

## HUMAN RIGHTS AND GLOBAL HEALTH: A RESEARCH PROGRAM

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**Abstract:** One-third of all human lives end in early death from poverty-related causes. Most of these premature deaths are avoidable through global institutional reforms that would eradicate extreme poverty. Many are also avoidable through global health-system reform that would make medical knowledge freely available as a global public good. The rules should be redesigned so that the development of any new drug is rewarded in proportion to its impact on the global disease burden (not through monopoly rents). This reform would bring drug prices down worldwide close to their marginal cost of production and would powerfully stimulate pharmaceutical research into currently neglected diseases concentrated among the poor. Its feasibility shows that the existing medical-patent regime (trade-related aspects of intellectual property rights—TRIPS—as supplemented by bilateral agreements) is severely unjust—and its imposition a human-rights violation on account of the avoidable mortality and morbidity it foreseeably produces.

Keywords: diseases, drugs, health, human rights, incentives, justice, medicine, patents, pharmaceutical research, poverty, public goods, TRIPS.

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### 1

Some eighteen million human beings die prematurely each year from medical conditions we can cure—this is equivalent to fifty thousand avoidable deaths per day, or one-third of all human deaths.<sup>1</sup> Hundreds of millions more suffer grievously from these conditions.<sup>2</sup> The lives of additional hundreds of millions are shattered by severe illnesses or

<sup>1</sup> In 2002, there were fifty-seven million human deaths. Among the main avoidable causes of death were (with death tolls in thousands): respiratory infections (3,963—mainly pneumonia), HIV/AIDS (2,777), perinatal conditions (2,462), diarrhea (1,798), tuberculosis (1,566), malaria (1,272), childhood diseases (1,124—mainly measles), maternal conditions (510), malnutrition (485), sexually transmitted diseases (180), meningitis (173), hepatitis (157), and tropical diseases (129). See WHO 2004b, annex table 2; cf. also FAO 1999 and UNICEF 2002.

<sup>2</sup> Such morbidity is due to the conditions listed in the preceding footnote as well as to a variety of other communicable diseases, including dengue fever, leprosy, trypanosomiasis

premature deaths in their family. And these medical problems also put a great strain on the economies of many poor countries, thereby perpetuating their poverty, which in turn contributes to the ill health of their populations.

This huge incidence of mortality and morbidity is not randomly distributed. For a variety of social reasons, females are significantly overrepresented among those suffering severe ill health (UNDP 2003, 310–30; UNIFEM 2001). Being especially vulnerable and helpless, children under the age of five are also overrepresented, accounting for about two-thirds of the death toll (USDA 1999, iii). But the most significant causal determinant is poverty: Nearly all the avoidable mortality and morbidity occurs in the poor countries (WHO 2004b, annex table 2), particularly among their poorer inhabitants.

There are different ways of attacking this problem. One approach, exemplified in much of my previous work, focuses on the eradication of severe poverty. In the world as it is, consumption by the poorest 44 percent of humankind, those living below the World Bank's "US\$2/day" benchmark (1993 purchasing power), accounts for approximately 1.3 percent of the global social product. If all 2,736 million currently below it were instead living right at the US\$2/day threshold, their consumption would still amount to only 2.2 percent of the global social product.<sup>3</sup> But they would then be much better able to gain access to things that help the rest of us ward off ill health, such as adequate nutrition, safe drinking water, adequate clothing and shelter, basic sanitation, mosquito nets in malaria-infested regions, and so on.<sup>4</sup>

Another way of addressing the huge mortality and morbidity rates is through ensuring improved access to medical treatments—preventive (like vaccines) or remedial. This way is exemplified in the research to be sketched here. The two ways of addressing the problem are complementary: Just as the eradication of severe poverty would greatly reduce the

(sleeping sickness and Chagas disease), onchocerciasis (river blindness), leishmaniasis, Buruli ulcer, lymphatic filariasis, and schistosomiasis (bilharzia). See Gwatkin and Guillot 1999.

<sup>3</sup> According to the World Bank's (flawed) estimate, there are 2,736 million people worldwide living below the "\$2/day" international poverty line, which means that their daily consumption falls below the purchasing power of US\$2.16 in the United States in 1993 ([www.worldbank.org/research/povmonitor](http://www.worldbank.org/research/povmonitor)). This threshold is today equivalent to the purchasing power of about US\$1,000 per person per year and, at current exchange rates, amounts to somewhere between US\$120 and US\$480 (depending on the poor-country currency in question). According to the World Bank's researchers, these global poor live, on average, 42 percent below the \$2/day poverty line (Chen and Ravallion 2004 tables 3 and 6, dividing the poverty-gap index by the headcount index). See Pogge 2004, 395 nn. 15–16, for additional references and detailed calculations supporting my estimates.

<sup>4</sup> Among the global poor, some 800 million are undernourished, 1,000 million lack access to safe water, 2,400 million lack access to basic sanitation (UNDP 2003, 87, 9, 6); more than 880 million lack access to basic health services (UNDP 1999, 22); approximately 1,000 million have no adequate shelter and 2,000 million no electricity (UNDP 1998, 49).

global disease burden, so improved access to essential medicines would greatly reduce severe poverty by enhancing the ability of the poor to work, and to organize themselves, for their own economic advancement.

Exemplifying the latter approach, this essay outlines how one crucial obstacle to a dramatic reduction in the global disease burden can be removed by giving medical innovators stable and reliable financial incentives to address the medical conditions of the poor. My aim is to develop a concrete, feasible, and politically realistic plan for reforming current national and global rules for incentivizing the search for new essential drugs. If adopted, this plan would not add much to the overall cost of global health-care spending. In fact, on any plausible accounting, which would take note of the huge economic losses caused by the present global disease burden, the reform would actually save money. Moreover, it would distribute the cost of global health-care spending more fairly across countries, across generations, and between those lucky enough to enjoy good health and the unlucky ones suffering from serious medical conditions.

The decision about whether and how to implement such a plan obviously rests with national parliaments and international organizations, such as the World Trade Organization (WTO) and the World Health Organization (WHO). But these decision makers could benefit from an exploration of the more promising reform options together with a full assessment of their comparative advantages and disadvantages, resulting in a specific reform recommendation.

## 2

The existing rules for incentivizing pharmaceutical research are morally deeply problematic. This fact, long understood among international health experts, has come to be more widely recognized in the wake of the AIDS crisis, especially in Africa, where the vital needs of poor patients are pitted against the need of pharmaceutical companies to recoup their research-and-development investments (Barnard 2002). Still, this wider recognition does not easily translate into political reform. Some believe (like Churchill about democracy) that the present regime is the lesser evil in comparison to its alternatives that have any chance of implementation. And others, more friendly to reform, disagree about what the flaws of the present system are exactly and have put forward a wide range of alternative reform ideas. What is needed now is a careful comparative exploration of the various reforms that have been proposed by academics, nongovernmental organizations (NGOs), and politicians as well as in the media, with the aim of formulating and justifying a specific alternative that is clearly superior to the present regime.

Filling this gap requires economic expertise. But it also, and centrally, requires moral reflection. From an economist standpoint, health care is a

commodity like many others in the service sector (for example, haircuts and car repairs) and, from that standpoint, the creation of effective new medical treatments is an intellectual achievement like many others (for example, the creation of new music or software). From a moral standpoint, however, there is a world of difference between poor people lacking access to haircuts and poor people avoidably lacking access to treatment for serious medical conditions—and also a world of difference in importance between the aim of encouraging the creation of new music and the aim of encouraging the creation of new essential drugs.

We need to develop and defend a moral standard that can ground the assessment of the current patent regime (trade-related aspects of intellectual property rights, or TRIPS, as supplemented by a growing number of bilateral agreements that the United States has been pressing upon its trading partners) against the various ideas for reforming it and can guide the formulation of a specific reform plan as well as organize the argument in its favor. To be useful as a policy option for decision makers, and as a clear focal point for advocacy, media discussions, and the general public, this must be a detailed and specific reform plan fully informed by the relevant facts and insights from science, statistics, medicine, economics, law, and (moral and political) philosophy.

In addition, this plan must be politically feasible and realistic. To be *feasible* it must, once implemented, generate its own support from governments, pharmaceutical companies, and the general public (taking these three key constituencies as they would be under the reformed regime). To be *realistic*, the plan must possess moral and prudential appeal for governments, pharmaceutical companies, and the general public (taking these three constituencies as they are now, under the existing regime). A reform plan that is not incentive compatible in these two ways is destined to remain a philosopher's pipe dream.

### 3

Bringing new, safe and effective life-saving medications to market is hugely expensive, as inventor firms must pay for the research and development of new drugs as well as for elaborate testing and the subsequent approval process.<sup>5</sup> In addition, newly developed medical treatments often turn out to be unsafe or not effective enough, to have bad side effects, or to fail getting government approval for some other reason, which may lead to the loss of the entire investment.

<sup>5</sup> This point may be controversial to some extent. It has been asserted that pharmaceutical companies wildly overstate their financial and intellectual contributions to drug development and that most basic research is funded by governments and universities and then made available to the pharmaceutical industry for free. See Consumer Project on Technology ([www.cptech.org/ip/health/econ/rndcosts.html](http://www.cptech.org/ip/health/econ/rndcosts.html)) and UNDP 2001, ch. 5.

Given such large investment costs and risks, very little innovative pharmaceutical research would take place in a free-market system. The reason is that an innovator would bear the full cost of its failures but would be unable to profit from its successes because competitors would copy or retro-engineer its invention (effectively free riding on its effort) and then drive down the price close to the marginal cost of production. This is a classic instance of market failure leading to a collectively irrational (Pareto-suboptimal) outcome in which medical innovation is undersupplied by the market.

The classic solution, also enshrined in the TRIPS regime (adopted under WTO auspices in the Uruguay Round), corrects this market failure through patent rules that grant inventor firms a temporary monopoly on their inventions, typically for twenty years from the time of filing a patent application. With competitors barred from copying and selling any newly invented drug during this period, the inventor firm can sell it at the profit-maximizing monopoly price well above, and often very far above, its marginal cost of production.<sup>6</sup> In this way, the inventor firm can recoup its research and overhead expenses plus some of the cost of its other research efforts that failed to bear fruit.

This solution corrects the market failure (undersupply of medical innovation), but its monopoly feature creates another. During the patent's duration, the profit-maximizing sale price of the invented medicine will be far above its marginal cost of production. This large differential is collectively irrational by impeding many mutually beneficial transactions between the inventor firm and potential buyers who are unwilling or unable to pay the monopoly price but are willing and able to pay substantially more than the marginal cost of production. If modified rules could facilitate these potential transactions, then many patients would benefit—and so would the drug companies, as they would book additional profitable sales and typically also, through economies of scale, reduce their marginal cost of production. Such a reform would not merely avoid a sizable economic loss for the national and global economies. It would also avoid countless premature deaths and much severe suffering worldwide that the present patent regime engenders by blocking mutually advantageous sales of essential medicines.

There are two basic reform strategies for avoiding this second market failure associated with monopoly pricing powers. I will refer to these as the *differential-pricing* and *public-good* strategies, respectively. The *differential-pricing strategy* comes in different variants. One would have inventor firms themselves offer their proprietary drugs to different

<sup>6</sup> The inventor firm can also sell permissions to produce its invention. Paying a hefty licensing fee to the inventor firm, the producer must charge a price well above, often very far above, its marginal cost of production. In this case, too, the second market failure I go on to discuss in the text arises, though it does so somewhat differently.

customers at different prices, thereby realizing a large profit margin from sales to the more affluent without renouncing sales to poorer buyers at a lower margin. Another variant is the right of governments, recognized under TRIPS rules, to issue compulsory licenses for inventions that are urgently needed in a public emergency. Exercising this right, a government can force down the price of a patented invention by compelling the patent holder to license it to other producers for a set percentage (typically below 10 percent) of the latter's sales revenues. The United States claims this right under 28 USC 1498, particularly for cases where the licensed producer is an agency of, or contractor for, the government,<sup>7</sup> but has been reluctant to invoke the right in the case of pharmaceuticals, presumably to avoid setting an international precedent detrimental to its pharmaceutical industry. Thus, during the anthrax scare of 2001, the United States preferred to pressure Bayer into supplying its patented drug CIPRO for US\$0.90 per pill (versus a wholesale price of US\$4.67) over purchasing generic versions from Polish or Indian suppliers. Canada invoked compulsory licensing in this case but backed down under pressure four days later ([www.cptech.org/ip/health/cl/cipro/](http://www.cptech.org/ip/health/cl/cipro/)). It has often been suggested that poor countries should assert their compulsory licensing rights to cope with their public-health crises, particularly the AIDS pandemic.

Differential-pricing solutions are generally unworkable unless the different categories of buyers can be prevented from knowing about, or from trading with, one another. In the real world, if the drug were sold at a lower price to some, then many buyers who would otherwise be willing and able to pay the higher price would find a way to buy at the lower price. Selling expensive drugs more cheaply in poor developing countries, for example, would create strong incentives to divert (for example, smuggle) this drug back into the more affluent countries, leading to relative losses in the latter markets that outweigh the gains in the former. Anticipating such net losses through diversion, inventor firms typically do not themselves try to overcome the second market failure through differential pricing, resist pressures to do so, and fight attempts to impose compulsory licensing upon them. As a result, differential pricing has not gained much of a foothold, and many poor patients who would be willing and able to purchase the drug at a price well above the marginal cost of production are excluded from this drug because they cannot afford the much higher monopoly price (Kanavos et al. 2004). While such exclusion is acceptable for other categories of intellectual property (for example, software, films, and music), it is morally highly problematic in the case of essential medicines.

<sup>7</sup> See [www4.law.cornell.edu/uscode/28/1498.html](http://www4.law.cornell.edu/uscode/28/1498.html). This right has been litigated in various important cases, producing licensing fees as low as 1 percent in the case of the Williams patent held by Hughes Aircraft Corporation (for details, see [www.cptech.org/ip/health/cl/us-1498.html](http://www.cptech.org/ip/health/cl/us-1498.html)).

To be sure, insofar as a government does succeed, against heavy pressure from pharmaceutical companies and often their home governments, in exercising its right to issue compulsory licenses, any net losses due to diversion are simply forced upon the patent holders. But such compulsory licensing, especially if it were to become more common, brings back the first market failure of undersupply: Pharmaceutical companies will tend to spend less on the quest for essential drugs when the uncertainty of success is compounded by the additional unpredictability of whether and to what extent they will be allowed to recoup their investments through undisturbed use of their monopoly pricing powers.

#### 4

In light of these serious problems, I doubt that the differential-pricing strategy can yield a plan for reform that would constitute a substantial improvement over the present regime. So I am proceeding, for now, on the assumption that an exploration of the *public-good strategy* is more promising, that is, more likely to lead to the formulation of a reform plan that would avoid the main defects of the present monopoly-patent regime while preserving most of its important benefits. The great difficulty to be overcome lies in devising the best possible reform plan within this much larger domain of the public-good strategy.

We may think of such a reform plan as consisting of three components. First, the results of any successful effort to develop (research, test, and obtain regulatory approval for) a new essential drug are to be provided as a public good that all pharmaceutical companies may use free of charge. This reform would eliminate the second market failure (associated with monopoly pricing powers) by allowing competition to bring the prices of new essential drugs down close to their marginal cost of production. Implemented in only one country or a few countries, this reform would engender problems like those we have found to attend differential-pricing solutions: Cheaper drugs produced in countries where drug development is treated as a public good would seep back into countries adhering to the monopoly-patent regime, undermining research incentives in the latter countries. The reform should therefore be global in scope, just as the rules of the current TRIPS regime are. The first reform component, then, is that results of successful efforts to develop new essential drugs are to be provided as public goods that all pharmaceutical companies anywhere may use free of charge.

Implemented in isolation, this first reform component would destroy incentives for pharmaceutical research. This effect is avoided by the second component, which is that, similar to the current regime, inventor firms should be entitled to take out a multiyear patent on any essential

medicines they invent but, during the life of the patent, should be rewarded, out of public funds, in proportion to the impact of their invention on the global disease burden. This reform component would reorient the incentives of such firms in highly desirable ways: Any inventor firm would have incentives to sell its innovative treatments cheaply (often even below their marginal cost of production) in order to help get its drugs to even very poor people who need them. Such a firm would have incentives also to see to it that patients are fully instructed in the proper use of its drugs (dosage, compliance, and so on), in order to ensure that, through wide and effective deployment, they have as great an impact on the global disease burden as possible.<sup>8</sup> Rather than ignore poor countries as unprofitable markets, inventor firms would moreover have incentives to work together toward improving the health systems of these countries in order to enhance the impact of their inventions there. In addition, any inventor firm would have reason to encourage and support efforts by cheap generic producers (already well established in India, Brazil, and South Africa, for example) to copy its drugs, because such copying would further increase the number of users and hence the invention's favorable impact on the global disease burden. In all these ways, the reform would align and harmonize the interests of inventor firms with those of patients and the generic drug producers—interests that, under the current regime, are diametrically opposed.<sup>9</sup> The reform would also align the moral and prudential interests of the inventor firms who, under the present regime, are forced to choose between recouping their investments in the search for essential drugs and preventing avoidable suffering and deaths.

This second component of a plausible public-good strategy realizes yet one further tremendous advantage over the status quo: Under the current regime, inventor firms have incentives to try to develop a new medical treatment only if the expected value of the temporary monopoly pricing power they might gain, discounted by the probability of failure, is greater than the full development and patenting costs. They have no incentives, then, to try to develop treatments that few people have a need for and treatments needed by people who are unable to afford them at a price far above the marginal cost of production. The former category contains treatments for many so-called orphan diseases that affect only small

<sup>8</sup> The absence of such incentives under the present rules gravely undermines the effectiveness of drugs delivered into poor regions, even when these drugs are donated (cf. UNDP 2001, 101).

<sup>9</sup> This opposition was displayed most dramatically when a coalition of thirty-one pharmaceutical companies went to court in South Africa in order to prevent their inventions from being reproduced by local generic producers and sold cheaply to desperate patients whose life depended on such affordable access to these retroviral drugs. In April 2001, the attempted lawsuit collapsed under a barrage of worldwide public criticism (see Barnard 2002).

numbers of patients. The latter category contains many diseases mainly affecting the poor, for which treatments priced far above the marginal cost of production could be sold only in small quantities. It may be acceptable that no one is developing software demanded only by a few and that no one is producing music valued only by the very poor. But it is morally problematic that no treatments are developed for rare diseases, and it is extremely problematic, morally, that so few treatments are developed for medical conditions that cause most of the premature deaths and suffering in the world today.

Even if common talk of the 10/90 gap<sup>10</sup> is now an overstatement, the problem is certainly real: Malaria, pneumonia, diarrhea, and tuberculosis, which together account for 21 percent of the global disease burden, receive 0.31 percent of all public and private funds devoted to health research (GFHR 2004, 122). And diseases confined to the tropics tend to be the most neglected: Of the 1,393 new drugs approved between 1975 and 1999, only thirteen were specifically indicated for tropical diseases and five out of these thirteen actually emerged from veterinary research (Trouiller et al. 2001; Drugs for Neglected Diseases Working Group 2001, 11).

Rewarding pharmaceutical research on the basis of its impact on the global disease burden would attract inventor firms toward medical conditions whose adverse effects on humankind can be reduced most cost effectively. This reorientation would greatly mitigate the problem of neglected diseases that overwhelmingly affect the poor. And it would open new profitable research opportunities for pharmaceutical companies.

One might worry that the second component of the reform would also *reduce* incentives to develop treatments for medical conditions that, though they add little to the global disease burden (on any plausible conception thereof), affluent patients are willing to pay a lot to avoid. But this worry can be addressed, at least in part, by limiting the application of the reform plan to *essential* drugs, that is, to medicines for diseases that destroy human lives. Drugs for other medical conditions, such as hair loss, acne, and impotence, for example, can remain under the existing regime with no loss in incentives or rewards.

Incorporating this distinction between essential and nonessential drugs into the reform plan raises the specter of political battles over how this distinction is to be defined and of legal battles over how some particular invention should be classified. These dangers could be averted by allowing inventor firms to classify their inventions as they wish and then designing the rewards in such a way that these firms will themselves choose to

<sup>10</sup> “Only 10 percent of global health research is devoted to conditions that account for 90 percent of the global disease burden” (Drugs for Neglected Diseases Working Group 2001, 10; cf. GFHR 2000, 2002, 2004).

register under the reform rules any inventions that stand to make a real difference to the global disease burden. Such freedom of choice would also greatly facilitate a smooth and rapid phasing in of the new rules, as there would be no disappointment of the legitimate expectations of firms that have undertaken research for the sake of gaining a conventional patent. The reform plan should be *attractive* for pharmaceutical companies by winning them new lucrative opportunities for research into currently neglected diseases without significant losses in the lucrative research opportunities they now enjoy—and by restoring their moral stature as benefactors of humankind.

This second reform component requires a way of funding the planned incentives for developing new essential medicines, which might cost some US\$45–90 billion annually on a global scale.<sup>11</sup> The third component of the reform plan is then to develop a fair, feasible, and politically realistic allocation of these costs, as well as compelling arguments in support of this allocation.

## 5

While the general approach as outlined may seem plausible enough, the great intellectual challenge is to specify it concretely in a way that shows it to be both feasible and politically realistic. This is an extremely complex undertaking that involves a formidable array of multiply interdependent tasks and subtasks. Here one main task, associated with the second component, concerns the design of the planned incentives. This requires a suitable measure of the global disease burden and ways of assessing the contributions that various new medical treatments are making to its reduction. When two or more different medicines are alternative treatments for the same disease, then the reward corresponding to their aggregate impact must be allocated among their respective inventors on the basis of each medicine's market share and effectiveness.

<sup>11</sup> The precise amount each year would depend on how successful innovative treatments would be in decimating the global disease burden. My estimate in the text is thus necessarily tentative and speculative, meant to provide a rough orientation and thus to illustrate the order of magnitude and hence the degree of realism of the reform. My estimate derives from current corporate spending on pharmaceutical research, which is reckoned to have been US\$30.5 billion in 1998, the latest year for which I have found a credible figure (GFHR 2004, 112). This suggests that the current figure is around US\$40 billion. Only part of this money is spent toward developing *essential* drugs. But the reformed rules would stimulate substantially greater spending on pharmaceutical research toward developing new essential drugs (especially for heretofore neglected diseases). Such outlays might well exceed corporate expenditures on *all* pharmaceutical research under the existing rules. The rewards offered under the reformed rules must not merely match but also substantially exceed these outlays, because pharmaceutical companies will brave the risks and uncertainties of an expensive and protracted research effort only if its expected return substantially exceeds its cost.

More complex is the case (exemplified in the fight against HIV, tuberculosis, and malaria) of “drug cocktails” that combine various drugs that frequently have been developed by different companies. Here the reform plan must formulate clear and transparent rules for distributing the overall reward, based on the impact of the drug cocktail, among the inventors of the drugs it contains. And it must also include specific rules for the phase-in period so as not to discourage ongoing research efforts motivated by the existing patent rules. It is of crucial importance that all these rules be clear and transparent, lest they add to the inevitable risks and uncertainties that complicate the work of inventor firms and sometimes discourage them from important research efforts. This task requires expertise in medicine, statistics, economics, and legal regulation.

Another main task, associated with the third component, concerns the design of rules for allocating the cost of the incentives as well as the formulation of good arguments in favor of this allocation. Effective implementation of the reform requires that much of its cost be borne by the developed countries, which, with 16 percent of the world’s population, control about 81 percent of the global social product (World Bank 2004, 253). This is feasible even if these countries, after retargeting existing subsidies to the pharmaceutical industry in accordance with the reformed rules, still had to shoulder around US\$70 billion in new expenditures.<sup>12</sup> This amount, after all, is only 0.27 percent of the aggregate gross national income of the high-income countries, or US\$70 for each of their residents.<sup>13</sup> To make this planned spending increase realistic, the taxpayers and politicians of the high-income countries need to be given compelling reasons for supporting it.

The plan can be supported by prudential considerations. For one thing, the taxpayers of the more affluent countries gain a substantial benefit for themselves in the form of lower drug prices. Under the current regime, affluent persons in need of essential drugs pay high prices for them, either directly or through their contributions to commercial insurance companies. Under the projected scheme, the prices of such drugs would be much lower, and their consumers, even the richest, would thus save money on drugs and/or insurance premiums. To be sure, such a shifting of costs, within affluent countries, from patients to taxpayers would benefit less-healthy citizens at the expense of the healthier ones. But such a mild mitigation of the effects of luck is actually morally appealing—not least because even those fortunate persons who never or rarely need to take advantage of recent medical advances still benefit from

<sup>12</sup> This figure is in line with the estimates made by the WHO Commission on Macroeconomics and Health (chaired by Jeffrey Sachs), according to which some eight million deaths could be prevented each year in the developing world through providing real access to medical care at a cost of about US\$60 billion annually (WHO 2001).

<sup>13</sup> See World Bank 2004, 253, for the aggregate gross national income and the aggregate population of the high-income countries.

pharmaceutical research that affords them the peace of mind derived from knowing that, should they ever become seriously ill, they would have access to cutting-edge medical knowledge and treatments.

A second prudential argument is that, by giving poor populations a free ride on the pharmaceutical research conducted for the benefit of citizens in the affluent countries, we are building goodwill toward ourselves in the developing world by demonstrating in a tangible way our concern for the horrendous public-health problems these populations are facing. This argument has a moral twin: In light of the extent of avoidable mortality and morbidity in the developing world, the case for giving the poor a free ride is morally compelling.

These last twin arguments have wider application. The reform plan would not merely encourage the same sort of pharmaceutical research differently but would also expand the range of medical conditions for which inventor firms would seek solutions. Under the current regime, these firms understandably show little interest in tropical diseases, for example, because, even if they could develop successful treatments, they would not be able to make much money from selling or licensing them. Under the alternative regime I suggest we design, inventor firms could make lots of money by developing such treatments, whose potential impact on the global disease burden is enormous. Measles, malaria, and tuberculosis each kill well over a million people per year, mostly children, and pneumonia kills more than these three combined. New drugs could dramatically reduce the impact of these diseases.

But, it may be asked, why should we citizens of the high-income countries support a rule change that benefits *others* (poor people in the developing world) at our expense? Viewed narrowly, underwriting such incentives for research into widespread but currently neglected diseases might seem to be a dead loss for the affluent countries.

Taking a larger view, however, important gains are readily apparent: The reform would create top-flight medical-research jobs in the developed countries. It would enable us to respond more effectively to public-health emergencies and problems in the future by earning us more rapidly increasing medical knowledge combined with a stronger and more diversified arsenal of medical interventions. In addition, better human health around the world would reduce the threat we face from invasive diseases. The recent SARS outbreak illustrates the last two points: Dangerous diseases can rapidly transit from poor-country settings into cities in the industrialized world (as happened in Toronto); and the current neglect of the medical needs of poor populations leaves us unprepared to deal with such problems when we are suddenly confronted with them. Slowing population growth and bringing enormous reductions in avoidable suffering and deaths worldwide, the reform would furthermore be vastly more cost effective and also be vastly better received by people in the poor countries than similarly expensive humanitarian

interventions we have undertaken in recent years and the huge, unrepayable loans our governments and their international financial institutions tend to extended to (often corrupt and oppressive) rulers and elites in the developing countries. Last, but not least, there is the important moral and social benefit of working with others, nationally and internationally, toward overcoming the morally preeminent problem of our age, which is the horrendous, poverty-induced and largely avoidable morbidity and mortality in the developing world.

## 6

In the remainder of this essay, I will further underscore the moral urgency of the task of dramatically lessening the global burden of disease by formulating it in human-rights terms. We are used to relating human rights to the conduct of individual and collective agents—such as prison guards, generals, corporations, and governments, whose conduct may be criticized for failing to safeguard the human rights of persons falling within their domain of responsibility. And their conduct may also be criticized (typically more severely) for actively violating the human rights of persons. In the former case, such agents stand accused of failing to fulfill positive responsibilities they have toward specific persons by not taking reasonable steps toward ensuring these persons have secure access to the objects of their human rights.<sup>14</sup> In the latter case, such agents stand accused of violating negative responsibilities they have toward all human beings by actively depriving some persons of secure access to the objects of some of their human rights.

Social (paradigmatically: legal) rules, too, can be criticized in human-rights terms. This is clearest when such rules explicitly mandate or authorize conduct that violates human rights, as with laws authorizing the enslavement of blacks and mandating the forcible return of fugitive slaves. Such laws violated the human rights of blacks. And those who participated in imposing such laws, even if they did not themselves own slaves, violated their negative responsibilities by helping to deprive blacks of secure access to the objects of their human rights.

Even social rules that do not explicitly mandate or authorize conduct that violates human rights may still violate human rights. This is most clearly the case with economic rules that avoidably produce massive extreme poverty or even famine, as exemplified by the economic regimes of feudal France and Russia, the economic rules Britain imposed on

<sup>14</sup> Here the *object* of a human right is whatever this human right is a right to—adequate nutrition, for example, or physical integrity. And what matters is *secure access* to such objects, rather than these objects themselves, because an institutional order is not morally problematic merely because some of its participants are choosing to fast or to compete in boxing matches. For a more elaborate statement of my understanding of human rights, see Pogge 2002a, 2002b.

Ireland and India (causing the Irish potato famine of 1846 to 1850 and the great Bengal famines of 1770 and 1942 to 1945), and the economic regimes temporarily imposed in the Soviet Union and China (the “Great Leap Forward”), which led to massive famines from 1930 to 1933 and 1959 to 1962, respectively.

The assertion that the mentioned economic regimes violated human rights crucially presupposes the claim that the horrendous deprivations and famines in question were in part *due to* those regimes and would have been—partly or wholly—avoided if a suitably modified regime had been in place instead. If this presupposition holds, the economic regimes mentioned were indeed in violation of human rights.

Here it may be objected that a just economic order should be immune from criticism on human-rights grounds: If a laissez-faire libertarian or communist or feudal economic order is what justice requires, then it is right that such an order should be upheld, even if doing so avoidably leads to deprivations on a massive scale.

The flaw in this objection is obvious. The objection assumes that the justice of an economic order is independent of how this order affects the fulfillment of human rights. But human rights are the core values of our moral and political discourse, central to how justice is conceived in the modern world. Social rules that avoidably deprive large numbers of persons of secure access to the objects of their human rights are, for this reason alone, unjust (assuming again that these deprivations are avoidable, wholly or in part, through suitably modified rules). In the era of human rights, then, social rules are in good part judged by their effects on the fulfillment of human rights. To be just, such rules must not violate human rights, that is, they must afford human beings secure access to the objects of their human rights insofar as this is reasonably possible.

When social rules violate human rights without explicitly mandating or authorizing conduct that violates human rights, then those who participate in upholding these rules may not be human-rights violators. They are not violators of human rights when they are sincerely and on the basis of the best available evidence convinced that the social rules they are upholding do not violate human rights (that is, that these rules contribute to the realization of human rights insofar as this is reasonably possible). Participation in the imposition of social rules constitutes a human-rights violation only when these rules *foreseeably* and avoidably deprive human beings of secure access to the objects of their human rights—when the imposers of the rule could and should have known that these rules fail to realize human rights insofar as this is reasonably possible, could and should have known that there are feasible and practicable reforms of these rules through which a substantial portion of existing deprivations could be avoided.

Much of the account I have just given is suggested by Article 28 of the 1948 *Universal Declaration of Human Rights*:

Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized. (*UDHR*, Article 28; cf. also Article 22)

Three points are worth noting about this article. First, its peculiar status. As its reference to “the rights and freedoms set forth in this Declaration” indicates, Article 28 does not add a further right to the list but rather addresses the concept of a human right, says something about what a human right is. It is then consistent with any substantive account of what human rights there are—even while it significantly affects the meaning of any human rights postulated in the other articles of this *Universal Declaration*: They all are to be understood as claims on the institutional order of any comprehensive social system.

Second, this idea about how the human rights postulated in the *Universal Declaration* are to be understood fits well with what I have just outlined—with how human rights can figure centrally in the critical examination of social rules. In fact, we can achieve perfect congruence through four plausible interpretive conjectures:

- (1) Alternative institutional orders that do not satisfy the requirement of Article 28 can be ranked by how close they come to enabling the full realization of human rights: Social systems ought to be structured so that human rights can be realized in them as fully as possible.
- (2) How fully human rights *can* be realized under some institutional order is measured by how fully these human rights generally are, or (in the case of a hypothetical institutional order) generally would be, realized in it.
- (3) An institutional order *realizes* a human right insofar as (and fully if and only if) this human right is *fulfilled* for the persons upon whom this order is imposed.
- (4) A human right is fulfilled for some person if and only if this person enjoys *secure access to the object of this human right*.

Taking these four conjectures together, Article 28 should be read as holding that the moral quality, or justice, of any institutional order depends primarily on its success in affording all its participants secure access to the objects of their human rights: Any institutional order is to be assessed and reformed principally by reference to its relative impact on the realization of the human rights of those on whom it is imposed.<sup>15</sup>

The third noteworthy feature of Article 28 is its explicit reference to the international order. When we reflect on social rules, we tend to think of the institutional (and more specifically legal) rules of a territorial state

<sup>15</sup> “Relative impact,” because a comparative judgment is needed about how much more or less fully human rights are realized in this institutional order than they would be realized in its feasible alternatives.

first and foremost. Less familiar, but no less important in the modern world, are the rules of the international institutional order, whose design profoundly affects the fulfillment of human rights, especially in the poorer and weaker countries. Recognizing this point, Article 28 requires that the rules of the international order be shaped, insofar as this is reasonably possible, so as to afford human beings everywhere secure access to the objects of their human rights.

In the world as it is, some eighteen million human beings die each year from poverty-related causes, mostly from communicable diseases that could easily be averted or cured. Insofar as these deaths and the immense suffering of those still surviving these diseases are avoidable, their victims are deprived of some of the objects of their human rights—for example, of their “right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services” (*UDHR*, Article 25; cf. *ICESCR*, Articles 11–12).

If these victims are so deprived, then who or what is depriving them, violating their human rights? Several factors, national and global, substantially contribute to the deprivations they suffer. As I have been arguing, one important such factor is the way pharmaceutical research into drugs and vaccines is incentivized under the current rules of the TRIPS Agreement as supplemented by various bilateral agreements the United States has been pursuing.

With this background, we can look once more at the question of why we citizens of the high-income countries should support a reform of the global health system that benefits others (poor people in the developing world) at our expense. The landholders of feudal France or Russia could have asked likewise. And the answers are closely analogous: We ought to support such a reform, even if it involves significant opportunity costs for us, because it is necessary for rendering minimally just (in the explicated sense of “realizing human rights insofar as this is reasonably possible”) the rules of the world economy considered as one scheme. Minimal justice in this sense is compatible with these rules being designed by, and with their greatly and disproportionately benefiting, the governments and corporations of the developed countries. However, minimal justice is not compatible with these rules being designed so that they result in a much higher incidence of extreme poverty and in much higher mortality and morbidity from curable diseases than would be reasonably avoidable.

## 7

Against this line of argument, it may be objected that accession to the TRIPS Agreement (and the whole WTO Treaty) is voluntary. Since the poor countries have themselves signed on to the rules as they are, the

imposition of these rules cannot be a violation of their human rights. *Volenti non fit iniuria* (to the willing, no wrong is done).

There are at least four distinct responses to this objection, each of which seems sufficient to refute it.

First, appeal to consent can defeat the charge of rights violation only if the rights in question are alienable and, more specifically, can be waived by consent. Yet, on the usual understanding of human rights, they cannot be so waived: Persons cannot waive their human rights to personal freedom, political participation, freedom of expression, or freedom from torture. (Persons can promise, through a religious vow perhaps, to serve another, to refrain from voting, or to keep quiet. But, wherever human rights are respected, such promises are legally unenforceable and thus do not succeed in waiving the right in question.) There are various reasons for conceiving human rights in this way: A person changes over time, and her later self has a vital interest in being able to avoid truly horrific burdens her earlier self had risked or incurred. Moreover, the option of placing such burdens on one's future self is likely to be disadvantageous even to the earlier self by encouraging predators seeking to elicit a waiver from this earlier self through manipulation of her or of her circumstances (for example, by getting her into a life-threatening situation from which one then offers to rescue her at the price of her permanent enslavement). Finally, waivers of human rights impose considerable burdens on third parties who will be (more or less directly) confronted with the resulting suffering of people enslaved or tortured or starving.

Second, an appeal to consent blocks the complaint of those now lacking secure access to the objects of (some of) their human rights only insofar as they have *themselves* consented to the regime that perpetuates their deprivation. Yet, most of those who are endangered by diseases or are severely impoverished live in countries that are not meaningfully democratic, and consent to the present global economic order by their rulers thus cannot be counted as consent by their subjects. For example, in 1995 Nigeria's accession to the WTO was effected by its brutal military dictator Sani Abacha, Myanmar's by the notorious SLORC junta (the State Law and Order Restoration Council), Indonesia's by the kleptocrat Suharto, and Zimbabwe's by Robert Mugabe and, two years later, Zaire's (since renamed the Congo) by Mobutu Sese Seko.

Third, consent to a very burdensome global regime can have justificatory force only if it was not impelled by the threat of even greater burdens. Thus, your consent cannot justify your enslavement when your consent was your only escape from continued torture or, indeed, from an accidental drowning. An appeal to consent thus blocks a complaint by the poor against the present global economic order only if, at the time of consenting, they had an alternative option that would have given them secure access to the objects of their human rights. Yet, the populations of

most poor WTO member states would have suffered even more if they had remained outside the regime. These people would still have been subject to coercively enforced global rules preventing them from offering their products in the more affluent countries or from migrating there. Thus, even the unreal case of a poor country's population voting with full information and unanimously for WTO accession does not exemplify appropriate consent if the severely deprived within this population were only given a choice between the deprivations they now endure and the even greater deprivations they would have had to endure outside the WTO.<sup>16</sup>

Fourth, an appeal to consent cannot justify the severe impoverishment of children who are greatly overrepresented among those suffering severe poverty and account for about two-thirds of all deaths from poverty-related causes (thirty-four thousand daily).<sup>17</sup> The claim that the present global economic order foreseeably and avoidably violates the human rights of *children* cannot be blocked by any conceivable appeal to consent.

## 8

Participation in the imposition of social rules constitutes a human-rights violation only when these rules *foreseeably* and avoidably deprive human beings of secure access to the object of their human rights—only when the imposers of the rules could and should have known that these rules fail to realize human rights insofar as this is reasonably possible, could and should have known that there are feasible and practicable reforms of these rules through which a substantial portion of existing deprivations can be avoided. I think this condition is fulfilled in the world today. The governments and citizens of the high-income countries could and should know that most of the current premature mortality and morbidity is avoidable through feasible and modest reforms, such as the global health-system reform outlined here. Still, with the suffering of the poor far away and invisible, powerful psychological tendencies and economic incentives suppress such knowledge through a constant barrage of rationalizations and deceptions. It may be possible to break through this barrage with a concrete plan for a feasible and realistic institutional reform that would help extend the benefits of the enormous technological and economic

<sup>16</sup> I am not disputing that joining the WTO was better for most poor states, and even for their poor citizens, than staying out. But this claim cannot defend the WTO regime (though it is often so used): Analogously, one could defend the fascist order briefly established in Europe by pointing out that countries cooperating with Hitler and Mussolini did better than countries opposing that order.

<sup>17</sup> USDA 1999, iii. The U.S. government mentions this fact while arguing that the developed countries should *not* follow the U.N. Food and Agriculture Organization's proposal to increase development assistance for agriculture by \$6 billion annually, that \$2.6 billion is ample. See *ibid.*, appendix A.

gains of the previous century to that other half of humankind currently still largely excluded from them.

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