countries are criminal homicides.

For a country such as Kenya, however, the problem is quite serious. Knowing the total homicide rate is a good start. But if the homicide rate is very high, and 90% of the homicides are perpetrated by the police, then cracking down on civilian gun owners is missing the point.

Unfortunately, this is precisely what the United Nations has done, urging the Kenyan government to confiscate arms from civilians. The result has been a Kenyan army ethnic cleansing campaign against tribes in southern Kenya, featuring torture, the incineration of villages, rape, and pillaging by the military—all under the pretext of UN-favored gun control.¹⁴⁹

Another problem with using only an aggregated homicide rate is the prevalence of deaths from the drug war. In some countries, such as Mexico, firearms homicides are overwhelmingly perpetrated by and against drug gangsters. Strategies aimed at disarming law-abiding civilians (e.g., the GDO's proffered strategy of withholding development aid unless all the civilians in an area surrender their guns¹⁵⁰) may have little relevance to reducing homicide.

C. Median Values

How should homicide rates from different countries be combined? If a "population-weighted average" is used, then the data from a few large population countries (e.g., China, the United States, Brazil, Indonesia) will dominate the final result. If "median values" are used, then large and small countries will have equal weight.¹⁵¹

¹⁴⁸ *Police are Kenya's top killers*, BBC NEWS, Jan. 14, 2002 ("Up to 905 of people shot dead in Kenya last year were victims of police....since 1997, 60% of gunshot deaths were caused by police....in 2001, 232 people were shot dead by police").

¹⁴⁹ David B. Kopel, Paul Gallant & Joanne D. Eisen, *Human Rights and Gun Confiscation*, 26 QUINNIPIAC L. REV 383 (2008).

¹⁵⁰ See text at note ____.

¹⁵¹ See *Methodological Annexe*, at 15. "The Median is the 'middle value' in your list. The median minimizes the influence of extreme values in a skewed distribution...." [A]

As GBAV explains, for some parts of the world, use of either method yields similar results. In Western Europe, for instance, whether or not you give greater weight to France than to Denmark, the regional homicide rate is about the same.

But in some regions—such as South America, Southern Africa, and Eastern Europe, the choice of method makes a major difference.¹⁵² For example, in South America,¹⁵³ the population-weighted average is an annual homicide rate of 25.9 per 100,000; but the median rate is only 13.¹⁵⁴ This means that total South American homicides could be as low as 47,658 or as high as 94,952. In other words, one method results in a 99% higher homicide rate.

The reason is clear. In South America, Brazil (a population giant) has a very high homicide rate, as do Venezuela and Columbia. The homicide rates in most other South American countries are low. On a country-based average, the South American homicide rate is therefore fairly low. Using a population-weighted average, the homicide rate is much higher, since Brazil pulls up the average so dramatically.

Table 4 of the GBAV *Methodological Annexe* compares population-weighted averages and median values.¹⁵⁵ Globally, the median-based homicide rate is 5.4, while the population-weighted rate is 7.6. So choosing one method rather than another raises the homicide rate by 40%. The GBAV's factoid of 740,000 annual deaths is based on using the higher figure.

Statistician Jeanine Baker suggests that there are problems with the GBAV approach:

I don't agree with aggregating across sub-regions in any way shape or form. It masks the real picture because there would be regional differences – just as the USA varies widely across the counties within States. By aggregating through weighting (and using an incomplete data set as per their caveat) the final result is influenced by the regions with highest populations (and this is usually where crime and violence is higher).¹⁵⁶

She adds:

Population-weighted average [is used] where different population groups are contributing to an overall average we need to ensure each population group contributes in an equitable way. E-Mails from Jeanine Baker to Joanne D. Eisen and Paul Gallant (Feb. 13, 2010)(on file with authors).

¹⁵² See *Methodological Annexe*, at 15.

¹⁵³ Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela (Bolivarian Republic of).

¹⁵⁴ See *Methodological Annexe*, Table 4, at 15.

¹⁵⁵ See *Methodological Annexe*, Table 4, at 15.

¹⁵⁶ E-Mail from Jeanine Baker to Joanne D. Eisen and Paul Gallant (Dec. 5, 2009, 5:27:54 EST)(on file with authors).

a population weighted average is better when the populations studied are representative of the whole, independent of each other and normally distributed. It's important to note that the key assumption when using the weighted mean is the assumption that the populations are truly independent of each other and normally distributed around the mean. Typically when a weighted average is calculated it is important to know the variance and standard deviation of that value. To cut that short—the values I've observed in GBAV are not normally distributed, which negates using the population weighted average in the first place.¹⁵⁷

In sum, the GBAV's decision to use population-weighted average means in effect that the high homicide rates in Brazil and South Africa are, in effect, exported and amplified, so as to pull up the homicide rates for the region, even though homicide rates for many other countries in the region are low.

D. The Percentage of Firearm-Related Homicides: Data Torturing

GBAV's estimate of total annual global homicides is 490,000. This 490,000, plus the estimated 52,000 direct conflict deaths, and the estimated 200,000 indirect conflict deaths produces the GBAV factoid of 740,000 global deaths from violence. As we have detailed *supra*, much of the data, and nearly all of the calculations, which were used to produce these estimates remain hidden from the public. To the extent that we have been able to retrace some of the methodology, we find that GBAV chooses to use whatever approach leads to the larger number (e.g., population weighting rather than medians).

However, even then, the allies of Geneva Declaration Organization (GDO) have overstated the evidence. As we described *supra*, Oxfam, Reuters, and the Associated Press claimed that there were 740,000 annual deaths from "arms." However, it is obvious that some homicides are not perpetrated with arms. Some killers strangle their victims with a rope, poison them, stab them with a knife, or beat them to death with fists or clubs or hammers. None of these instrumentalities of deaths are "arms" within the meaning of the UN's campaign against "small arms" for the proposed Arms Trade Treaty.

So at least for purposes of the Arms Trade Treaty, it is important to know how many homicides are perpetrated with firearms. GBAV claims that firearm-related homicides are 60% of total homicides,¹⁵⁸ from which GBAV claims 245,000 firearm-related homicides per year.¹⁵⁹ This appears to be a

¹⁵⁷ E-Mail from Jeanine Baker to Joanne D. Eisen and Paul Gallant (Mar. 14, 2010, 4:10:16 PM EDT)(on file with authors).

¹⁵⁸ GBAV, at 2, 5.

¹⁵⁹ GBAV, at 75, Box 4.2.

calculation error; 60% of 490,000 is 294,000.¹⁶⁰

In the any case, the 60% estimate may be far too high.

In 2004, the Small Arms Survey (which, as we have detailed *supra*, supervised the research for GBAV) reported that firearms are used in 38 percent homicides.¹⁶¹

The change from a 38% estimate in 2004 to a 60% estimate in 2009 is dramatic. In neither 2004 nor 2009 did SAS explain how the estimate was created.¹⁶² GBAV does not even mention the 2004 estimate.

1. Under the Iraqi Radar

In the United States and some other developed countries, police data on homicides provide reliable information about what percentage of homicides are perpetrated with firearms, or with other weapons, such as knives, fists, clubs, and so on. In other nations, however, accurate estimates are very difficult to find.

Consider Iraq. As the *Small Arms Survey 2005* noted, “In Iraq, a survey found that all civilians killed by non-coalition forces were killed by a firearm....”¹⁶³ The cited study was a retrospective survey, partially funded by SAS. That study found that “Small arms were responsible for all...violent deaths not attributed to coalition forces...”¹⁶⁴

The survey’s finding is implausible, because there have been many Iraq deaths caused by explosives used by insurgents.¹⁶⁵

Another study based on the incident-driven data from Iraq Body Count¹⁶⁶ found that only 20% of civilian deaths resulted from firearms.¹⁶⁷ They also found that 33% were killed “by execution after abduction....”¹⁶⁸ If we presume that firearms were used in most of the executions of kidnap victims, then about half the Iraqi deaths were from firearms.¹⁶⁹

¹⁶⁰ E-Mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen (Feb. 24, 2010, 11:39:22 AM EST)(on file with authors).

¹⁶¹ SMALL ARMS SURVEY 2004, at 200.

¹⁶² See SMALL ARMS SURVEY 2004, at 175-76, 199-204.

¹⁶³ SMALL ARMS SURVEY 2005, at 249.

¹⁶⁴ Les Roberts Lafta, Richard Garfield & Gilbert Burnham, *The Role of Small Arms during the 2003-2004 Conflict in Iraq*, Working Paper 1 (undated), at 3, Small Arms Survey, Geneva. Approximately 0.2% of Iraqi residences were queried. See *id.* at 4 (“While most coalition-attributed deaths were caused by air strikes, all other violent deaths involved pistols or long arms.”).

¹⁶⁵ See *Triple Iraq bombs ‘kill dozens,’* BBC NEWS, Sept. 29, 2005; see also *Iraq bombs claim dozens of lives*, BBC NEWS, Feb. 28, 2006.

¹⁶⁶ See Iraq Body Count, available at <http://www.iraqbodycount.org/> (visited Jan 13, 2009).

¹⁶⁷ See Madelyn Hsiao-Rei Hicks et al., *The Weapons that Kill Civilians—Deaths of Children and Noncombatants in Iraq, 2003-2008*, 360 NEJM 1585 (2009).

¹⁶⁸ See Hicks, at 1587.

¹⁶⁹ The report did not specify how the 33% of kidnapped—and then executed—victims were killed. According to Michael Spagat, one of the authors:

Another study¹⁷⁰ found that 56% of the 601,027 deaths in the 40 months after the invasion were from firearms.¹⁷¹ In other words, there were 100,973 firearms deaths per year in post-invasion Iraq. This seems like an extremely high and implausible figure, even including firearms deaths from military combat. Although this retrospective survey appears to report an overestimate of total deaths, we report it because it provides another estimated percentage of firearm-related deaths.

In sum, different studies have suggested that firearms constitute 50%, 56%, or 100% of homicides in Iraq. Social scientists attempting to produce a global estimate for firearms deaths might use any or all of the above estimates (combined with estimates from other countries).

Obviously, including the 100% rate, which is a wild outlier and absurd on its face, would skew the global estimate upward. However, we do not know how and if the SAS/Lafta estimate of 100%.

Again, GBAV has refused to release information about which Iraqi sources it used to calculate the global 60% figure.

2. The Report's own Data Suggest a 22% Firearms Homicide Rate, not a 60% Rate

The GBAV text states that it used data from 45 countries for the firearms homicide percentage calculations.¹⁷² However, the Methodological Annex says that 50 countries were used.¹⁷³ Moreover, when we checked the sources stated in GBAV,¹⁷⁴ there were only 43 countries listed as having provided firearm-related homicide data for 2004.¹⁷⁵

The percentage would be very high, I believe. I would be surprised if it did not exceed 90%. Gun use is reported in the vast majority of executions for which weapons are reported and a bullet to the head is clearly the easiest way to execute a person.

E-Mail from Michael Spagat to Joanne D. Eisen and Paul Gallant (Jan. 4, 2010, 14:31:47 EST)(on file with authors). So we took 90% of 33%, which is 29.7%, and added that to the reported firearm-related civilian deaths, to obtain a figure of just under 50% for firearm-related deaths in Iraq, according to this study.

¹⁷⁰ Gilbert Burnham, Riyadh Lafta, Shannon Doocy & Les Roberts, *Mortality after the 2003 invasion of Iraq: a cross-sectional cluster sample survey*, 368 THE LANCET 1421 (Oct. 21-Oct. 27, 2006).

¹⁷¹ Burnham.

¹⁷² GBAV, at 67.

¹⁷³ See *Methodological Annex*, at 18.

¹⁷⁴ GBAV, at 75, Box 4.2 ("Using figures from the Ninth UN Survey on Crime Trends and Operations of Criminal Justice Systems (UN, 2006)....")

¹⁷⁵ When we asked Ms. Gilgen about these discrepancies, she responded that these would be "examined." E-Mail from Elizabeth Gilgen to Paul Gallant and Joanne Eisen, Feb. 24, 2010

Whatever the number of countries used, GBAV states that their data exhibited inconsistencies. GBAV has supplied no details regarding those inconsistencies, nor has GBAV revealed the statistical methods for handling the inconsistent data.¹⁷⁶

At most, GBAV used fifty countries,¹⁷⁷ none of them in Africa, Oceania, East- and Southeast-Asia, and South Asia, all of which had unreliable data.¹⁷⁸ Was this estimate based on about 25% of the world's countries plausible? It is impossible to tell, since GBAV did not supply, and GDO refused to disclose, any of the methods or calculations used in creating the estimate.

So we attempted to verify the percentage of firearm-related homicides from the data the GDO said that GBAV used.¹⁷⁹ We took 2004 UN homicide data,¹⁸⁰ from the 43 countries¹⁸¹ which had provided both total homicide statistics and firearms homicide statistics. We calculated the total homicide figures for those 43 countries, and then calculated the total firearm-related

at 11:39:22 AM EST (on file with authors) (“We will also examine the two discrepancies that you pointed out to us: 1) the number of countries on p.67 of the GBAV and the number of countries on p.18 in the annex. 2) the 60% figure of the 490'000 annual homicide deaths.”) Thus far, the GBAV on-line documents have not been changed to rectify the discrepancies.

¹⁷⁶ GBAV, at 75, Box 4.2.

¹⁷⁷ *Methodological Annexe*, at 18:

Data on homicide committed with firearms was found for 50 countries/territories: 5 in Central America, 7 in South America, 5 in the Caribbean, 3 in the Middle East/Southwest Asia, 3 in North America, 3 in Central Asia and the Caucasus, 6 in South-east Europe, and 18 in Western and Central Europe. For each subregion, the overall percentage of homicides committed with firearms was calculated as the sum of homicides with firearm for those countries available, divided by the sum of total homicides × 100.

¹⁷⁸ GBAV, at 75.

¹⁷⁹ GBAV, at 75, Box 4.2.

¹⁸⁰ See Ninth United Nations Survey on Crime Trends and the Operations of Criminal Justice Systems (CTS)(2003-2004), available at <http://www.unodc.org/unodc/en/data-and-analysis/Ninth-United-Nations-Survey-on-Crime-Trends-and-the-Operations-of-Criminal-Justice-Systems.html> (visited Feb. 13, 2010). A description of these CTS surveys, and their results, are available at <http://www.unodc.org/unodc/en/data-and-analysis/United-Nations-Surveys-on-Crime-Trends-and-the-Operations-of-Criminal-Justice-Systems.html> (visited Feb. 13, 2010). Total intentional homicide data is provided at 13-14, Table 2.2; Total intentional homicides committed with a firearm data is provided at 17-18, Table 2.4.

¹⁸¹ Algeria, Australia, Azerbaijan, Belarus, Bermuda, Bulgaria, Canada, Costa Rica, Croatia, Cyprus, Czech Republic, Ecuador, England & Wales, Estonia, Georgia, Germany, Hong Kong Special Administration, Hungary, Iceland, Ireland, Latvia, Lithuania, Malta, Monaco, Mongolia, Occupied Palestinian Territories, Poland, Portugal, Qatar, Republic of Moldova, Romania, Singapore, Slovakia, Slovenia, Sri Lanka, Swaziland, Sweden, Switzerland, Turkey, Turkmenistan, Uganda, Ukraine, and Uruguay. List of countries given in supra note, Table 2.4. Although GBAV stated they used 45 countries, and the Methodological Annexe stated they used 50 countries, we are not privy to which country's data were used, nor where the data came from.

homicides. By dividing the firearm-related homicides by the total homicides, we arrived at a figure of just under 22%.

We weighted all countries equally, and we did not apply any elaborate statistical operations to arrive at this figure. Yet if the raw data on which GBAV says it relied yields a firearm-related homicide percentage of 22%, one might infer that a substantial amount of data-torturing was used to produce a firearm-related percentage of 60%.

In any case, the GDO's refusal to release its calculations leaves no way of understanding how a 22% figure was turned into 60%.

3. Trying to Make Sense of the Numbers

As we detailed *supra*, the GBAV estimate of 490,000 annual homicides may be too high. For example, we believe that the country-level estimates were inflated, and one simple statistical choice—using population-weighted estimate rather than median values—may have raised the total homicide figure by 40%.

Hypothesizing for the moment that the 490,000 figure is accurate, then the GBAV estimate that 60% of homicides are perpetrated with firearms results in 294,000 firearms homicides annually.

Using the Small Arms Survey 2004 estimate of 38% would yield 186,200.

Using the 43-country data on which GBAV says it relied (with a 22% average rate) would yield 107,800.

A different study, briefly noted by GBAV, estimated that global firearm-related deaths was 196,000 to 229,000 for the year 2000.¹⁸²

This study, by T.S. Richmond and colleagues, is not directly comparable to the GBAV figures, since the GBAV indicates that firearm-related suicides are not included in its estimates. The Richmond study includes at least some firearm-related suicides.¹⁸³ In some countries, such as the United States,

¹⁸² See T.S. Richmond, R. Cheney & C.W. Schwab, *The global burden of non-conflict related firearm mortality*, 11 INJURY PREVENTION 348 (2005).

¹⁸³ See T.S. Richmond, R. Cheney & C.W. Schwab, *The global burden of non-conflict related firearm mortality*, 11 INJURY PREVENTION (2005) at Table 1, 350. The authors provide the rate for the US in 2000, and that rate is 10.9 per 100,000. The FBI rate for homicides for that year is only 5.5 per 100,000. The difference results from the inclusion of firearm-related suicide data. In discussing "Guns and homicide," GBAV notes, at 75, Box 4.2:

the available data suggests that approximately 60 per cent of total homicides in the eight subregions were carried out with a firearm. This figure excludes all of Africa, Oceania, East and Southeast Asia, and South Asia, for which no reliable figures were available. It is, however, worth noting that if the 60 per cent figure is applied to the global total of 490,000 estimated total homicides in 2004, the result (approximately 245,000 firearms deaths) is somewhat higher than previously estimated (Richmond, Cheney, and Schwab, 2005; Small Arms Survey, 2004).

suicides account for about half of all firearm-related deaths, while in other countries, suicides may comprise only a small fraction.

With these caveats, GBAV's claim of almost 300,000 annual deaths from firearm-related homicide¹⁸⁴ appears to be substantially out of line with other data.

Perhaps GBAV's authors interpreted data better than did Richmond and his colleagues, and better than the 2004 Small Arms Survey did, and better than we did. But since GBAV's calculations remain secret, it is impossible to tell.

V. CONCLUSION

A first step in solving a problem is understanding the problem accurately. Accurate social science data can help in understanding the global problem of violent deaths. The Geneva Declaration Organization, Small Arms Survey, and the United Nations, should release their data, calculations and methodology to the public. Concealing this information makes it impossible for other scholars to verify the accuracy of the claim that 740,000 persons annually are killed by armed violence.

To the extent that we have been able to reverse engineer the Geneva Declaration Organization's calculations, we have found repeated instances where the organization made choices which resulted in much higher estimates. Sometimes, those estimates have produced results that are out of line with other evidence.

Until the data and calculations are made available to the public, policymakers and concerned global citizens should give no weight to the unsubstantiated factoid of 740,000 deaths.

The GBAV authors should have easily recognized that approximately 15,000 firearm-related suicides were added to the Richmond figures, which lists firearm-related deaths in the U.S. for the year 2000 as 30,900. Yet, no mention of "suicide" appears in this discussion.

¹⁸⁴ See GBAV at 75, Table 4.2: "60 per cent" of "490,000 estimated total homicides in 2004...." equals 294,000 firearm-related homicides.