NEW YORK UNIVERSITY
JOURNAL OF LAW & LIBERTY

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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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 have produced a report claiming that armed violence is responsible for 740,000 deaths annually. This Article

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carefully examines the claim. We find that the claim is based on dubious assumptions, cherry-picked 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 the 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 firearm 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 states[6] and seventeen organizations[7] met in Geneva[8] for a conference hosted by Switzerland and the United

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[4] GENEVA DECLARATION ON ARMED VIOLENCE AND DEV., GLOBAL BURDEN OF ARMED VIOLENCE (2008) [hereinafter GBAV], http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-full-report.pdf.

[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 ST. L. REV. 891 (2010).

[6] *See* 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, June 7 – July 7, 2006, *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, Annex, The Geneva Declaration on Armed Violence and Development*, U.N. Doc A/Conf.192/2006/RC/2 (June 16, 2006), *available at* http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N06/396/96/PDF/N0639696.pdf.

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.

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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 report introduced a new statistic: 740,000 people, worldwide, fall victim to armed violence each year. The statistics presented in this new report were lauded in Geneva by representatives

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[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 DEV., WHAT IS THE GENEVA DECLARATION ON ARMED VIOLENCE AND DEVELOPMENT?, http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Leaflet.pdf.

[8] At this meeting, *The Geneva Declaration on Armed Violence and Development* [hereinafter *The Geneva Declaration*] was introduced by the group we shall refer to as the Geneva Declaration Organization.

[9] GENEVA DECLARATION ON ARMED VIOLENCE AND DEV.: AN INT'L NEWSLETTER ON INTEGRATING ARMED VIOLENCE PREVENTION & REDUCTION INTO DEV. STRATEGIES (Quaker United Nations Office, Geneva, Switz.), Apr. 2008, at 1, http://www.quno.org/geneva/pdf/disarmament-peace/200804GenevaDeclarationNewsletter_English.pdf [hereinafter GENEVA DECLARATION ON ARMED VIOLENCE AND DEV. NEWSLETTER].

[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.org, 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 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. Additional queries likewise went unanswered. Therefore, we shall refer to that un-named parent body as the "Geneva Declaration Organization," hereinafter referred to by the acronym "GDO," in order to minimize confusion between the Geneva Declaration document, itself, and the parent organization.

[11] GBAV, *supra* note 4, at iii; *see also* SMALL ARMS SURVEY, SMALL ARMS SURVEY 2001: PROFILING THE PROBLEM, at ii (2001). The Small Arms Survey is a research center at the Graduate Institute of International Studies in Geneva Switzerland. It aims to "be the principal source of public information on all aspects of small arms . . . ."

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of 70 countries.[12] The GBAV authors claim that 250,000 of these 740,000 deaths are due to direct and indirect conflict (that is, wars and the consequences of wars), while 490,000 deaths are due to non-conflict-related homicide (criminal murders).

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.

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[12] *See* Simon Bradley, *Geneva Summit to Fight Armed Violence*, SWISSINFO.CH (Sept. 12, 2008), http://www.swissinfo.ch/eng/politics/index/Geneva_summit_to_fight_armed_violence.html?cid=6915670.

[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, April 21, 2004, http://www.recsasec.org/pdf/Nairobi%20Protocol.pdf.

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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 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*

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[14] *See* SMALL ARMS SURVEY, SMALL ARMS SURVEY 2009: SHADOWS OF WAR 165 (2009) (explaining that during the attempted disarmament of the Democratic Republic of Congo, only one percent of the weapons were collected).

[15] *See* Bradley, *supra* note 12 ("The meeting is organised by Switzerland and the United Nations Development Programme (UNDP) to examine progress on the Geneva Declaration . . . .").

[16] *See* GENEVA DECLARATION ON ARMED VIOLENCE AND DEV. NEWSLETTER, *supra* note 9, at 1.

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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

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[17] Geneva Declaration on Armed Violence and Development, June 7, 2006, http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Armed-Violence-Development-091020-EN.pdf [herinafter Geneva Declaration].

[18] *See id*.

[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. & POL. 113, 115 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 anti-aircraft guns, recoilless rifles, portable launchers of anti-tank and antiaircraft 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

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any other type of arms—such as tanks, artillery, airplanes with bombs, helicopter gunships, and so on.[20] The Secretariat[21] (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]

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

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of SALW deaths also include deaths from light weapons, such as anti-aircraft missiles and mortars. (internal citations omitted).

[20] *See* Geneva Declaration, *supra* note 17 ("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 the GBAV and in the Geneva Declaration website, went unanswered. In international organizations, "Secretariat" is usually the executive office of an organization.

[22] *See* GENEVA DECLARATION SECRETARIAT, ARMED VIOLENCE PREVENTION AND REDUCTION: A CHALLENGE FOR ACHIEVING THE MILLENIUM GOAL 27 (2008), *available at* http://www.genevadeclaration.org/fileadmin/docs/Geneva-Declaration-Millennium-Development-Goals.pdf.

[23] *See id*. at 41.

[24] *See* The Geneva Declaration—How Does It Work? Implementation of Measures Against Armed Violence, http://www.genevadeclaration.org/en/the-geneva-declaration/how-does-it-work.html (last 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 ccordinate [sic] national and international efforst [sic] to enhance the knowledge about the distribution, causes and consequences of armed violence."); *see also* GBAV, *supra* note 4, 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 . . . .").

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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 of international gun control.[26] The GDO and SAS share personnel[27] 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 *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.

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[25] *See* BUREAU FOR CRISIS PREVENTION & RECOVERY, U.N. DEV. PROGRAMME, FAST FACTS: ARMED VIOLENCE AND SMALL ARMS & LIGHT WEAPONS (SALW) 1 (2008), *available at* http://www.undp.org/cpr/documents/Fastfact_armed_violence_sept08.pdf (opening with the new Geneva Declaration statistic of 740,00 annual deaths due to armed violence). 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.

Id. at 2

[26] *See* Small Arms Survey-Mission, http://www.smallarmssurvey.org/about-us/mission.html (last visited month, xx, xxx).

[27] Email exchanges with Elisabeth Gilgen indicated she holds positions within both organizations. *See supra* note 10 and accompanying text.

[28] *See* THE GENEVA DECLARATION ON ARMED VIOLENCE AND DEVELOPMENT, http://www.genevadeclaration.org/ (last visited Dec. 23, 2009); *see also* GBAV, *supra* note 4, at iii.

[29] *See* e-mail from Paul Gallant and Joanne D. Eisen, to Elizabeth Gilgen (Jan. 21, 2010) (on file with authors).

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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 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

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[30] Oxfam runs the Control Arms campaign jointly with the International Action Network on Small Arms (IANSA) and Amnesty International, calling for a global, legally-binding Arms Trade Treaty. *See* Oxfam International: Control Arms Campaign, http://www.oxfam.org/en/campaigns/conflict/controlarms (last visited January, 25, 2011).

[31] OXFAM INTERNATIONAL, DYING FOR ACTION: DECISION TIME FOR AN URGENT EFFECTIVE ARMS TRADE TREATY (2009), http://www.oxfam.org/sites/www.oxfam.org/files/bn_dying_for_action.pdf.

[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. Permanent Mission of Luxemburg to the United Nations: Non-Violence – The Knotted Gun, http://newyork-un.mae.lu/en/Non-Violence-The-Knotted-Gun (last visited Sept 13, 2010). 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. 6, 2009, available at http://www.reuters.com/article/idUSTRE59601620091007.

[34] OXFAM INTERNATIONAL, *supra* note 31 at 6.

[35] *Id*. at 3 (italics in original).

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

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. . . . 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's[40] 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]

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[37] Jan Egeland, Remarks at Dying for Action: Why We Need an Arms Trade Treaty Now (Oct. 7, 2009) (video recording available at http://www.ony.unu.edu/events-forums/new/MDForums/2009/dying-for-action-why-we-need-a.php).

[38] *Id*.

[39] Francis Mutuku Nguli, Speech at Dying for Action: Why We Need an Arms Trade Treaty Now (Oct. 7, 2009) (transcript available at http://www.ony.unu.edu/Mr_Mutuku%27s_Speech.pdf).

[40] Panelist Debbie Hillier is Policy Advisor, Oxfam International.

[41] Debbie Hillier, Presentation at Dying for Action: Why We Need an Arms Trade Treaty Now (Oct. 7, 2009) (Powerpoint slides available at http://www.ony.unu.edu/Ms_Debbie_Hillier_Presentation.pdf).

[42] Debbie Hillier, Speech at Dying for Action:
Why We Need an Arms Trade Treaty Now (Oct. 7, 2009) (transcript available at http://www.ony.unu.edu/MS_Debbie%27s_Speech.pdf).

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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 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 day was published as an established fact.[46]

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[43] Press Release, Oxfam International, Talks for an Arms Trade Deal Going at Snail's Pace as Figures Show Over 2,000 Die Per Day from Armed Violence (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.

[44] Worsnip, *supra* note 33.

[45] *See* Patrick Worsnip, *Armed Violence kills 2,000 a day worldwide: Advocacy groups*, THE GAZETTE (Montreal), Oct. 6, 2009 (on file with author).

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 citations omitted); *see also* David L. Eckles & Brian F. Schaffner, *Priming Risk and Policy Change*, at Abstract (American Political Science Association 2009 Annual Meeting, Meeting Paper, 2009), *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." *Id*. at 2; *see generally* THE SCIENCE OF COURTROOM LITIGATION: JURY RESEARCH AND ANALYTICAL GRAPHICS (Samuel H. Solomon et al. eds., 2008) (detailing how graphics can profoundly influence and frame human behavior and attitudes).

[46] *See, e.g.*, *Armed Violence kills 2,000 a day worldwide,* THE MALAYSIAN INSIDER, Jan. 14, 2010, (on file with authors); Patrick Worsnip, *Armed Violence Kills 2,000 a Day Worldwide: Groups,* CONGONEWSCHANNEL.COM, Oct. 7, 2009 (on file with authors); *Violence Kills 2,000 a Day Worldwide: Groups*, THE NATION (Pak.), Oct. 8, 2009, *available*

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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 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

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at http://www.nation.com.pk/pakistan-news-newspaper-daily-english-online/International/08-Oct-2009/Violence-kills-2000-a-day-worldwide-groups; *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; *Arms Trade Veto 'Would Weaken Treaty*,' Oct. 16, 2009, BRITISHINFORMATION.COM, http://www.britishinformation.com/news/News-Headlines/2009-10/Arms-trade-veto-'would-weaken-treaty'-19410902 ("Armed violence claims 2,000 lives every day around the world . . . "; accompanied by a photo of two automatic firearms); *Weapons Kill 2,000 People a Day*, RADIO NETH. WORLDWIDE, Oct. 7, 2009, 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.").

[47] Suzanne Hoeksema, *NGOs Hold Arms Exporters to Account for Abuses*, INTER PRESS SERVICE, Oct. 8, 2009, http://ipsnews.net/news.asp?idnews=48780.

[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* Press Release, Department of Public Information, Eliminating Global Arms Trade Crucial to Security, Sustainable Development, Speakers Stress as DPI/NGO Conference Round Tables Continue, U.N. Press Release NGO/679 (Sept. 11, 2009).

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("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 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.

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[50] GBAV, *supra* note 4, at 11; SMALL ARMS SURVEY, SMALL ARMS SURVEY 2005: WEAPONS AT WAR 235-237 (2005) [hereinafter SMALL ARMS SURVEY 2005].

[51] GBAV, *supra* note 4, at 12.

[52] SMALL ARMS SURVEY 2005, *supra* note 50, at 239-41.

[53] John Bohannon, *Iraqi Death Estimates Called Too High; Methods Faulted*, 314 SCI. 396 (2006), available at http://www.sciencemag.org/cgi/content/full/314/5798/396.

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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 inaccurate 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 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 group[58] used World Health Organization (WHO) surveys and WHO population statistics. Their calculation of

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[54] GBAV, *supra* note 4, 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 LANCET 208 (1998), *available at* http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2897%2906512-4/fulltext.

[55] GBAV, *supra* note 4, at 12.

[56] Michael Spagat et al., *Estimating War Deaths: An Area of Contestation*, 53 J. CONFLICT RESOL. 934 (2009); *see also* Michael Spagat et al., *Leading British Medical Journal's Review Process Assailed*, HUMAN SEC. REPORT PROJECT, Dec. 9, 2009, http://www.hsrgroup.org/press-room/latest-news/latest-news-view/09-12-15/Leading_British_Medical_Journal%92s_Review_Process_Assailed.aspx ("no research has ever independently validated the accuracy of nationwide estimates of violent conflict deaths derived from surveys.").

[57] *E.g.*, Seymour Sudman & Norman M. Bradbum, *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 (2008).

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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 "[a]ll published figures are estimates based on incomplete information."[63]

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[59] *Id*. at 1485 tbl.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] Michael Spagat et al., The Conflict Over War Deaths, http://www2.pcr.uu.se/about/staff/staff_doc/Spagat,%20Mack,%20Cooper,%20Kreutz,%20JCR%202009summary.pdf (last visited Sept. 12, 2010).

[61] Amir H. Alkhuzai et al., *Violence-Related Mortality in Iraq from 2002 to 2006*, 358 NEW ENG. J. MED. 484, 484 (2008); *see also* John Bohannon, *Calculating Iraq's Death Toll: WHO Study Backs Lower Estimate*, 319 SCI. 273, 273 (2008); John Bohannon, *Iraqi Death Estimates Called Too High; Methods Faulted*, 314 SCI. 396, 397 (2006).

[62] Gilbert Burnham et al., *Mortality After the 2003 Invasion of Iraq: A Cross-sectional Cluster Sample Survey*, 368 LANCET 1421, 1421 (2006). Burnham also reported that 56% of these deaths were firearm-related. *Id.* at 1425.

[63] SMALL ARMS SURVEY 2005, *supra* note 50, at 233; *see, e.g.*, *id.* 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."). *Compare* GBAV, *supra* note 4, at 2 ("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."), *and id.* at 18-19 tbl.1.2 (Table 1.2 is entitled "Estimates of the regional distribution of direct conflict deaths, 2004–07." The notes at the bottom of Table 1.2 state that the statistic "includes all information on direct conflict deaths available for 62 conflicts"), *with* J. JOSEPH HEWITT ET AL., CENTER FOR INTERNATIONAL DEVELOPMENT AND CONFLICT MANAGEMENT AT THE UNIVERSITY OF MARYLAND, PEACE AND CONFLICT 2008:

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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 databases different from 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]

EXECUTIVE SUMMARY 1 (2008) (In 2005, the number of states around the globe engaged in "armed conflict" was twenty-five).

[64] *See* SMALL ARMS SURVEY 2005, *supra* note 50, at 235 ("In many cases . . . data collection systems cease to function during conflict, if they ever functioned before.").

[65] *See* Colin D. Mathers et al., *The Burden of Disease and Mortality by Condition: Data, Methods, and Results for 2001*, *in* GLOBAL BURDEN OF DISEASE AND RISK FACTORS 46, 65 (Alan D. Lopez et al. eds., 2006).

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

[67] *See* Mathers, *supra* note 65, at 65.

[68] *See id*.

[69] *See* GBAV, *supra* note 4 app. at 4-8; GENEVA DECLARATION ON ARMED VIOLENCE AND DEV., GLOBAL BURDEN OF ARMED VIOLENCE: METHODOLOGICAL ANNEXE 4 tbl.1 (2009), *available at* http://www.genevadeclaration.org/fileadmin/docs/Global-Burden-of-Armed-Violence-Methdological-Annexe.pdf [hereinafter METHODOLOGICAL ANNEXE].

[70] SMALL ARMS SURVEY 2005, *supra* note 50, 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

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The GBAV meta-database is derived from a combination of sources,[72] which GBAV uses to produce a mortality estimate for the conflicts in 2004-2007.[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 conflict deaths.

1993, former DIA analyst John Heidenrich estimated that as few as 1,500 Iraqi soldiers had been killed . . . .

[71] *Id*. at 242.
[72] GBAV, *supra* note 4, at 13.
[73] *Id*. at 18–19.
[74] *Id*. at 9.
[75] *Id*. at 25 tbls.1.4 & 1.5.
[76] *Id*. at 13, box 1.2.
[77] Obermeyer et al., *supra* note 58.

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III. INDIRECT CONFLICT 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" result. 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 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]

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[78] GBAV, *supra* note 4, at 31.

[79] *Id*.

[80] *Id*.; *see also* Ruwan Ratnayake et al., *Methods and Tools to Evaluate Mortality in Conflicts: Critical Review, Case-Studies and Applications* 4, (WHO Collaborating Ctr. for Research on the Epidemiology of Disasters, Working Paper No. 237, 2008), *available at* http://www.cedat.be/sites/default/files/CRED-OP-No-237.pdf. ("**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, *supra* note 4, at 31.

[82] HUMAN SECURITY CENTRE, HUMAN SECURITY REPORT 2005: WAR AND PEACE IN THE 21ST CENTURY 129 (2005) [hereinafter HUMAN SECURITY REPORT 2005].

[83] For example, although children under the age of 5 comprise 19.4 percent of the sample population studied in the DR Congo, they accounted for 47.2 percent of the deaths. BENJAMIN COGHLAN ET AL., INTERNATIONAL RESCUE COMMITTEE, MORTALITY IN THE DEMOCRATIC REPUBLIC OF CONGO: AN ONGOING CRISIS 7 (2007), http://www.ircuk.org/fileadmin/user_upload/Reports/2006-7_congomortalitysurvey.pdf; *see also* FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, STUDY ON THE IMPACT OF ARMED CONFLICT ON THE NUTRITIONAL SITUATION OF CHILDREN (1996), http://www.fao.org/docrep/005/W2357E/W2357E00.htm#ack.

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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 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

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[84] *See, e.g.*, HUMAN SECURITY REPORT 2005, *supra* note 82, at 128 fig.4.1, (comparing battle deaths versus total war deaths in selected sub-Saharan African conflicts).

[85] *See* Permanent People's Tribunal, Tribunal on Sri Lanka, Trinity Coll., Dublin, Ir., Preliminary Report, Jan 14 – 16, 2010 at 13, http://www.apdh-argentina.org.ar/relaciones_internacionales/2010/People%27s_Tribunal_On_Sri_Lanka_-_Final_Report.pdf. 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. *Id*. at 9 (Squeezed into camps with inadequate water and food, they are 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* Press Release, United Nations, Urgent International Scrutiny Needed in Sri Lanka, Say UN Human Rights Experts (May 8, 2009), http://www.unhchr.ch/huricane/huricane.nsf/view01/57D5CC3A9B1271B2C12575B000492130?opendocument (According to Philip Alston, the UN's expert on summary executions: "[T]he 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://old.nationalreview.com/kopel/kopel_gallant_eisen200403030918.asp.

[86] HUMAN SECURITY REPORT 2005, *supra* note 82, at 128 fig.4.1.

[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, *supra* note 4, 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.").

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indirect deaths to 1 direct death would be reasonable, for the time interval of 2004-07.[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 Report[90] 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

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[89] *Id*. at 32.

[90] *Id*. 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; HUMAN SECURITY REPORT 2005, supra note 82, at 104.

[92] HUMAN SECURITY REPORT 2005, *supra* note 82, at 106 (internal footnotes deleted).

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workers.[93] GBAV puts the blame on guns, 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]

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[93] CATE BUCHANAN & ROBERT MUGGAH, NO RELIEF: SURVEYING THE EFFECTS OF GUN VIOLENCE ON HUMANITARIAN AND DEVELOPMENT PERSONNEL 7, 10 (2005), *available at* http://www.smallarmssurvey.org/fileadmin/docs/E-Co-Publications/SAS-CHD-2005-no_relief-full_text.pdf (joint project of The Centre for Humanitarian Dialogue (HD Centre), and Small Arms Survey); *see also* Max P. Glaser, Negotiated Access: Humanitarian Engagement with Armed Non-State Actors 63 n.11 (2003) (research essay, Carr Center for Human Rights Policy, Kennedy School of Government, Harvard University), *available at* http://www.hks.harvard.edu/cchrp/pdf/NegotiatedAccess.pdf

[94] GBAV, *supra* note 4, at 138, *citing* Buchanan & Muggah, *supra* note 93 at 7, 14; *see also* SMALL ARMS SURVEY 2005, *supra* note 50, at 251 ("[T]he 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, *supra* note 4 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* Glaser, *supra* note 93; *see also* Daniel Toole, *Humanitarian Negotiation: Observations from Recent Experience*, 2001 HARV. PROGRAM ON HUMANITARIAN POL'Y AND CONFLICT RES. 1, *available at* http://www.hpcrresearch.org/pdfs/HumanitarianNegotiation_Toole.pdf (last visited Jan. 31, 2010); Mark Cutts, Negotiating with Warring Parties, 18 REFUGEE SURV. Q. 43 (1999).

[96] *See* Cutts, *supra* note 95, 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.

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

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 deaths[98] 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 (MONUC[100]) has

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[97] Imogen Foulkes, *Geneva Conventions' Struggle for Respect*, BBC NEWS, Aug. 12, 2009, http://news.bbc.co.uk/2/hi/8196166.stm; *see also The Geneva Conventions of 1949 and Their Additional Protocols*, INT'L COMM. OF THE RED CROSS, Mar. 9, 2009, http://www.icrc.org/Web/Eng/siteeng0.nsf/html/genevaconventions (last 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." Id. (follow "Fourth Geneva Convention, 1949" hyperlink).

[98] GBAV, *supra* note 4, at 31.

[99] *See* S.C. Res. 1279, U.N. Doc. S/RES/1279 (Nov. 30, 1999) ("Reaffirming the sovereignty, territorial integrity and political independence of the Democratic Republic of the Congo . . . ."). A decade and several million deaths later came Security Council Resolution 1906. S.C. Res. 1906, U.N. Doc. S/Res/1906 (Dec. 23, 2009) ("*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

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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 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.

Resolution 1279, id. The history of MONUC can be found at http://www.un.org/en/peacekeeping/missions/monuc/index.shtml (last visited Feb. 7, 2010).

[101] *See* Mark Turner, *The Largest Force, Barely Holding Together*, *in* A GLOBAL AGENDA: ISSUES BEFORE THE UNITED NATIONS, 2009–2010, 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 id*. at 20.

[103] HUMAN RIGHTS WATCH, "YOU WILL BE PUNISHED:" ATTACKS ON CIVILIANS IN EASTERN CONGO 11–12 (2009), *available at* http://www.hrw.org/sites/default/files/reports/drc1209webwcover2.pdf (last visited Feb. 7, 2010).

[104] *Id*. at 139.

[105] *See* Turner, *supra* note 101, at 19.

[106] HUMAN RIGHTS WATCH, *supra* note 103, 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* U.N. Office for the Coordination of Human Affairs [UNOCHA], Security Incidents Against Humanitarian Workers, OCHA North Kivu (DR Congo), *available at* http://www.irinnews.org/pdf/Security_Incidents_against_humanitarian_workers.pdf.

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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 at 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 areas."[109] The mercenaries also provided "emergency evacuation services to UN staff members

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[108] *See* Kopel, Gallant & Eisen, *supra* note 5.

[109] *See* Dena Montague, *The Business of War and the Prospects for Peace in Sierra Leone*, 9 BROWN J. WORLD AFF. 229, 233 (2002).

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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 additional civilian lives.

C. Sudan

The Government of Sudan has a long history of obstructing humanitarian aid to its civilians.[113] Arab nomads, the Janjaweed,

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[110] *See* Khareen Pech, *Executive Outcomes – A Corporate Conquest*, *in* PEACE, PROFIT OR PLUNDER?: THE PRIVATISATION OF SECURITY IN WAR-TORN AFRICAN SOCIETIES 81, 93 (Jakkie Cilliers & Peggy Mason eds., 1999).

[111] *See id*. 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 id*. at 81.

[113] *Sudan: Peace Talks, Humanitarian Action*, INTEGRATED REG'L INFO. NETWORKS, (Dec. 2002), http://www.irinnews.org/IndepthMain.aspx?IndepthId=32&ReportId=70683.

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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 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.

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[114] HUMAN RIGHTS WATCH, SELLING JUSTICE SHORT: WHY ACCOUNTABILITY MATTERS FOR PEACE 71 (2009), *available at* http://www.hrw.org/en/node/84262/section/1.

[115] *Threatened UN Staff Leave Darfur*, BBC NEWS, Mar. 16, 2005, http://news.bbc.co.uk/2/hi/africa/4354933.stm; *see also* Anne Edgerton, Denial of Humanitarian Access, Protection, and R2P, Address at Catholic Conference on Protection, at 1c (Oct. 23, 2009), *available at http*://symposia.crsprogramquality.org/wp-content/uploads/2009/10/Talking-Points-Protection-and-Access-and-R2P.pdf ("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"); NO RELIEF, *supra* note 93, 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, http://news.bbc.co.uk/go/pr/fr/-/2/hi/africa/6190148.stm.

[117] *Sudan to "Expel All Aid Groups"*, BBC NEWS, Mar. 16, 2009, http://news.bbc.co.uk/2/hi/africa/7946306.stm.

[118] Andrew Harding, *UN Expert Finds Grounds for Optimism*, BBC NEWS, May 10, 2009, http://news.bbc.co.uk/2/hi/entertainment/8042970.stm; *see also Arab States: Press Sudan on Darfur Aid*, HUMAN RIGHTS WATCH, (Mar. 29, 2009), http://www.hrw.org/en/news/2009/03/29/arab-states-press-sudan-darfur-aid.

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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 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."

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[119] Natalie H. Kuldell, *Scientific Writing: Peer Review and Scientific Journals*, VISIONLEARNING, 2004, http://www.visionlearning.com/library/module_viewer.php?print=1&mid=123.

[120] Description of Workshop: Scientific Writing and New Patterns of Scientific Communication, Fifth International Conference on E-Social Science (June 24, 2009), http://www.ncess.ac.uk/conference-09/workshopsandtutorials/scientific_communication/.

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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, "[e]xisting 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 Annexe[124] 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 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

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[121] GBAV, *supra* note 4, at 67, 75 ("Approximately 490,000 deaths from homicide are estimated to have occurred in 2004. . . . [A]round 490,000 people [. . .] were killed in homicides in 2004 . . . .").

[122] *Id*. at 67.

[123] *Id*. at 87 n.3.

[124] *See* METHODOLOGICAL ANNEXE, *supra* note 69.

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

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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 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.

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[126] *See* METHODOLOGICAL ANNEXE, *supra* note 69, at 11. The Annexe states that "[s]ub-regional estimates presented in this chapter were calculated from national-level homicide estimates for 201 countries or territories for the year 2004."

[127] *See id*. at 13.

[128] *See id*. ("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 id*.

[130] *Id*.

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

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 calculations 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]

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[131] E-mail from Elisabeth Gilgen to Paul Gallant (Nov. 26, 2009, 04:47:19 EST) (on file with authors).

[132] METHODOLOGICAL ANNEXE, *supra* note 69, at 15.

[133] E-mail from Elisabeth Gilgen to Joanne D. Eisen and Paul Gallant (Jan. 15, 2010, 05:03:13 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 emphasizing 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, 09:02:34 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-Methdological-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] criminlogisit [sic]"? We

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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]

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

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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 EST) (on file with authors).

[136] See U.N. Office on Drugs and Crime [hereinafter UNODC], Int'l Homicide Statistics, *Intentional Homicide, Rate per 100,000 Population*, (2004), http://www.unodc.org/documents/data-and-analysis/IHS-rates-05012009.pdf. This document contains high and low homicide rates for many countries, and single rates for others.

The UNODC document states, "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), Intentional Homicide, Rate per 100,000 Population, http://www.unodc.org/documents/data-and-analysis/Crime-statistics/Criminal_justice_latest_year_by_country.20100201.xls.

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. *See* GBAV, *supra* note 4, at 74–75 map 4.2 & fig.4.3. 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 United Nations Dep't of Economic and Social Affairs

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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 only used in one country.[142]

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

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[UNDESA], World Population Prospects: The 2008 Revision Population Database, available at http://esa.un.org/unpp/index.asp (last 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 falls within this range.

[139] *See, e.g.*, UNODC, International Homicide Statistics, *supra* note 136 (relying on "criminal justice and public health statistics").

[140] GBAV, *supra* note 4, at 70.

[141] GBAV, *supra* note 4, at 71 fig.4.1.

[142] *See* METHODOLOGICAL ANNEXE, *supra* note 69, at 13.

[143] *See also* UNODC, *United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems* (CTS) [hereinafter UN CTS Summary], *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. 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* UNODC, Ninth U.N. Survey of Crime Trends and Operations of Criminal Justice Systems [hereinafter *U.N. Survey on Crime Trends*], http://www.unodc.org/pdf/research/9th_survey/CTS9ByIndicatorExtract.pdf

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comprise only 16.76 percent of the world population.[145] So government data are missing for about two-thirds of the world's countries[146] 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 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.)

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[145] See *World Population Prospects: The 2008 Revision Population Database*, UNITED NATIONS, http://esa.un.org/unpp/index.asp. The estimated world population is 6,432,978,000; the total population of those countries which provided homicide statistics for 2004 is 1,078,326,000. Dividing 1,078,326,000 by 6,432,978,000 yields 16.76%.

[146] The UNODC reported data for 199 countries. As of 2008, there were 195 independent states. *See* Matt Rosenberg, *The Number of Countries in the World*, ABOUT.COM, (Mar. 18, 2008), http://geography.about.com/cs/countries/a/numbercountries.htm (last visited Nov. 8, 2010) ("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, BUREAU OF INTELLIGENCE & RESEARCH, INDEPENDENT STATES IN THE WORLD (2009), http://www.state.gov/s/inr/rls/4250.htm (last visited Nov. 8, 2010). 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).

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Although the reasons for the discrepancy in the United States remain a mystery, what we do know is that many homicides in developing countries are committed by government. For example, in Kenya, up to 90% of firearm-related 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 firearm-related 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]

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[148] *See Police are Kenya's top killers*, BBC NEWS, http://news.bbc.co.uk/2/hi/africa/1759421.stm (last visited Nov. 8, 2010) ("Up to 90% of people shot dead in Kenya last year were victims of police . . . . [S]ince 1997, 60% of gunshot deaths were caused by police . . . in 2001, 232 people were shot dead by police.").

[149] *See generally* David B. Kopel et al., *Human Rights and Gun Confiscation*, 26 QUINNIPIAC L. REV. 385, 401–09 (2008).

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Another problem with using only an aggregated homicide rate is the prevalence of deaths from the drug war. In some countries, such as Mexico, firearm-related 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 guns[150]) 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]

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

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[150] *See* SMALL ARMS SURVEY 2005, *supra* note 50, at 251.

[151] *See* METHODOLOGICAL ANNEXE, *supra* note 69, at 15; e-mails from Jeanine Baker, Senior Research Scientist, Int'l Coal. for Women in Shooting and Hunting, to Joanne D. Eisen and Paul Gallant (Feb. 13, 2010) (on file with authors) ("The Median is the 'middle value' in your list. The median minimizes the influence of extreme values in a skewed distribution . . . .") ("[A] 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.").

[152] *See* METHODOLOGICAL ANNEXE, *supra* note 69, at 15.

[153] Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.

[154] METHODOLOGICAL ANNEXE, *supra* note 69, at 15 tbl.4.

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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 is 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:

> 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

[155] *Id.*

[156] E-mail from Jeanine Baker, Senior Research Scientist, Int'l Coal. for Women in Shooting and Hunting, to Joanne D. Eisen and Paul Gallant (Dec. 5, 2009, 05:27:54 EST) (on file with authors).

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> 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 the 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

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[157] E-mail from Jeanine Baker, Senior Research Scientist, Int'l Coal. for Women in Shooting and Hunting, to Joanne D. Eisen and Paul Gallant (Mar. 14, 2010, 16:10:16 EDT) (on file with authors).

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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, from which GBAV claims 245,000 firearm-related homicides per year.[158] This appears to be a calculation error; 60% of 490,000 is 294,000.[159]

In 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 were used in 38% of homicides.[160]

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.[161] GBAV does not even mention the 2004 estimate.

1. UNDER THE IRAQI RADAR

In the United States and in 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 . . . ."[162] The cited study was a retrospective survey, partially funded by SAS. That study found that "Small arms

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[158] GBAV, *supra* note 4, at 75 box 4.2.

[159] *See* e-mail from Elisabeth Gilgen to Paul Gallant and Joanne D. Eisen, *supra* note 125.

[160] SMALL ARMS SURVEY, SMALL ARMS SURVEY 2004: RIGHTS AT RISK (2004), *available at* http://www.smallarmssurvey.org/publications/by-type/yearbook/small-arms-survey-2004.html.

[161] *See id*. at 175–76, 199–204.

[162] SMALL ARMS SURVEY 2005, *supra* note 50, at 249.

Electronic copy available at: https://ssrn.com/abstract=1580225

were responsible for all . . . violent deaths not attributed to coalition forces . . . ."[163]

The survey's finding is implausible, because there have been many Iraqi deaths caused by explosives used by insurgents.[164]

Another study based on the incident-driven data from Iraq Body Count[165] found that only 20% of civilian deaths resulted from firearms.[166] They also found that 33% were killed "by execution after abduction . . . ."[167] If we presume that firearms were used in most of the executions of kidnap victims, then about half the Iraqi deaths were from firearms.[168]

Another study[169] found that 56% of the estimated 601,027 deaths in the 40 months after the invasion were from firearms.[170] In other words, there were an estimated 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

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[163] Riyadh Lafta, Les Roberts, Richard Garfield & Gilbert Burnham, *The Role of Small Arms During the 2003-2004 Conflict in Iraq* (Small Arms Survey, Working Paper No. 1), *available at* http://www.prio.no/misc/nisat/Download.aspx?file=12925. 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.").

[164] *See Triple Iraq Bombs 'Kill Dozens'*, BBC NEWS, Sept. 29, 2005, http://news.bbc.co.uk/2/hi/middle_east/4295250.stm; *see also Iraq Bombs Claim Dozens of Lives*, BBC NEWS, Feb. 28, 2006, http://news.bbc.co.uk/2/hi/middle_east/4757964.stm.

[165] *See* IRAQ BODY COUNT, http://www.iraqbodycount.org/ (last visited Jan 13, 2009).

[166] *See* Madelyn Hsiao-Rei Hicks et al., *The Weapons that Kill Civilians—Deaths of Children and Noncombatants in Iraq*, 2003-2008, 360 NEW ENG. J. MED. 1585, 1587 (2009).

[167] *See id*.

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

[169] Burnham, *supra* note 62.

[170] *See id*. at 1425–26.

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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% was used.

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 firearm-related homicide percentage calculations.[171] However, the Methodological Annexe says that 50 countries were used.[172] Moreover, when we checked the sources stated in GBAV,[173] there were only 43 countries listed as having provided firearm-related homicide data for 2004.[174]

Whatever the number of countries used, GBAV states that their data exhibited inconsistencies. GBAV has supplied no details

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[171] GBAV, *supra* note 4, at 67.

[172] METHODOLOGICAL ANNEXE, *supra* note 69, at 18.

[173] GBAV, *supra* note 4, at 75 box 4.2 ("Using figures from the Ninth UN Survey on Crime Trends and Operations of Criminal Justice Systems (UN, 2006) . . . .").

[174] 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, 11:39:22 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 online documents have not been changed to rectify the discrepancies.

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regarding those inconsistencies, nor has GBAV revealed the statistical methods for handling the inconsistent data.[175]

At most, GBAV used fifty countries,[176] none of them in Africa, Oceania, East- and Southeast-Asia, and South Asia, all of which had unreliable data.[177] 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.[178] We took 2004 UN homicide data,[179] from the 43 countries[180] 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 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%.

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[175] GBAV, *supra* note 4, at 75 box 4.2.

[176] METHODOLOGICAL ANNEXE, *supra* note 69, 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.

[177] GBAV, *supra* note 4, at 75.

[178] GBAV, *supra* note 4, at 75 box 4.2.

[179] *U.N. Survey on Crime Trends*, *supra* note 144; *see also UN CTS Summary*, *supra* note 143 (summarizing the survey's findings).

[180] *U.N. Survey on Crime Trends*, *supra* note 144 (listing the countries surveyed). Although GBAV stated they used forty-five countries, and the Methodological Annexe stated they used fifty countries, we are not privy to which country's data were used, nor where the data came from.

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In any case, the GDO's refusal to release it 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 firearm-related 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 between 196,000 and 229,000 for the year 2000.[181]

This study, by T.S. Richmond and colleagues, is not directly comparable to GBAV figures, since GBAV indicates that firearm-related suicides are not included in its estimates. The Richmond study includes at least some firearm-related suicides.[182] In some

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[181] T. S. Richmond et al., *The Global Burden of Non-conflict Related Firearm Mortality*, 11 INJ. PREVENTION 348, 350 (2005).

[182] *See id*. at 350 tbl.1. The authors provide the rate for the U.S. 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:

> [T]he 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).

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countries, such as the United States, 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 homicide[183] appears to be substantially out of line with other data.

Perhaps GBAV's authors interpreted the 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.

GBAV, *supra* note 4, at 75 box 4.2. 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.

[183] See GBAV, *supra* note 4, at 75 box 4.2 ("60 per cent . . . of 490,000 estimated total homicides in 2004. . . . " equals ". . . approximately 245,000 firearms deaths . . . .").

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