Abstract

The issue of compensation is an under-studied dimension of a rights-based approach to health. The emerging normative framework that allows for compensation of human rights abuses lacks a consistent and transparent methodology for valuing health losses. While methods for assigning monetary values to decreases in health have evolved through health economics, these techniques have developed outside of a human rights framework and do not adequately account for such concerns as fairness and nondiscrimination. These methods may in fact underestimate damages for poor individuals and communities, as well as for those subjected to prolonged abuses. This article will examine the normative foundations for compensation, evaluate methodological shortcomings, and propose a methodology for the valuation of health damages in group settings.

Le problème de la compensation est une dimension qui n'a pas été suffisamment étudiée dans l'approche à la santé basée sur les droits. La nouvelle structure normative qui accorde une compensation pour les abus des droits de l'homme manque de méthodologie cohérente et transparente pour l'évaluation de dommages en matière de santé. Bien que les méthodes d'attribution d'une valeur monétaire à la perte de santé aient évoluées avec le régime économique de la santé, ces techniques se sont développées en dehors d'une structure des droits de l'homme et ne tiennent pas suffisamment compte des préoccupations telles que la justice ou la non-discrimination. En fait, ces méthodes sous-estiment probablement les atteintes à la santé des personnes et communautés pauvres, ainsi que des victimes d'abus prolongés. Cet article examine les bases normatives de la compensation, évalue les défauts méthodologiques, et propose une méthodologie pour l'évaluation des atteintes à la santé au sein d'un groupe.

El tema de la compensación es una dimensión estudiada de manera insuficiente en los enfoques para la salud basados en los derechos. El marco normativo emergente, que permite compensación de abusos de derechos humanos carece de una metodología coherente y transparente para evaluar pérdidas de salud. Si bien los métodos para asignar valores monetarios a disminuciones de la salud han evolucionado por medio de la economía de la salud, estas técnicas se han desarrollado fuera de un marco de derechos humanos, y no toman en cuenta de manera adecuada enigmas tales como la imparcialidad y la ausencia de discriminación. De hecho, estos métodos pueden subestimar daños para personas y comunidades pobres, así como para quienes están sujetos a abusos prolongados. En este artículo se examinarán los fundamentos normativos para la indemnización, se evaluarán defectos metodológicos, y se propondrá una metodología para la valoración de daños de la salud en situaciones de grupo.

ACCOUNTABILITY FOR THE HEALTH CONSEQUENCES OF HUMAN RIGHTS VIOLATIONS: Methodological Issues in Determining Compensation

Mey Akashah and Stephen P. Marks

Compensation for victims of human rights violations is a crucial developing area of international jurisprudence that demonstrates the need for collaboration among experts in the fields of public health and international law in the pursuit of effective rights-based approaches to health. The numerous methodological and ethical dilemmas raised through the emerging system of compensation reflect the complex nature of human rights abuses themselves. The myriad harms engendered by such violations can be successfully addressed only through methods that involve a marriage between normative and quantitative spheres of thinking.

The right to compensation derives from both the right to an effective remedy, which is set out in numerous human rights instruments, and the struggle against impunity.[1] In this context, compensation has emerged as an attempt to help victims of human rights violations reclaim aspects of their former health and to dissuade future acts of wrongdoing. An examination of legal precedent, however, illustrates that the framework for compensation lacks an equitable, consistent, and transparent methodology for valuation. Economic theory has developed techniques for assigning monetary value to changes in health status that may be ap-

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plicable to this problem, but these techniques have developed outside of a human rights framework and do not yet adequately account for such concerns as equity and non-discrimination. Further, these evolving methods may underestimate damages for poor individuals and communities, as well as for those subjected to prolonged abuses or deprivation of rights. Therefore, although the emerging compensatory framework will have benefits for those seeking redress through the regional and international systems, the lack of a transparent and predictable means of assessing damages will preclude the complete effectiveness of the remedy that this framework is designed to secure.

This article will examine the normative foundations for compensation, evaluate current methodological issues in this developing framework, and propose an optimal methodology for the valuation of health damages in group settings. The proposed valuation method accounts for both morbidity and mortality and moves away from the human capital approach, which assesses only actual/individual productivity and treatment costs. The proposed method also includes lost productivity calculations based on national averages, as well as loss of well-being. With the adoption of such a methodology, the framework for compensation has the potential to develop into an effective means of reparation for victims of human rights violations and may ultimately prove useful in helping prevent the repetition of such abuses in the future, bringing the legal treatment of health claims in closer alignment with the definition of health as advanced by the World Health Organization (WHO): "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[2]

Normative Foundations for Compensation

Historical Development of Principles of Remedy and Compensation for Violations of Human Rights and Humanitarian Law

During the 1970s, human rights groups launched "amnesty campaigns" in defense of political prisoners and prisoners of conscience under dictatorial regimes.[3] These cam-

paigns functioned as a means toward establishing a framework for freedom of speech and peaceful resistance against military dictatorships in countries such as Brazil and Uruguay.[4] The very dictators who gave rise to the need for amnesty, however, ultimately began to use this movement to their advantage. These dictators declared "self-amnesty laws" in an effort to establish impunity for themselves and their regimes.

To battle this trend, it became necessary conceptually to separate amnesty and impunity. In 1996, the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities appointed a French judge and human rights activist, Louis Joinet, to develop a set of principles to combat impunity. These principles were formally entitled "Set of Principles for the Protection and Promotion of Human Rights Intended to Strengthen Action to Combat Impunity" (hereafter "the Joinet Principles"). These principles include:

- The victim's right to know (Principles 1–17)
- The victim's right to justice (Principles 18–32)
- The victim's right to reparations (Principles 33–50).[5]

In a parallel effort, the same UN Sub-Commission focused on remedies for victims and in 1989, requested a study from human rights expert, Theo van Boven, on compensation for victims of violations of human rights and international humanitarian law.[6] This study, further pursued by legal scholar M. Cherif Bassiouni in 1998, resulted in an additional set of principles, the "Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Violations of International Human Rights and Humanitarian Law."[7] These principles, which were submitted to the Commission on Human Rights in 2000, are divided into four categories: restitution; rehabilitation; compensation and satisfaction; and guarantees of non-repetition. Compensation seeks to assist a victim in returning to a previous state of well-being by attempting to provide monetary recompense for economically assessable damages. Compensation also plays a role in guarantees of non-repetition, as award sums must be large enough to dissuade future wrongdoing.

The current version of the Principles and Guidelines, adopted by the Commission on Human Rights on April 19, 2005, and the General Assembly at its 64th plenary meeting

on December 16, 2005, references five types of damage for which compensation should be awarded:

(a) Physical or mental harm;
(b) Lost opportunities, including employment, education, and social benefits;
(c) Material damages and loss of earnings, including loss of earning potential;
(d) Moral damage; and
(e) Costs required for legal or expert assistance, medicine and medical services, and psychological and social services.[8]

Although the Principles and Guidelines have been referenced frequently, even in draft form, expert opinion and legal discourse on them are sparse and have largely failed to address methodological issues in using them to award compensation.[9] A series of Consultative Meetings through the UN Office of the High Commissioner for Human Rights and the Sub-Commission on the Promotion and Protection of Human Rights have been held with an aim to improving the Principles and Guidelines; however, these meetings also have not adequately addressed methodological considerations. Rather, discussions in these meetings have centered largely on issues of state responsibility and UN jurisdiction with regard to humanitarian law.[10] The little methodologically-oriented discussion that has taken place outside of the Consultative Meetings has been limited to critiques of inconsistency in current international judicial practice and the need for more victim-oriented approaches to reparations.[11]

The Practice of Compensation for Victims of Human Rights Violations

The Principles and Guidelines are particularly relevant to the way remedies and compensation issues are currently dealt with by the regional and international human rights systems. Indeed, the most likely practical application of the Principles and Guidelines will be in improving the ways in which regional and international systems award compensation.

UN System. The UN system has broadly recognized the use of compensation to address human rights violations. Treaty bodies, including the Human Rights Committee and the Committee on the Elimination of Racial Discrimination, have noted monetary awards as one of a number of means to compensate individuals for losses resulting from human rights abuses.[12] The UN also established a Compensation Commission and a Special Rapporteur on the Situation of Human Rights in Kuwait under Iraqi Occupation in order to hear pleas for compensation for damages inflicted during the Gulf War in Kuwait.[13] In addition, Article 75 of the Rome Statute on the International Criminal Court furnishes the Court with the power to grant reparations, including restitution, rehabilitation, and compensation, to victims of human rights violations.[14,15]

Regional Human Rights Courts. The bulk of compensation cases heard internationally have taken place in regional human rights courts. According to the prevailing literature on international remedies, however, the methods employed by regional courts to calculate damages have been inconsistent and have had little discernable basis in economic theory or legal precedent.[16] Judges have rarely offered comments explaining the methodologies by which they determined award sums, and they often cite abstract legal concepts, such as "international principles" and "equity considerations," without offering clarification on the ways in which these concepts shaped the monetary valuation given to the harms.[17] In some cases, judges made decisions based on no more than a "feeling" for an appropriate compensatory sum.[18] Court decisions are also often marred by political concerns.[19] The result is a plethora of rulings that lack the economic validity, consistency, and replicability necessary to set clear precedent.

All regional human rights courts—the African Court, the Inter-American Court, and the European Court—have the authority to award compensation. Both the Inter-American Court and the European Court of Human Rights have awarded a wide range of remedies, including compensation. The Inter-American Court has offered the most copious remedies to date, including compensation for loss of life; however, the theoretical foundations of its rulings have been vague.[20,21] Unlike

the Inter-American Court, the European Court of Human Rights has yet to address issues of measuring damages for injury or wrongful death. Although it has ruled on numerous cases involving compensation for property loss or human suffering, these rulings continue to exhibit methodological inconsistencies. Rather than measuring according to an objective standard, the European Court seems to calculate awards based on subjective judgments of the worth of the victim(s) and the wrongdoer(s) that are influenced by their conduct and social status.[22] The African Court, which was authorized by a 1998 Protocol but only constituted on July 2, 2006, will be able to "make appropriate orders to remedy the violation, including the payment of fair compensation or reparation."[23] Although it does not have judicial power, the African Commission has called on governments to ensure adequate compensation to victims of the human rights violations.[24]

Award sums by regional courts show wide variations, especially in cases where economic proof of loss is not available. For instance, in *Mayagna v Nicaragua,* the Inter-American Court ordered the state to invest a mere $50,000 in a community of Native Americans who had been forcibly removed from their ancestral homes due to land reclamations by the government.[25] The reason cited for such a small reward was that the Mayagna were a non-cash community. In contrast, in the case of *Alvaro Lobo Pacheco (19 merchants) et al. v Colombia,* where again, reliable income records were unavailable for the Plaintiffs, the Court required Colombia to pay in the range of millions of dollars due to the brutality and systematic nature of the crimes.[26]

Current Methods for Quantifying Health Damages

In light of the normative development of the Principles and Guidelines and the inconsistent valuation practices utilized for compensation in the regional and international systems discussed above, the proper application of the Principles and Guidelines will require methods of valuing health losses that can be used predictably and repeatedly. This section will examine several applicable methods of health valuation that have evolved in the field of health economics, including a discussion of their benefits and deficiencies for use in compensation cases.

Cost-Outcome Analyses

Cost-outcome analyses are methods used to place a value, sometimes in terms of monetary units, on health impacts.[27] Hence, they could prove very useful in calculating compensation for victims of human rights abuses. These methodologies are backed by a substantial amount of research conducted in the area of medical decision-making. Developed primarily for domestic health care programs in the US and England, cost-outcome studies typically reflect a utilitarian, welfare economics framework wherein the aim is to maximize overall health benefits subject to a constrained budget.[28] Since domestic health care programs seek to best utilize scarce resources to address the health needs of large populations, this approach is helpful in weighing health care decisions.

The most common types of cost-outcome analyses are cost-utility analysis (CUA) and cost-benefit analysis (CBA). The primary difference between these approaches hinges on their outcome measurements. CUA relates outcomes in terms of health-adjusted life years (HALYs) that are often weighted by social preferences. CBA goes one step beyond CUA by assigning dollar values on the basis of individual preferences about changes in health.

Cost-Utility Analysis. In health policy evaluations, CUA is often used to determine gains and losses in the health status of populations as a result of programmatic interventions. CUA measures health outcomes in non-monetary terms.[29] HALYs, such as the quality-adjusted life year (QALY) or the disability-adjusted life year(s) (DALYs), are often used as the metrics for this approach.

HALYs are valuable for use in compensation for many reasons. They combine the impact of illness, disability, and mortality on population health into a single summary measure, they can be used to value losses for individuals and groups alike, and they can incorporate social values of health into their measurement. An additional benefit of HALYs is that significant research has been conducted on their monetization.

First used in the 1993 Global Burden of Disease project (GBD) to provide a global picture of health, DALYs are calculated by adding together years of life lost prematurely

(YLL) and years of life lived with disability (YLD).[30] DALYs reflect the total amount of healthy life lost, due to premature mortality and/or mental or physical disability over a period of time. One of the great advantages of DALYs is that they provide a common measure of health that can be used to compare the value of health interventions and even target these to particular diseases or causes of morbidity and mortality.[31] The mortality component of the DALY, or the YLL, represents lost life years due to death prior to a standard life expectancy. The morbidity component of the DALY, the YLD, can be represented by the following formula: incident cases of disability x disability weight x duration of disability.[32] Disability weights represent the socially perceived severity of a given disability on a scale from 0 (perfect health) to 1 (death), where the greater the disability, the higher the weight placed on it.[33] For example, in the case of a major disability, the social weight might be 0.8, whereas for a minor disability, it might be 0.2. The incident cases and duration components of the DALY will rely fairly heavily on the underlying epidemiological information and will, therefore reflect any errors therein.[34] Another area of concern is the weighting used for DALYs. The objective of the weighting is to account for societal values of disease, health, and age.[35] The GBD used disability weights derived from experts through the person trade-off elicitation method.[36] Few studies, however, have been conducted to determine such weights at the local level, especially in areas where populations are undergoing systematic abuse.

Cost-Benefit Analysis. CBA diverges from CUA because it is based on principles of welfare economics and measures individual preferences in terms of monetary tradeoffs.[37] Because it assigns dollar values directly to changes in health status, it allows for comparison of the value that people place on health and on other public/private goods, such as education. In contrast, CUA is limited to comparisons of health programs unless they are translated into monetary terms. There are three primary CBA methods used: the human capital approach, willingness-to-pay (WTP), and willingness-to-accept (WTA).[38]

At its nascence, CBA utilized cost of illness studies that depended on what was termed "*human capital.*"[39] In the human capital approach, utilization of health care is viewed as an investment in a person's fiscal productivity. In other words, the value of health care lies in its ability to return people to the workforce so that they may contribute to the economy. The value of healthy time produced through a health care intervention is then quantified in terms of a person's income alone. The human capital approach is most closely related to the methods currently used to calculate compensatory sums in regional and international human rights cases.

In the 1970s, critical attention began to focus on measuring people's *willingness to pay* for health care programs.[40] Methods emerged whereby decreases in health could be valued by a person's willingness to pay in order to avoid them. This approach was thought to allow individual preferences to be more adequately represented.

WTP is largely concerned with tradeoffs between incremental decreases in wealth and incremental increases in health in determining an overall monetary value for a year of life lived in a particular morbid state. When valuing mortality alone, one determines how much a person would be willing to pay to avoid incremental increases in risk of death in order to develop a value for a statistical life (VSL).[41] In compensation cases, this method has the benefit of providing real currency estimates of damages, even as it has evolved outside of a rights-oriented framework.

In WTP, health is essentially treated similarly to any good in the market. Using this method, one attempts to quantify "the value of a change in mortality risk by the amount of money that, if available for spending on other items, would have the same effect on that person's well-being."[42] The incremental tradeoff between health and wealth can then be used to calculate a person's value for a statistical life lived in full health or with disability.[43]

VSL could alternatively be calculated using a "*willingness-to-accept*" approach. WTA measures a person's willingness to accept compensation in exchange for incremental decreases in survival probability (1-mortality risk) or incremental increases in the probability of a morbid state.[44] Here, when valuing mortality alone, one determines

how much a person would be willing to accept for incremental increases in risk of death in order to develop a value for a statistical life (VSL). It is the complement of "willingness-to-pay" and will, theoretically, arrive at comparable estimates of VSL for small changes in risk.[45,46] For example, in WTP, one might ask, "How much would you be willing to pay to reduce your chances of dying from two in a million to one in a million?" In WTA, by contrast, one might ask, "How much money would you be willing to accept to increase your risk of dying from one in a million to two in a million?" It may be that this approach is a more appropriate measure in human rights cases where compensation is sought for forced increases in risk.[47]

Methodological and Ethical Considerations in Assigning Monetary Values to Health Losses

A fundamental concern in the monetization of health losses for the purpose of compensation is whether the methods utilized will account for such factors as equity and distributive justice in their calculations and thereby adequately value the health of poor, marginalized, or chronically ill individuals. This is especially important where disparities are extreme and human rights abuses establish long-term disenfranchisement and poor baseline health. It is therefore necessary to examine the ways in which each of the monetization methods adjusts for baseline health and economic inequities when used to generate monetary awards. This will better enable practitioners to adjust them as needed for the purposes of fair compensation in regional and international human rights cases.

Implicit Social Willingness-to-Pay in Cost-Utility Analysis. Unlike cost benefit analysis, where there are a number of methods—human capital approach, WTP, WTA—that can be used to assign dollar values to changes in health, there is no explicit monetization of cost-utility measurements (e.g., HALYs, including QALYs and DALYs).[48] However, monetary benchmarks for health care investments have been suggested by health economists and are used by many countries to evaluate the cost-effectiveness of health interventions. These benchmarks can be viewed as an implicit willingness-to-pay

for health improvements within a society. Health agencies within the US and the UK have established general cut-off points for monetary investments per HALY. These benchmarks are roughly US$50,000/QALY and £30,000/QALY, respectively.[49] For developing countries, Jeffrey Sachs and the Commission on Macroeconomics and Health (CMH) have developed methods for calculating benchmarks that result in figures comparable to those of the US and UK when adjusted for average national per capita earnings.[50] In order to arrive at benchmarks for health interventions in developing countries, the CMH relied on multiples of national per capita income.[51]

Market Inequities in CBA. Despite its great utility, there are measurement challenges associated with the human capital approach. First, imperfections in market and wage rates may cause the human capital approach to reflect inequalities.[52] If a person is making less in the marketplace because of systematic discrimination, for instance, the human capital approach will reflect these inequities without mitigation. Second, one would need to account for healthy time not sold on the market for wages.[53] Otherwise, the health of those outside of the workforce will be valueless. Economists generally use shadow pricing to circumvent the latter problem.[54] In shadow pricing, non-marketed resources are given a price. Thus, time devoted to non-wage seeking activities, such as homemaking, might be valued at the amount of money that would be made if a person were to sell their skills in the labor force or the amount it would cost to replace that person with services from the market (e.g., a maid and/or nanny). In this way, a professor under house arrest for extended periods of time could also be valued at his/her typical wage rate in the work force. Unfortunately, with this method there still remains the problem of valuing life solely in terms of the amount of money that people make in the world, rather than an individual's or society's value of life more generally.[55]

Some of the issues associated with the human capital approach are also common to that of WTP. Since WTP is constricted by a person's ability to pay, market inequities must still be considered. In theory, wage rates reflect the marginal productivity of workers. There are many market imperfections, however, and wage rates might therefore re-

flect unacceptable disparities.[56] Using the WTP approach in places where disparities are more pronounced, both among individuals and nation states, may magnify these disparities. To a lesser extent, income and social disparities will also have consequences for WTA, since a person's willingness to accept compensation is likely to be affected by their income.

Toward an Optimal Approach

So far, this article has examined the normative basis for compensation and has outlined various current valuation methodologies and some of their technical and philosophical challenges. This section will outline a proposed solution essential to enabling the system of compensation to be effective in the dual goals of mitigating damage to the victims and battling impunity on the part of the violator.

A Continuum of Approaches to Compensation

An optimal approach to compensation for human rights abuses is one which takes into account as many of the deleterious effects of the abuse as is feasible, as well as current limitations in economics and the health sciences. Ideally, victims should be compensated for all of the harms resulting from human rights violations. However, variations in baseline health data and research funds, as well as limitations in the techniques currently available to calculate compensation, require that an adaptable approach be available to human rights courts and claims tribunals. The continuum of approaches presented here suggests a means toward achieving consistency in a changing landscape without sacrificing flexibility in the calculation of awards.

An ideal approach would value harms in each new case and the stream of consequences that they entail. This may not be possible, however, when there is a lack of complete epidemiological information or sufficient financial resources to support appropriate studies. Therefore, a continuum of approaches is presented, from least ideal on the left to optimal on the far right. The components of the compensation continuum are described in detail in the text following the diagram.

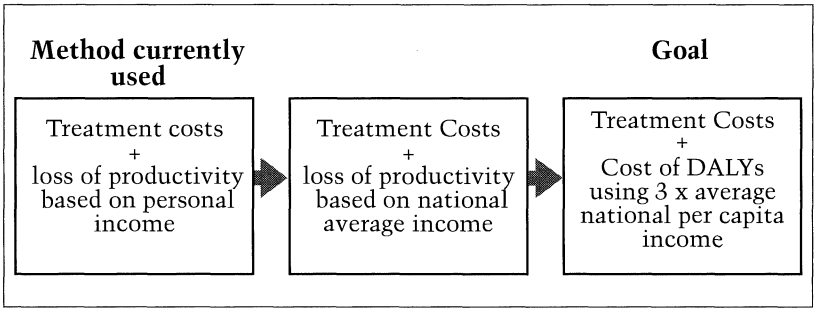

Figure 1. *As an example to illustrate these approaches, imagine a situation wherein 10 individuals in a disadvantaged community were killed as a result of a human rights violation, resulting in a total of 400 years of lost life. Let us say also that each individual had an approximate yearly income of US$1,000 and that the per capita income in their country of origin is US$2,000. Leaving out treatment costs and disability considerations for the sake of simplicity, we would calculate the monetary compensation owed to the community under each of the three compensation scenarios as follows. Under the first, compensation is calculated as treatment costs + (number of years of reduced productivity x average value of lost productivity) = 0 + (400yrs x US$1,000) = US$400K. Under the second, treatment costs + (number of years of reduced productivity x average per capita income) = 0 + (400yrs x US$2,000) = US$800K. Under the third (with DALYs reduced to years of life lost), treatment costs + (DALYs x [3 x average per capita income]) = 0 + (400DALYs x US$6,000) = US$2.4 million.*

Characteristics of an Optimal Approach

Integration and Adaptability. Many of the challenges inherent in the system for compensation stem from the bringing together of the normative and the quantitative realms. Therefore, any proposed solution must involve a more complete integration of these spheres of thinking.

As previously established, strict reliance on income through the human capital approach can lead to unpalatable ethical consequences. The same can be said for the direct or indirect reliance on income in WTP or WTA, and the weighting that is used to adjust for social values of disease, health, and age in HALYs. On the other hand, abstract reliance on equity considerations and principles of fairness do not by themselves lead to objective or consistently achieved award sums.

It is also important to confront the methodological issues that arise with the various quantitative approaches. In the case of HALYs, the reliability of epidemiological data can

greatly affect the accuracy of the end measurement, even overshadowing social weighting concerns when the health effect in question is severe. WTA and WTP depend heavily on survey elicitations of individuals' values, which might or might not be feasible in resource-poor settings.

Many of these issues can be mitigated, however, through a multifaceted approach to compensation that is amenable to change in the face of varying circumstances. The wide range of national and regional settings in which compensation cases might arise should be welcomed as an opportunity to utilize flexibility in the valuation methods applied, and avoid either the use of static quantification methods or the abandonment of a predictable framework.

Transparency. The debate over the appropriate methods to use in various settings is valuable and should be transparent. It is important for the affected community to be aware of the rationale behind integration of the normative and quantitative approaches to compensation. Consequently, alleged victims and their representatives will understand how compensation is calculated and will be less reluctant to bring their claims before regional courts and other international bodies.

Components of an Optimal Approach

An optimal approach to compensation should take into account a range of options that will depend in large part on the availability of baseline epidemiological information as well as funding. Assessment of harms should move beyond the standard human capital approach, wherein only productivity and treatment costs are assessed, to a method that also includes loss of well-being. As outlined in the following sections, an optimal approach for health claims resulting from human rights abuses should take into account morbidity and mortality, treatment costs, and foregone productivity or loss of well-being, as these are the primary stream of quantifiable losses resulting from human rights abuses. An approach incorporating these factors would allow tribunals and courts to address a range of health effects.

Underlying Epidemiology. Resources permitting, analytic and descriptive epidemiology should be employed in the assess-

ment of a compensatory sum. Epidemiological analysis is important because it allows for the examination of morbidities and outcomes that may be attributable to abuse in larger group settings. For example, if a universal or well-used health care system is in place and the abused community is non-migratory, hospital records may be consulted in order to compare pre- and post- abuse admission rates, death rates, changes in enrollment in various health services, and changes in the overall utilization of health care. This would not only allow for the identification of emergent cases, but would also facilitate the identification of communities that may be disproportionately affected by abuse. In the case of psychological conditions directly attributable to an acute event, such as Post Traumatic Stress Disorder (PTSD), survey elicitations and proper studies might also be conducted. Where an acute event is identifiable, age-adjusted morbidity from the pre-event period can also be used to project hypothetical future patterns of morbidity in the absence of abuse. This "counterfactual" can then be compared to post-abuse rates in order to determine excess morbidity. Competing risks and variations in circumstances outside of the event would have to be modeled for this type of comparison to be effective.

Methods of identifying cases requiring compensation will and should vary depending on whether the exposure or outcome is rare (cohort and case-control, respectively, with many variations possible) and the availability of and nature of information. Case-control studies maximize power in the case of rare outcomes and may be more feasible than cohort data.[57] In the end, the overwhelming issues with regard to epidemiological methods in compensation cases are likely to be availability of human and financial resources, availability of baseline data, generalizability/external validity, and recall and selection bias in the case of surveyed populations. Methods should be subject to change in accordance with the needs of different cases and populations. Properly applied epidemiology that is appropriate for use with the available health data will allow for the accurate valuation of present and projected health damages.

Treatment Costs. Treatment costs should be incorporated into the morbidity portion of the claim and should include

any costs absorbed by the community or government in treating the sick and injured. These would involve per-case pharmaceutical costs, physician visits, hospitalization, counseling costs in the case of psychological morbidity, and costs for prosthetics and equipment necessary for treatment. Treatment costs should extend for the life of victims and should be projected for the community until such a time as disease projections are predicted to return to pre-abuse levels. Inflation and discounting procedures should also be incorporated.

Foregone Productivity. The standard mode of addressing productivity losses in compensation cases has been the calculation of lost earnings — the amount of money an individual would have been expected to make were it not for a deleterious event or death.[57] These earnings are typically adjusted for inflation and time discounted. Foregone productivity can include lost time while in treatment, as well as reduced output due to a chronic ailment. In the case of non-wage compensated work, such as homecare and child rearing, productivity losses can be estimated from the cost of replacing such services from the market or from the earnings that a homemaker could expect to make with his/her own skills on the market. If productivity costs form only part of the claim, it is reasonable to include them. Productivity costs should not be used as the sole basis of award, however, because this implies quite simply that the value of life and health is limited to the monetary value of labor.

It is necessary to consider the implications of valuing productivity losses in terms of the income of the abused. In many cases, human rights abuses are insidious and occur over long periods of time, ranging from months to decades. Aside from direct health losses, longstanding abuse and marginalization are likely to result in a significant lowering of income throughout a community. If compensation is then based on this lowered income, it essentially buys savings for the abuser. The more a community is marginalized, the fewer funds the abuser must dole out to compensate that community for lost earnings. This problem may be mitigated through the use of other costs, such as health and well-being, to calculate compensatory sums.

Productivity costs should be measured according to national average per capita incomes as opposed to individual incomes in order to reduce inequities in the calculation of compensatory sums. In the absence of this semi-corrective gesture, similar crimes and similar health damages will be valued very differently, depending on the wealth of the person affected. While some variation is acceptable, drastic differences within countries are unacceptable, as they create an incentive to marginalize communities that might eventually bring cases against violators. One approach that balances equity within and between countries is to apply a formula, like the one suggested by the CMH, of valuing each DALY at three times the per capita income.[59]

Loss of Well-Being. Population health measures allow for the assessment of health gaps and attribution to specific causes. This characteristic makes such measures quite useful for the purposes of compensation. As mentioned previously, the DALY is a commonly used summary measure of population health. The 1993 World Development Report (WDR), "Investing in Health," used DALYs together with cost-effectiveness to determine prioritization for health interventions.[60] Not only do DALYs facilitate the calculation of compensatory sums based directly on the effects of abuse, but because they identify the impact of specific illnesses and disabilities on population health, they also make possible the dispersal of funds earmarked to address these illnesses and disabilities. Thus, DALYs can potentially mitigate health disparities caused or exacerbated by abuse. In addition, many afflictions associated with abuse, such as PTSD, show symptoms only intermittently, rather than continuously from the time of onset to recovery. In these cases, the morbidity component of DALYs is useful because it considers only time with symptoms; compensation can then be calculated based on the time during which an individual is hampered by disease.[61]

One area that requires careful thought in the use of DALYs for compensation is how uncertainty should be characterized and addressed. A vital area of future research — although beyond the scope of this paper — is the in-depth examination of the ways in which all uncertainty should be

addressed, including the uncertainty in the underlying epidemiology, such as misclassification of disease and measurement error, as well as the choice of weights used in calculating the DALY.[62]

Despite the drawbacks of DALYs, however, they present a great deal of potential for use in compensation cases. The primary reason that DALYs surpass the other metrics presented in this article lies in their monetization. As mentioned previously, the Commission on Microeconomics and Health, under Jeffrey Sachs, developed a monetization scheme for the DALY that is based on a multiple of national per capita income. Because it uses a multiple of national per capita income, rather than individual earnings, the CMH monetization avoids many of the pitfalls common to other methods of valuation, especially CBA. Rather than relying on personal income, which can easily be affected by systematic disenfranchisement and prolonged cases of abuse, the CMH monetization would value every year of lost healthy life in the same way.

Additionally, the reliance on national per capita income (rather than the standard cutoffs employed in UK- and US-based cost effectiveness analysis) makes the CMH valued DALY flexible enough to use in wealthy and developing countries alike. A final and important benefit in using the CMH valued DALY in human rights cases, is that the CMH incorporated into its calculus the larger community effects of illness and disease. These effects include intergenerational spillovers wherein the reduction in health of one individual may have adverse consequences for other family members, and societal spillovers, such as high labor force turnover and the subsequent lowering of business profitability.[63] Thus, the CMH approach to valuing the DALY captures some of the community level suffering that may occur as a result of systematic abuse.[64] In the end, the CMH determined that using three times the average per capita income for a country should capture the costs discussed above.[65]

Conclusion

The current international push to combat impunity and provide remedies has produced a valuable normative framework set out in the Principles and Guidelines recently adopted

by the UN General Assembly.[66] The goals of an effective remedy will not be met, however, until we develop and apply consistent and transparent methodologies that mitigate inequities in their calculations. Such methodologies will provide the necessary tools to make the Principles and Guidelines the definitive and practical international normative standard for compensation. Such methodologies, drawing upon the approach suggested here, which is really a flexible continuum of approaches, would enable regional and international legal bodies that hear cases involving serious human rights violations to adopt a more standard approach in determining compensation. The successful resolution of these issues will require significant collaboration among experts in the public health and human rights fields in an effort to identify and implement the most appropriate approaches.

It is important to note that, while this article introduces methodological aspects of compensation, it does not attempt to encompass all of the complexity inherent in the issue. Future research should address issues such as: (a) which methodologies are best suited to collective complaints and which are more suited for an individual complainant; (b) what variations exist in the severity of harm resulting from human rights violations, as distinguished methodologically from variations in the number of individuals affected by such violations; and (c) how compensation can be calculated for increased future health risks resulting from human rights abuses.

While there are no simple solutions to the complex methodological and ethical dilemmas raised by the emerging system of compensation for human rights abuses, it is increasingly evident that representatives of both normative and quantitative spheres of thinking must work together on this crucial issue of common concern. Although the merging of disparate modes of thought involves challenges, such a union will ultimately lead to more comprehensive, innovative solutions to the issues surrounding compensation. A consistent, transparent, and equitable methodology for compensation will provide reparation for victims of past abuses and may also serve to deter future human rights violations, thus realizing the full potential of human rights law.

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suant to Commission Resolution 2002/44. During this meeting, the United States voiced an objection to the use of the term "humanitarian law" in the title, stating that it did not fall under the auspices of the UN. Pursuant to Commission Resolutions 2003/34 and 2004/34, the Principles and Guidelines were further modified at the Second and Third Consultative Meetings, which took place in 2003 and 2004 respectively. These meetings somewhat weakened the Principles and Guidelines by including language to emphasize existing international law rather than the creation of new rules of remedy and compensation. Taken together, the three consultative meetings also moved further towards restricting the responsibilities of states in remedying human rights violations. See A. Salinas, Report of the consultative meeting on the Draft Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Violations of International Human Rights and Humanitarian Law, UN Doc. E/CN.4/2003/63 (2002); Report of the second consultative meeting on the Draft Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Violations of International Human Rights and Humanitarian Law, UN Doc. E/ CN.4/ 2004/ 57 (2003); Report of the High Commissioner for Human Rights on the outcome of the consultative process with a view to finalizing the Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Violations of International Human Rights and Humanitarian Law, UN Doc. E/CN.4/2005/59 (2004).

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