Humanitarian responses to mass violence perpetrated against vulnerable populations

George A Gellert

This multidisciplinary review links three areas of legitimate inquiry for practitioners of medicine and public health. The first is occurrences of mass violence or genocide perpetrated against vulnerable populations, with a focus on the failure of national and international mechanisms to prevent or predict such violence. The second is evolving concepts of national sovereignty and an emerging framework in which the imperative to assist vulnerable populations supersedes a state's right to self determination. The last is how medical, public health, and other systems of surveillance and rapid assessment of mass violence can accelerate public awareness and facilitate structured, consistent political decision making to prevent mass violence and to provide international humanitarian assistance.

Let no one be discouraged by the belief there is nothing one man or one woman can do against the enormous array of the world's ills—against misery and ignorance, injustice and violence. . . . Each time he stands up for an ideal, or acts to improve the lot of others, or strikes out against injustice, he sends a tiny ripple of hope, and crossing each other from a million different centers of energy and daring those ripples build a current which can sweep down the mightiest walls of oppression and resistance.

Robert F Kennedy

The principles of medicine and public health may help decision makers determine the timing and level of intervention to protect vulnerable populations from mass violence. Mass violence occurs overtly through warfare and civil strife, or covertly through the creation of morbid conditions, and here refers not only to homicide and genocide through direct injury but also to the promotion of other threats to the survival of

populations, such as famine, drought, communicable disease, migration, and imprisonment. Mass violence and genocide are not homogeneous: their manifestations are quite diverse.¹ Vulnerable populations include peoples identifiable by common race, ethnic group, religion, culture, political beliefs, or geography who lack political or other means to address such assaults effectively. Mass violence is perpetrated worldwide on the basis of these identities.

The international community has become more responsive to humanitarian assistance needs,² whether they result from natural disasters, human actions, or a combination of these. This may partly reflect a rising global consciousness mediated by electronic communications technologies. The most remote experience of yesteryear is today the subject of daily mass consumption for broadcast and print media. Furthermore, episodes of overwhelming need used to be restricted largely to developing nations in Africa and Asia, but dramatic political changes—such as the fall of the Soviet Union, economic difficulties, and ethnic and religious wars—have spread humanitarian crises to populations throughout the world. Interdependence among nations is also increasing and with it an attendant motivation to provide assistance.^{3,5}

Mass violence and genocide

The twentieth century offers a dark history of national practices described inconsistently in popular culture as "genocide." The mere use of the term genocide provokes controversy. The Geneva Convention of 1948 declares genocide a crime and legally obliges signatories to take action to halt such violence and aid its victims. Because those committing genocide will not allow neutral witnesses to record it, fear of describing episodes of mass violence as genocide may conceal the compelling truth from those in the contemporary political arena with the power to prevent or halt it.⁶ It has been estimated that since 1900 political and military actions carried out by nation states have been directly responsible for the violent or unnatural deaths of over 100 million people (table). Genocide has been conducted by at least 40 nations. Since the second world war there have been 149 episodes, with a total of 23 142 000 deaths,⁷ many of which entailed mass violence against vulnerable populations.

Genocide is defined as the systematic, planned annihilation of a racial, political, or cultural group. The etymology of the word refers to the killing (from the Latin *cide*) of a race or kind (from the Greek *genos*), and was coined by Lemkin after the second world war to describe the systematic destruction of peoples in Europe by the Nazis.⁸ The United Nations Genocide Convention states:

any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group,

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Selected episodes of humanitarian need within vulnerable populations of more than 100 000 (20th century)

Year	Location	Threat to population	Deaths (millions)
1980-94	Bosnia, China, Ethiopia, Iraq, Palestine, Somalia, South Africa, Sudan, Rwanda	International conflicts, internal civil strife, tribal and ethnic conflicts, and political oppression	Yet to be fully determined
1978-89	Afghanistan	Afghan-Soviet conflict	1
1975-9	Kampuchea	Pol Pot regime	0.8-3
1971-9	Uganda	Persecution of political opponents of Idi Amin	0.1-0.5
1971	Pakistan	Suppression of Bengali nationalism	1.2-3
1965-72	South Vietnam	Civilians in Vietnam-United States conflict	0.5
1952-72	Sudan	Suppression of southern nationalism	0.1-0.5
1967	Nigeria	Biafra civil war	1
1966-75	China	Cultural Revolution	0.4-0.9
1965-73	Burundi	Ethnic conflict	0.1-0.2
1965-6	Indonesia	Persecution of Chinese and Communists	0.5-1
1958-61	China	Great Leap Forward and famine	30
1947	India	Independence	1
1943-7	Soviet Union	Forced repatriation of Soviet nationals	0.5-1.1
1943	Bangladesh	Famine	2
1942	India	Famine	2
1939-45	Europe and Asia	National socialism and Japanese imperialism	10
1939	China	Flood	1
1932-34	Soviet Union	Forced collectivisation and famine	5
1928	China	Drought	3
1921	Soviet Union	Drought	1
1915	Turkey	Persecution of Armenians during first world war	0.8-1

as such: (a) killing members of the group; (b) causing serious bodily or mental harm to members of the group; (c) deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) imposing measures intended to prevent births within the group; (e) forcibly transferring children of the group to another group.⁹

A broader definition given by Fein¹⁰ is:

sustained purposeful action by a perpetrator to physically destroy a collectivity directly or indirectly, through interdiction of the biological and social reproduction of group members, sustained regardless of the surrender or lack of threat offered by the victim.¹¹

Politicide has been distinguished from genocide as the mass murder of victims defined primarily in terms of their political position (their class, political beliefs, or their organised opposition to the state and the dominant group) for political motives.¹¹ Ethnocide is the elimination of a group's cultural identity without its physical extermination.

Labelling and semantic problems can be lessened by referring to the broader issue of mass violence perpetrated against vulnerable populations, and defining the vulnerability of a population not by a particular intrinsic characteristic but, rather, by the existence of a risk of destruction for a large absolute number or relative percentage of any group, no matter how small. Of greater importance is the need to consider how genocide is defined operationally; what this designation implies and achieves; the intrastate and international stages of genocide; and how this knowledge may help to prevent it.

Surveillance of mass violence

Genocides do not develop overnight; neither do they happen without considerable advance warning. Like many illnesses, this collective pathology has recognisable risk factors and symptoms which can act as an early warning system and be used to anticipate outcome. Increasing systematic discrimination, mounting repression, and escalating violence are usually precursors to mass violence. Staub has identified cultural preconditions to genocide and factors increasing the probability of its evolution.¹² These include cultural self perceptions expressed as a sense of superiority and the right to rule others, feeling threatened and insecure, and nationalist tendencies with a desire to expand and rule. Subgroups are devalued, and this is often deeply embedded in the culture and political life of the country. There is frequently a strong culture of obedience to authority and a rigidly hierarchical society. The culture is often monolithic rather than pluralistic in nature. An ideology such as nationalism or a national security doctrine is usually emerging or has already been adopted.¹²

Political considerations often delay the detection of, and response to, high risk conditions for vulnerable populations. Problems may be compounded by differing definitions among aid agencies and across nations of what constitutes a serious threat, and by what some providers of aid have called an "information drought."¹³ During the Sudanese famine of 1983-6 the scarcity of information with which to predict and fight the famine was crucial.¹³ Other factors contributing to political delays and delays in conveying assistance are uncertainties about the numbers of people affected and the type and quantities of aid needed.

Many forms of surveillance for mass violence can be conducted, including political, social, economic, medical, and public health monitoring of the population (box). The denial of political or economic positions, or both, for example, has preceded genocide in several episodes of history. Current and emerging

Surveillance of mass violence against vulnerable populations

Monitor

- High risk national warning signs
- Denial of political and economic positions
- Other forms of increasing systematic discrimination
- All persecuted minority and oppressed majority groups
- Mounting repression
- Escalating violence
- Increasing cultural sense of superiority and right to rule
- Increasing cultural sense of being threatened and insecure
- Increasing nationalism and desire to expand
- Devaluation of subgroups
- Rigid and unquestioning obedience to authority
- Rigidly hierarchical societies
- Monolithic cultures

Use

- Political, social, economic, medical, and public health observation and indicators
- Emerging technologies and satellite surveillance
- Standardised mechanisms of surveillance and reporting
- Quantitative action thresholds for reporting that include both absolute numbers affected in a population and the percentages of those at risk within small groups
- Non-selectivity in targeting surveillance
- Modern communications and media systems
- Trained media teams to enrich surveillance and assessment data
- Clinical evaluation to infer means and patterns of bodily injury
- Famine and drought early warning systems
- International and neighbour state refugee surveillance (medical, testimonial, demographic, and survey methods)
- Rapid assessment tools
- Risk assessment process

technologies, including satellite surveillance, offer considerable potential for acquiring information about violence against populations.

Refugee surveillance comprises medical, testimonial, and demographic components. Mass violence may be detected in its earliest stages by finding living witnesses, determining the truth of their testimonies, and deciding whether those testimonies fit a pattern of persecution or indicate genocidal intent.¹⁴ Refugee surveillance is important in countries that neighbour states where the potential for mass violence is high. Pechota has recommended that the United Nations adopt a resolution defining the role of neighbouring countries, calling on them to signal acts of genocide and secure evidence.¹⁵

Sophisticated survey methods have been applied to outline the scope of mass violence. These include interview techniques, validation of interview data, and use of statistical methods to project the results on to a larger population.¹⁶ The credibility of refugee surveillance is established by the simple quantifiable fact of mass exodus itself.¹⁴ Multivariate regression analysis has been used to show a correlation between refugee flows out of El Salvador and political violence in that country.¹⁷ Refugees are a potential measure of genocide

in the making, "a barometer of repression" which impels people to flee their native country.⁶ In many genocides, such as the holocaust, escape routes are blocked and refugee outflows are prohibited. Furthermore, populations at risk of mass violence may be displaced within their own countries. The current number of internally displaced people (25 million) exceeds the numbers who have crossed international borders to become refugees (18 million).¹⁸ There is no adequate system of surveillance, protection, and assistance for internally displaced people; no legal instrument covers their particular needs and no institution is mandated to address these.¹⁸

Uses of medicine and epidemiology

The primary contribution of medicine to the detection of mass violence has been to infer the means and pattern of attack by assessing evidence of bodily injuries among the victims. Clinical evaluation can also have epidemiological and preventive value. For example, a pattern of sequelae induced by chemical weapons among Kurdish refugees from certain towns and provinces could have been determined in Iraq.⁶ A pattern of mortality among Sudanese refugees could have been used to discern disproportionate starvation and malnutrition among the Dinkas as opposed to other fleeing ethnic groups. An assessment of the wounds on Hutu survivors from Burundi would have shown that they were caused by bayonets, which, as these were available only to the army, would have established its responsibility for that massacre of 100 000 people.⁶

Preventive diplomacy has been emphasised by United Nations Secretary General Boutros Boutros-Ghali.¹⁹ For mass violence this implies that epidemiological and other tools of surveillance, and rapid assessment of population status, need to be related to a risk assessment process for specific genocides. Successes achieved in public health and epidemiology are relevant here, and the principles of disease and injury surveillance can be applied to violence perpetrated globally against vulnerable populations. The first of these is populational surveillance of events. Public health and epidemiological methods for conducting surveillance and rapid assessments of drought, famine, and disease among vulnerable populations are well established.²⁰⁻³⁰ The mechanisms of such surveillance require standardisation, and the parties responsible for conducting it and reporting the results need to be defined. Public health is also concerned with prevention. Management of public health problems has culminated in effective prevention efforts, and public health has successfully made the transition from prevention theory to practice in many substantive areas.

Several non-governmental and multinational organisations participate in surveillance and information dissemination of a diverse range of risks to populations. They include International Alert Against Genocide and Mass Killing, Amnesty International, the International League for Human Rights, the International Commission of Jurists, Cultural Survival, Survival International, and the Minority Rights Group. The United States Centers for Disease Control and Prevention and other organisations have conducted numerous rapid population assessments in areas of need.²⁰⁻²⁸ The Food and Agriculture Organisation of the United Nations has established an information and early warning system for the detection and prevention of famine. Because resources may be deployed more readily to needy countries, the major obstacle to eliminating famine remains the destruction or interdiction of civilian food supplies in regions in the midst of armed conflict.³¹ Famine early warning systems have

greatly reduced the impact of nature on the causes of famine, and famine today is largely engendered by strategic policy or tactics deployed by governments and opposition groups.¹³

Even when the proximate causes of violence to populations seem to be natural, as in recent African droughts, analysis has shown that human made factors are required for the natural assault to magnify and achieve its full devastating effects.¹³ Given abundant and accurate surveillance data, consistent quantitative thresholds can be established for specific international actions to prevent mass homicide and other injuries, including the fostering of famine and disease, perpetrated against a vulnerable population. The difficulty lies in being able to link established evaluative systems for determining whether a genocide is in the making with a political process. Ideally, all persecuted minority groups or repressed majorities should be monitored on an ongoing basis.¹¹ New and emerging technologies are beginning to make this more feasible. Currently genocides are recognised politically only after a large number of fatalities or a substantial percentage of a population has been killed. Data sets have been developed to assess civil and political rights at the societal and national level of 237 minorities in 126 countries.³² These allow groups with the greatest probability of being targeted for extreme repression in the future to be identified.³³

Preventive humanitarian intervention

Humanitarian intervention is a doctrine of international law that allows states to intervene forcefully to prevent gross violations of the right to life in other states.¹⁰ The doctrine recognises a right of nations to use force "against another nation for the purpose of protecting the inhabitants of that other nation from inhuman treatment by the governing sovereign."³⁴ States may use humanitarian intervention to mask other political motives—for example, as a means to falsely label human rights violations as genocide to stigmatise a state.¹⁰ Safeguards have been recommended to prevent groups of states organising to propagandise or politically embarrass other states in this manner.¹⁵ Real and imagined abuses of the doctrine have resulted in its disfavour over the past 50 years.³⁴ None the less, it is a historical reality that effective intervenors against genocides have seldom been moved by altruistic considerations alone.¹ Examples of this are the interventions of India in Bangladesh, Tanzania in Uganda, and Vietnam in Kampuchea.

It is imperative to establish routine and widely accepted points of intervention earlier in the causal chain from which mass violence or genocides emerge. A range of interventions by the international community, from diplomacy and economic sanctions through to military invasion, can be linked to a progression in the severity of violence perpetrated against vulnerable populations. Deng has suggested that legal principles and institutional mechanisms could be made operational in three phases: (a) monitoring, reporting, and early warning; (b) intercession, dialogue, and mediation; and (c) eventual humanitarian collective action.¹⁸ When governments are unable adequately to protect and help their people in need, they may request international assistance. If a government is unwilling to accept such assistance in many instances the problem can be resolved through diplomacy. Only the most extreme situations require military force to protect and assist.³³ Guidelines driven by data are needed when mass violence is perpetrated under each of these circumstances, to facilitate systematic and consistent decision making.

Bazyler has recommended criteria for humanitarian

intervention: atrocities should have been perpetrated on a large scale and other remedies exhausted; the overriding motive for intervention should be humanitarian and action joint or multinational in nature to restrain the pursuit of national self interest.³⁴

Data and quantifiable thresholds from epidemiology, public health, and other sciences can be used as indicators for the timing, form, and level of action by the international community. Thresholds would be flexible yet consistent and titrated to the magnitude and rate of escalation of mass violence. A Rwanda scenario would warrant specific, immediate, preventive and protective commitments; a Bosnia scenario would produce a more emergent response in accord with the incrementalism and chronicity of that setting, but the nature of international responses would be a certainty and predictable. Decisions to intervene on behalf of vulnerable populations when mass violence occurs depend on the generation of adequate international political will, itself an expression of popular and political culture that it is shaped by many factors. Lack of political will contributes to the failure to collect data on mass violence, which subsequently obstructs or forces arbitrary decision making on how and when to intervene. The complexities encountered in late stage humanitarian intervention further compromise political will and invite the assertion of national sovereignty and non-interference by states conducting mass violence. The figure illustrates factors that obstruct or could facilitate rapid responses to mass violence.

Inferior surveillance and lack of systematic and consistent decision making compound weak political will to assist vulnerable populations. Epidemiological and other surveillance and rapid assessment tools provide a means for proactively collecting and assessing precise information on the occurrence and extent of mass violence and for mitigating the influence of factors that promote political indifference. Heightened public awareness may contribute to the mobilisation of political will and, when linked to protocols for international action, can help bypass decision making that is based exclusively and specifically on cost-benefit considerations. International agreements on action

thresholds to which nations become signatories would lend consistency to preventive humanitarian interventions. Intervention should be decided through existing mechanisms such as the United Nations where possible, but with recognition of the finite capabilities of that organisation. An independent, multilateral international infrastructure to gather surveillance data systematically and rapidly make recommendations to the United Nations and regional governments may be warranted.¹

In view of the overstretch already evident in the peacekeeping activities of the United Nations, there will probably be a need in coming years to obtain regional commitments of humanitarian assistance, economic and non-military sanctions, and military resources to be used during the earliest stages of mass violence. Regional and individual nation commitments do not necessarily have to be long term. Vulnerable populations that meet an agreed set of criteria should eventually be placed under United Nations control and protection. Of course, improved surveillance and predictive methods for mass violence are not a panacea for the many humanitarian crises that emerge. Earlier intervention, however, is easier intervention on all counts, political, medical, and material. Furthermore, the introduction and sustained use of a standardised protocol for decision making in humanitarian intervention, based on quantifiable thresholds which invoke specific international actions, will help to ensure that consistency, regularity, and predictability prevail in the international response to mass violence, and this should itself exert a preventive effect.

The balance of sovereignty and humanitarianism

Because international assistance originates outside the target country, its need implies a national failure of government to provide for the survival of its citizens and an accountability—if not to its citizens because of their lack of power, then to the global community.¹³ Therefore, not only sovereignty but basic questions of the national purpose and legitimacy of governments are relevant to humanitarian aid. Regimes which perpetrate mass violence often respond to international protest by invoking the principle of non-intervention into the internal affairs of a sovereign state. International efforts to provide humanitarian assistance to populations in need have often been halted when faced with this legal barrier, but concepts of sovereignty are changing.

The balance between sovereignty and the suffering of populations is shifting in favour of greater international action on behalf of those against whom violence is perpetrated, and there is greater impatience with the obstructionism of indifferent or ill motivated governments.³⁵ This is particularly important because internal conflicts accounted for almost all of the 29 ongoing wars and deaths related to war in the world during 1991 and 1992.⁷ The Convention on the Prevention and Punishment of the Crime of Genocide states that persons committing genocide “shall be punished, whether they are constitutionally responsible rulers, public officials or private individuals,”³⁶ which eliminates the defence of sovereign immunity. The concept of universal jurisdiction further authorises any state to punish certain crimes regardless of where and by whom they have been committed.¹² United Nations Secretary General Perez de Cuellar wrote of the limits to national sovereignty that may become effective when human rights are grossly violated: “...the principle of non-interference with the essential domestic jurisdiction of states cannot be regarded as a protective barrier behind which human rights could be massively or systematically violated with impunity.”³⁵ He went on to say that the principles

Surveillance and activity thresholds as facilitators of humanitarian response

of sovereignty, territorial integrity, and political independence of nations could be weakened if sovereignty were "to carry the implication that [it] includes the right of mass slaughter or of launching systematic campaigns of decimation or forced exodus of civilian populations in the name of controlling civil strife or insurrection."³⁵

Resolution 688 of the United Nations Security Council, adopted in 1991 after the Gulf war, was a watershed that stated that humanitarian suffering within a given member state was a threat to international peace and security and insisted that the Iraqi government allow immediate access of international organisations to those in need of assistance. Because of its criminal behaviour, Iraqi claims to non-interference were invalid. Humanitarian intervention in Somalia constituted a further breach of traditional notions of sovereignty by providing assistance to a suffering population in the absence of local government accord. In the former Yugoslavia, with its targeted ethnic extermination, however, international decision making has been unstructured and adrift, failing to produce any consensus or coherent policy.

The obligation of non-interference in the internal affairs of states is increasingly at odds with the desire to protect human rights and prevent mass violence against vulnerable populations. The concept of non-interference laid down in the United Nations Charter has been superseded within the United Nations by the Universal Declaration of Human Rights. Perez de Cuellar articulated rules for intervention across national borders to protect vulnerable populations:

- Non-selectivity, in which human rights are not protected in one situation while receiving protection in a similar setting
- Uniformity, in which all international action is to be based on a decision taken in accordance with the United Nations Charter
- Proportionality, in which the scale of international action is in proportion to the level of mass violence.³⁵

A balance has yet to be established between the rights of states as confirmed by the United Nations Charter and the rights of the individual as confirmed by the Universal Declaration of Human Rights.³⁵ A shift in public attitudes supports defence of those who are oppressed over sovereignty, but this evolution in the practice of international relations calls for caution because of the risk of ensuing international chaos.³⁵

Convergence of imperative and opportunity

International responses to the plight of vulnerable populations in Iraq and Somalia increased the political acceptability of intervention against mass violence and challenged the assumption that repressive or dysfunctional governments should be allowed to abuse their civilian populations with impunity. The assistance to, and protection of, the Kurds after the Gulf war has reshaped the concept of non-interference in the internal affairs of nations. The aftermath of Somalia, the continuing challenge of Bosnia, and the haunting failure in Rwanda illustrate that the course of this revision will be neither predictable nor simple. The violation of another state's territorial integrity remains primary in international relations whereas the violation of peoples—and especially non-state peoples—is secondary.¹⁰ Nonetheless, intervention targeted primarily at securing a vulnerable population must remain a prerogative of the international community. States may have the primary responsibility for human rights within their territory, but when they fail to meet this responsibility the international community has a duty to intervene and provide humanitarian assistance.

Building constituencies for active campaigning

against the threat of a genocide will be essential, as will education to promote a social movement comparable with the peace movement.¹ A success in this regard has been the effective public and governmental lobbying of the international Baha'i community since 1979 to protect its people in Iran, that country's largest religious minority, from executions, torture, arbitrary imprisonment, denial of education and employment, and seizure of homes and possessions.³⁷ The Baha'i people are upheld by educated governments, international organisations, and the press and general public, and they have enlisted a professional public relations firm to make contact and meet with key government agencies. As a result, the United States Senate and House of Representatives passed resolutions condemning the Iranian government's treatment of Baha'is and a grassroots constituency was created.³⁷ Because of such intense public pressure, the treatment of Baha'is in Iran has improved in recent years.

The correlation between increases in violence perpetrated against populations and the level of awareness of these events within the international community needs to be studied. The understanding of how modern communications technologies and electronic media can better influence international awareness and action against mass violence must be improved. The unexploited potential that exists here both for surveillance and the mobilisation of international political will demands systematic research. Five decades have passed between the mass violence perpetrated in the holocaust and the current "ethnic cleansing" of Bosnia, and 20 years have passed since the mass violence against African and Asian peoples. This offers an opportunity for timed analyses of the political impact of improved detection and communication technologies. Media coverage of mass violence against vulnerable populations is not in and of itself an adequate vehicle for information dissemination and political mobilisation. Western media have specific biases in focus, continuity of coverage, and description of mass violence. Training of media teams might decrease reporting that is coloured by political prejudices and selective perception and could improve the reliability and validity of the data gathered.¹⁶ Emerging information technologies, particularly those that multiply or bypass interpretive and mediating entities (such as electronic networks and online services), can accelerate public and political awareness of episodes of mass violence.

Prevention of mass violence

Preventive humanitarian intervention as I have described it here is a response to situations where the momentum towards violence against a vulnerable population has in most cases already been well established. There are many reasons why, once the likelihood of mass violence seems greatly enhanced or inevitable, governments are unable to prevent its occurrence. Internal power conflicts, native or target nation risk of political destabilisation or total state failure, fear of lost sovereignty, and financial and human costs all contribute to nations responding inadequately to the threat of mass violence either at home or abroad. Information about an emerging crisis, and even systematic decision making linked to thresholds for concerted international action, may be necessary, but they are not by themselves sufficient conditions for such action. In this respect preventive humanitarian intervention has parallels with the secondary level of prevention in health care, during which screening and early detection result in early treatment of disease to halt its progress and reduce mortality.

The prevention of mass violence must address itself

S. PETERSON/LIAISON/GAMMAFSP

Massacre of Tutsis in Chapel of Ntara discovered by first United Nations military mission

to the aetiological processes which occur on a worldwide basis before the circumstances arise in which specific instances of violence result and humanitarian intervention is warranted. At the systemic level those principles and practices of primary prevention need to be engaged that strive to eliminate, reduce, or otherwise render harmless exposure to pathogenic influences. To prevent mass violence this would entail redirecting national resources from military to social and other expenditures, and reducing the concentration of weapons in high risk areas. Current world spending on military programmes exceeds \$600 billion (thousand million) a year, and the developed nations alone spend as much on military power in a single year as the poorest 2 billion people earn in total income.⁷ Although global military expenditures have declined for several years, the rate of reduction is slow and in some regions has been reversed. The positive trend in the global arms market, which shrank to \$32 billion in 1993 from \$68 billion in 1988,³⁸ reflects a dramatic decline in arms exports from the former Soviet Union. United States arms transfer agreements in 1993 amounted to \$22.3 billion, with far fewer arms sold by Russia (\$2.86 billion) and Britain (\$2.36 billion).³⁸ In 1986 the United States accounted for 13% of worldwide arms exports, but today its share of the weapons market is an astounding 70%.³⁸ Thus while the worldwide reduction in military outlays has produced an average annual savings of \$14 billion,⁷ this represents only a 2.3% decrease in total global military expenditures.

While the developed nations provided \$56 billion in economic aid to poorer countries in 1990, \$36 billion in arms were exported to developing nations in the same year,⁷ somewhat of a paradox in view of the commitment of many industrialised nations to international development and economic assistance in the Third World. Furthermore, 66% of all United States arms exports are to developing nations, many with fragile autocracies that are easily destabilised.³⁸ These arms exports are a particularly potent contribution to the risk of mass violence in developing countries because they not only provide the instruments for highly effective and highly fatal assaults on populations, but they also legitimise a national political, and civil culture dominated by the military and by arms expenditures. In more than half of Third World countries the military controls political power.⁷ In 1960, 26 of then independent developing states were under military control; in 1982 this figure had increased to 52, and in 1992 it was 61.⁷ The number of human rights violations has increased accordingly. In 58 of the 61 countries extreme forms of official violence

and political repression, including torture, disappearances, and political killings, were used by the authorities.⁷ Of the 149 wars between 1945 and 1992, 137 (92%) were in developing countries, which have, on average, experienced six times as many years of war.⁷

The risk of mass violence can be reduced if global arms sales (and donations) are restricted, particularly to developing nations and emerging democracies. Internationally enforceable and binding guidelines are needed which exclude arms sales to nations under dictatorships, non-democratic states, nations opposing or not complying with United Nations resolutions, and those with early detectable evidence of mass violence in the making (box). Ironically, arms sales from the industrialised states eventually provoke greater military investments from them to offset regional arms buildups and tensions created by the very same exports.³⁸ Arms restrictions should focus not only on sophisticated weapons systems but also on small arms, which contrary to political orthodoxy, often constitute a far greater threat of mass violence to vulnerable populations—in Rwanda, for example. International assistance, donor and lending agencies, and trade ministries within the industrialised states, should dramatically increase economic pressure on developing countries to reduce military spending and to stop the development of indigenous arms manufacturing industries. One third of governments in developing countries currently spend more on military programmes than on education, and two thirds have military budgets greater than total health care expenditures.⁷ For every physician in the developing world there are six soldiers.⁷

The prevention of mass violence, and the use of preventive humanitarian intervention when the latter fails, can be successful only if conceived and implemented as part of a consistent system of political and economic incentives and disincentives. Incentive systems have been applied successfully elsewhere in international relations to achieve specific political objectives. These strategies should be used to prevent mass violence in the many high risk nations of the developing and restructuring world. This could be achieved through more active support for civilian political leadership, decreased national expenditures on the military sector, and through the termination of arms sales to countries and regions likely to engage in such violence.

Conclusion

In the face of mass violence the international community must establish consistent, data driven decision making for international action which uses valid public health, social, political, economic, and other criteria. If the principle of non-interference is to be limited in its use as a shield for human rights violations, clear criteria with qualitative and quantitative thresholds for intervention need to be articulated and accepted widely by the international community. We must study how decision making can be facilitated by rapid assessment data on morbidity and mortality, nutritional deprivation, and the incidence of communicable and other diseases associated with violence among vulnerable populations. This is not, however, tantamount to a "philanthropic diplomacy" for the 21st century³⁹; the decision making process for intervention must be transparent and cannot be arbitrary. A system of incentives and disincentives must be instituted wherein states can balance their assertion of sovereignty against the consequences of mass violence inflicted on vulnerable populations within their borders. States should be able to anticipate consistent and predictable risks associated with perpetrating mass

violence and weigh the costs of inviting intense international scrutiny and possible intervention. This too may yield a preventive benefit.

Such tools will not be enough by themselves, however: as Koestler said, "statistics do not bleed."⁴⁰ Precise quantification of mass violence is valuable, but a narrow vision of surveillance that reduces assessment to a body count should be avoided. This can be effected by adopting a broad, multidisciplinary understanding of the expression of violence that does not equate it with wartime or even collateral mortality. States may also use pure humanitarian intervention to appease altruistic and pacifist feelings at home; humanitarian assistance should not be used by governments to defer a response to situations where political intervention is vital.³⁹ A change in the culture of political policy is essential. Policy elites will have to recognise that mass violence against vulnerable populations is a threat to regional and international stability, and relate the benefits of tolerating such violence to the enormous subsequent costs of refugee aid, famine relief, and underdevelopment.¹⁰ The industrialised democracies cannot prosper when standards of human rights are violated grotesquely or where large populations (and market segments) face endemic violence in an internationalised economy.

The different forms of multinational intervention constitute a spectrum from international advocacy and diplomacy through to economic sanctions and use of military force. These interventions should be titrated quantitatively to existing or anticipated rates of death and disease in vulnerable populations and to other non-biological measures that portend mass violence. Absolute numbers of fatalities or disease prevalence are just one indicator; for small at risk communities, percentages of the population affected should also be considered. It is broadly recognised that a point exists when conditions affecting a population become so severe and the magnitude of suffering so great that responsibility shifts from a single nation to the international community. Civilised nations must have the power to suspend sovereignty whenever sovereignty is exercised in a criminal manner so as to permit mass violence against vulnerable populations. Incrementally, as more states contribute to the prevention, of mass violence, the moral and economic imperative to comply with this emerging norm of international relations will be strengthened. Medicine and public health can provide scientific means of assessing population status and risk, which, combined with consistent political decision making, can prevent or halt future genocides. The transience and capricious nature of political will and leadership can be disciplined and bolstered by systematic directives for action that derive from a convergence of science, morality, and compassion.

- 1 Kuper L. Reflections on the prevention of genocide. In Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:135-61.
- 2 Agency for International Development, Development and the National Interest. *US economic assistance into the 21st century*. Washington, DC: U.S. Government Printing Office, 1989.
- 3 Keohane RO Nye JS. *Power and interdependence*. Glenview, ILL: Scott, Foresman, 1989.
- 4 Brown LR. *World without borders: the interdependence of nations*. New York: Foreign Policy Association, 1972. (Headline series.)
- 5 Gellert GA. Global health interdependence and the international physicians' movement. *JAMA* 1990;264:610-3.
- 6 Frelick B. Refugees: contemporary witnesses to genocide. In: Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:45-58.
- 7 Leger Sivard R. *World military and social expenditures 1993*. Washington, DC: World Priorities, 1993.
- 8 Lemkin R. *Axis rule in occupied Europe*. Washington, DC: Carnegie Endowment for International Peace, 1944.
- 9 United Nations General Assembly. *United Nations Genocide Convention*. New York: United Nations, 1946.
- 10 Fein H. Introduction. *Genocide watch*. New Haven, CT: Yale University Press, 1992:1-14.
- 11 Harff B. Recognizing genocides and politicides. In: Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:27-44.
- 12 Staub E. *The roots of evil: the origins of genocide and other group violence*. Cambridge: Cambridge University Press, 1989.

- 13 Deng FM, Minear L. *The challenges of famine relief: emergency operations in the Sudan*. Washington, DC: Brookings Institution, 1992.
- 14 Frelick B. Refugees: a barometer of genocide. In: *World refugee survey: 1988 in review*. Washington, DC: US Committee for Refugees, 1989:13-7.
- 15 Pechota V. Establishing criminal responsibility and jurisdiction for genocide. In Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:197-204.
- 16 Ezell WK. Newspaper responses to reports of atrocities: Burundi, Mozambique, Iraq. In: Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:87-112.
- 17 Stanley W. Statistical evidence indicates many Salvadorans in US flee from violence. *Refugee Reports* 1985;August 16:1-4.
- 18 Deng FM. *Protecting the dispossessed: a challenge for the international community*. Washington, DC: Brookings Institution, 1993.
- 19 Boutros-Ghali B. *An agenda for peace: preventive diplomacy, peacemaking and peace-keeping*. New York: United Nations, 1992. (A/47/477;S/24/11.)
- 20 Centers for Disease Control. Famine-affected, refugee, and displaced populations: recommendations for public health issues. *Morb Mortal Wkly Rep* 1992;41:RR-13.
- 21 Centers for Disease Control. Public health consequences of acute displacement of Iraqi citizens—March-May 1991. *MMWR* 1991;40:443-6.
- 22 Centers for Disease Control. Evaluation of drought-related acute undernutrition—Mauritania, 1983. *MMWR* 1984;33:565-7.
- 23 Centers for Disease Control. Rapid nutritional status evaluation during drought conditions—Republic of Niger. *MMWR* 1986;35:384-6.
- 24 Centers for Disease Control. Rapid nutrition evaluation during drought conditions—Burkina Faso, 1985. *MMWR* 1986;35:5-6.
- 25 Centers for Disease Control. Rapid nutrition and health-assessment of the population affected by drought-associated famine—Chad. *MMWR* 1985;43:665-7.
- 26 Centers for Disease Control. Rapid nutrition evaluation in drought-affected regions of Somalia—1987. *MMWR* 1987;37:104-7.
- 27 Centers for Disease Control. Nutritional assessment of children in drought-affected regions—Haiti, 1990. *MMWR* 1991;40:222-4.
- 28 Centers for Disease Control. Nutritional and health status of displaced persons—Sudan, 1988-1989. *MMWR* 1989;38:848-55.
- 29 Shears P, Lusty T. Communicable disease epidemiology following migration: studies from the African famine. *International Migration Review* 1987;21:783-95.
- 30 Shears P, Berry AM, Murphy R, Nabil MA. Epidemiological assessment of the health and nutrition of Ethiopian refugees in emergency camps in Sudan, 1985. *BMJ* 1987;295:314-8.
- 31 Anonymous. The Bellagio declaration: overcoming hunger in the 1990s. [Editorial] *Food Policy* 1990;1(Aug):6-8.
- 32 Gurr TR, Scarritt JR. Minorities' rights at risk: a global survey. *Human Rights Quarterly* 1989;11:375-405.
- 33 Harff B, Gurr TR. Victims of the state: genocides, politicides and group repression since 1945. *International Review of Victimology* 1989;1:23-41.
- 34 Bazyley M. Re-examining the doctrine of humanitarian intervention in the light of atrocities in Kampuchea and Ethiopia. *Stanford Journal of International Law* 1987;23(summer):547-619.
- 35 Perez de Cuellar J. *Report of the Secretary-General on the work of the organization*. New York: United Nations, 1991.
- 36 United Nations Texts Staff. *The crime of genocide and the Bill of Human Rights*. New York: United Nations, 1989.
- 37 Bigelow KR. A campaign to deter genocide: the Baha'i experience. In: Fein H, ed. *Genocide watch*. New Haven, CT: Yale University Press, 1992:189-96.
- 38 Thompson M. Going up, up in arms. *Time* 1994 Dec 12:46-57.
- 39 Hermet G. Humanitarian aid versus politics. In: Jean F, ed. *Médecins sans Frontières, populations in danger*. London: John Libbey, 1992.
- 40 Koestler A, Totten S. The personal face of genocide: words of witnesses in the classroom. *Social Science Record* 1987;24:63-7.

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Commentary: Life in the real world is more complicated

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These past months have been filled with the wars in former Yugoslavia: the fall of Srebrenica and Zepa to the Bosnian Serbs, the flight of tens of thousands of Bosnian Muslims, the retaking of Krajina by the Croats and evidence of Croatian atrocities, the flight of Croatian Serbs, wanton violence and war crimes, rape, and ethnic cleansing. The historically hesitant and inconsistent response of the West and the United Nations, enabling the Bosnian Serbs to continue with their genocidal project, has at last been placed at the top of the political agenda. Hopefully the current negotiations will lead to a lasting peace, but doubt somehow lingers.

Gellert's important article¹ is timely, relevant, and deserves to be debated widely. It raises many crucial issues which should be recognised, endorsed, and acted on by us all. Below, I focus on a few areas where further debate is merited: the role of data, improving the international response, and assessing vulnerability in order to intervene and prevent violence at an earlier