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## **Title**

A Culture of Ethical Conduct in Research:  
The Proper Goal of Capacity Building in  
International Research Ethics

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## INTRODUCTION

International collaborative health research continues to enjoy a central position among the many strategies to improve international health and development. Although the role of health research in promoting health and development has a long history (1) recent attention has been focused primarily on the findings of the 10/90 Report of the Global Forum for Health Research,(2) which has situated staggering global health disparities against the backdrop of equally staggering disparities in health research funding globally. Among other effects, the report has placed the problem of global health and development disparities squarely in the lap of the international health research community and has awakened anew the aspirations for collaborative health research and its potential to function as a vehicle for global health and development. In a strange and terrible twist of fate, the terrorist attacks on the United States on September 11, 2001 have dramatically reinforced the importance of international cooperation of all kinds and have renewed recognition of the potential for health research collaborations to serve broader goals related to international stability and cooperation.(3)

There remain many important and pressing questions about how collaborative research can and should be structured to narrow the 10/90 gap and further broader inter-state collaborations beyond the domain of health research. None of these questions has been more thoroughly explored in recent years than that of determining the standards by which multinational collaborative research should be judged to be ethically acceptable. Some

high profile cases of questionable and even frankly unethical practices in international research (4,5) have focused attention on the nature of the potential harms that can befall host countries and their citizens in international collaborative research, primarily concerns about a predatory-style opportunism and exploitation by researchers.(6) While these cases may be the “exception to the rule” they have clearly demonstrated how unethical conduct in research, and the inability to manage and/or eliminate it, can severely compromise the potential of collaborative health research to address global health disparities. Yet these cases have also helped to elevate research ethics from a relatively obscure set of concerns for academic bioethicists to a pressing issue for funders and regulators throughout the world and a dominant theme in the vast enterprise of global health research.

In an effort to encourage a global consensus on the ethical standards that should govern international collaborative research involving human subjects, particularly research conducted in resource poor countries by partners from wealthy nations or industry, the past several years have seen an unprecedented range of activities from the development(7) and revision of major international guidance documents,(8,9) to reports from leading bioethics commissions,(10) to the proliferation of frameworks for the harmonization of research practices.(11,12) These documents and activities have fed a complex international drama in which deeply divided factions—almost exclusively in developed countries—have engaged in spirited and occasionally vitriolic debate about some of the specific rules, principles and moral commitments at stake.(13-22) Yet despite high profile cases that have crystalized public concern and attention, and despite some

successes in technical standards related to clinical drug trials (11), the debate about ethical standards has occurred largely in the abstract, and largely in the absence of the voices of the research and research ethics communities in the developing world. This debate has generated a great deal of heat, but the light it has produced seems to have illuminated the competing slogans of the rival factions as much as it has revealed the basis for more comprehensive agreement on truly collaborative research ethics. Perhaps as a result, some commentators have begun to expand the scope of the debate by encouraging efforts in capacity building in addition to hammering out agreements on rules and principles.(23)

In this paper I begin with the assumption that international collaborative health research is a worthy and promising global enterprise and that systems to promote and regulate ethical conduct in research in participant countries is an integral part of this enterprise. I will then argue that guidelines and research ethics review—on their own—are insufficient to ensure ethical collaborative research, and therefore that attention to them alone offers a weak platform for building long-term research collaborations. I will argue as well that capacity building efforts in research ethics, though innovative and promising, have placed too great an emphasis on guidelines and research ethics review, which may limit the influence of these efforts in ensuring ethical conduct in research.

Finally, I argue that we have paid insufficient attention to the nature of human subjects research as a complex social enterprise and therefore also to the demands and implications of this social enterprise for reaching agreement on standards of international

research ethics. Even a cursory examination of the research ethics enterprise—as I offer below—reveals the importance of civil society and decent government and the deeper social, economic and political conditions that enable them, for the establishment and maintenance of a strong research ethics enterprise. These underlying conditions are largely taken-for-granted by those of us who work within research ethics systems in developed countries and as a result the relationship between these social, economic and political conditions and the research ethics enterprise has not been well examined.

This line of enquiry ultimately leads me to propose a three part framework to guide international efforts in capacity building and performance assessment for national research ethics systems: (1) the establishment (or transformation) of a culture of ethical conduct in research; supported by (2) guidelines, research ethics review mechanisms, a broad range of relevant health and social policies, strong relevant aspects of civil society and government; enabled by (3) the necessary achievements in development as described by Amartya Sen in *Development as Freedom*. I will then briefly examine the implications of this approach for international collaborative research and the development of international standards in research ethics.

### **The Need to Move Beyond Guidelines, Principles and Ethics Review**

Agreement on the rules that should govern collaborative research ventures is essential to ensure that the progressive globalization of health research narrows, rather than widens, the 10/90 gap, however agreement on the rules themselves is insufficient to ensure truly ethical conduct in research. Nowhere is this better illustrated than in the case of pre-

WWII Germany. In 1931 the German government produced little-known guidelines governing research involving human subjects (24) These guidelines were arguably even more comprehensive than the Nuremberg Code,(25) which followed the famous Nazi Doctors' Trial, and embodied important ethical principles including informed consent, and yet their ability to promote ethical conduct in research was limited, as the abhorrent experiments of the Nazi doctors has documented so indelibly in our consciousness (26). The guidelines were limited in their scope and authority,(27) but their failure likely had as much to do with the general weakness of the culture of ethical conduct in research in Germany at the time, in light of the prevailing political and social influences, than with any specific flaws in the construction of the guidelines themselves.

The German example is, in no way, meant to suggest that countries that lack a sufficiently well developed culture of ethical conduct pose threats of egregious ethical violations similar to those committed by the Nazi doctors. My claim is simply that in the absence of a sufficient culture of ethical conduct, enabled by appropriate policy, political and social conditions, carefully crafted language in research ethics guidelines is not likely to ensure the intended safeguards. This is illustrated powerfully also in the U.S. General Accounting Office's review of research ethics systems in the United States. Despite an elaborate regulatory framework and extensive procedural requirements for research ethics review, the report concluded that the system did not give rise to acceptable practices (28).

Although the ethical principles that form the basis of codes of research ethics may have a unifying effect—i.e. they may function as a way to build consensus about fundamental

ideas that can be appealed to meaningfully across jurisdictions—these principles, and hence the guidelines they inform, must ultimately be interpreted against the prevailing conditions and circumstances of the specific research trial in order that their application is appropriately specified<sup>(29)</sup> and contextualized<sup>(30)</sup>. Disagreements about the ethical acceptability of a given research protocol are ultimately resolved by proposing justifications that combine attention to the guiding principle, for example as a means of framing important ethical considerations,<sup>(31)</sup> the relative importance of the specific rule or requirement in dispute, and an account of the ethical significance of the circumstances within which the research will be carried out.<sup>(32,33)</sup> Therefore, much of the disagreement about the ethical acceptability of individual studies stems not from disagreement about whether a given principle, e.g. respect for persons, is a relevant concern, but rather whether the substantive requirements of informed consent, the ethical requirement that flows from the principle, is likely to be satisfied in a given protocol. This interpretive activity requires capable people making judgements within a culture of ethical conduct.

Since the Nuremburg Code was written in 1947 virtually all of the important guidelines regarding human subjects research have adopted a similar architecture, emphasizing certain fundamental principles and commitments that were intended to be applicable universally. Although these guidelines have occupied an important symbolic role in the evolution of research ethics throughout the world, we know very little about how, precisely, these guiding frameworks have contributed to protecting human subjects and promoting ethical conduct in research. Some research on Institutional Review Boards

and Research Ethics Boards suggests, at least, that the move from guidelines and principles to specific judgements about the ethical acceptability of individual research protocols is not necessarily a linear one (34,35).

Recent efforts to clarify the ethical requirements of international collaborative research continue to involve schemes of common ethical principles (Emanuel et al., in progress) that are intended to forge agreement about the requirements of ethical research regardless of the country or cultural context of the research. But these proposals do not generally emphasize the fact that guidelines—and the principles that inform them—require interpretation, that interpretation requires trained and experienced people, and that, to act ethically, people require a supportive culture of ethical conduct.

*“Context” in international research ethics*

The health and economic disparities that exist between sponsoring countries and the developing countries in which the research is increasingly being conducted are likely to have a strong bearing on the relevance, authority and interpretation of research ethics guidelines and review mechanisms by committees in both countries. For example, there is growing concern that research sites are being selected as often for reasons of reduced cost, convenience (e.g. absence of regulatory “obstacles”) and expediency due to disease prevalence, as for sound scientific or ethical reasons. In many developing countries the lack of access to even basic health care services introduces the paradox that the populations with the greatest need for advancement in health care are often the most

vulnerable to the promise of improvement that research activity symbolizes. In many contexts, entering a research protocol is the only way to access any care at all. These problems are most acute in circumstances in which the investigators are not motivated by the desire to improve the circumstances of the populations that volunteer their time and good will to make the research possible.

In international research ethics concerns about context, i.e. about the specific features of the environment in which the research is conducted, and how these features might legitimately influence the ethical analysis, have been largely overshadowed by concerns about the appropriate set of principles and their precise articulation in guidelines. But more recently concerns have been raised over the effects of economic and health disparities on the ethics of research and the influence of the political and economic context within which research is to be carried out.(36) The 2000 Global Forum on Health Research 10/90 Report (2) documents that 90% of the world's research expenditures are targeted to 10% of the global burden of disease, mostly in the developed world.

In a recent editorial, Benatar and Singer have attempted to situate the entire enterprise of research ethics within this broader political and economic framework and highlight problems associated with wide health and economic disparities (23). Their arguments suggest roles for research ethics in attending to, and by implication alleviating some of these global disparities. For example, they argue for an expanded concept of standard of care in clinical trials that might encourage practical improvements in the way the researchers ensure equal respect for the dignity of all research subjects, and they argue

that producing tangible benefits for the health practice setting in the host country should be a central concern of those adjudicating the ethical acceptability of any given research protocol. These arguments are also increasingly prominent in the international research ethics literature (22) and have begun to appear in a wide range of recent guidance documents (7-9).

This move to broaden the range of considerations that are generally considered to be germane to the ethics of international health research stems most obviously from concerns about justice, though precise characterizations of injustice attributable to research (i.e. and that should therefore fall within the rubric of research ethics) remain scarce (37). The most notable focus of attention has been on exploitation. Although this remains a difficult concept to pin down in the context of international research ethics, there are two domains that have drawn the most attention to date: (1) that some researchers seek research subjects in contexts in which they believe that authentic informed consent and meaningful oversight are less likely to constrain and delay their studies (38); and (2) that the motives of the research sponsors are purely opportunistic, i.e. that they have no genuine interest in, or concern for, the host country people aside from seeing them as an efficient means to answer a research question that could result in personal and/or financial gains for the investigator or the sponsor in another jurisdiction.(39)

Despite a widespread and abiding faith that informed consent may neutralize the potential for exploitation in research, the broader question about how health and economic

disparities—and the underlying social, economic and political circumstances that give rise to them—might increase the likelihood of exploitation has not been satisfactorily resolved. Of course, in reality it is likely quite uncommon (though we do not know for certain) that research stems solely from such mean and underhanded motives (40), though anecdotal evidence of such motives continues to accumulate. In any case, we have not in any meaningful way exhausted the possibilities of improving the way we promote ethical conduct in research, even in countries with the most highly developed systems.

### **The Limits of Existing Approaches to Capacity Building**

If health research can further the global health objectives outlined above, then it follows that improving the capacity of developing countries to conduct health research would be a worthwhile goal. Training in research has been more readily available than training in ethics related to research, but proposals for improving the capacity for research ethics-related activities have been among the wider range of recent proposals and initiatives for improving research capacity in general. Among proposals for improvements in the ethics of international collaborative research there is also a strong emphasis on capacity building, i.e. an explicit attempt to improve a host country's capacity to manage its own research ethics enterprise. These proposals are important, and innovative, but they have important limitations.

Benatar and Singer have proposed a plan for focusing attention on capacity building in research ethics that involves the development of a series of regional training centers

around the developing world that would focus on the development of people, rather than guidelines and codes of ethics (23). Their proposal is modeled after the International Network of Clinical Epidemiology (INCLLEN), an international network of physicians and researchers committed to integrating the principles of epidemiology into clinical practice (41), and aims to build on the foundation provided by the Fogarty International Center, United States National Institutes of Health Bioethics Curriculum and Career Development Program (42), which is currently funding the development of a broad range of curricular materials and educational activities and training leaders in research ethics in the developing world. Since its inception 20 years ago, INCLLEN has trained more than 500 health practitioners in 24 countries, and, most importantly for Benatar and Singer's proposal, resulted in strong decentralized leadership in developing countries. In the turbulent aftermath of the 2000 revision of the Declaration of Helsinki (43), Benatar and Singer argue that progress will not stem from greater nuance in language or better consensus around abstract principles, but rather from preparing people for leadership and stewardship roles in developing the research ethics enterprise in their home countries(23).

Benatar and Singer's vision of a network of regional training centers achieves 3 things:

- (1) it helps to steer the focus of the debate beyond guidelines and the universalizability of principles to the development of the necessary human capital, that is the people who will direct the development of capacity in research ethics in their own developing countries;
- (2) it strongly implies a process by which poorer countries could gain increasing recognition (by foreign research collaborators and funders, in particular) of their legitimate moral authority in matters related to the ethics of research conducted within

their own countries, with their own people; and (3) this also suggests a path toward greater democratization of research in general, which could ultimately contribute to the alleviation of some of the conditions that give rise to claims of exploitation in research.

Although these ideas have strong intuitive appeal, important concerns have been expressed about whether money should be spent on training bioethics people when there are more pressing health needs that will go unaddressed as a result (44). Leaving aside for the moment the question of whether or not such a complex issue is best understood in the zero-sum terms expressed by the critics, my own concern about Benatar and Singer's model is that it does not go far enough in laying out either the ultimate goals of the regional networks, or the conditions required within a given country to bring about these goals. Both questions have a direct bearing on how we understand "capacity" in the context of research ethics. Specifically, how should "capacity" be understood for developing countries that are engaged in collaborative research ventures with researchers and/or funding from other countries?

### **Capacity to Establish and Sustain a Culture of Ethical Conduct in Research**

One way of conceptualizing "capacity" is to focus on a country's ability to establish and sustain a culture of ethical conduct in research. My *prima facie* account of what constitutes such a 'culture' has 2 general dimensions: first, the knowledge, experience, behaviour, attitudes, opinions, values, expectations, trust and moral commitments of the people who will provide the human face of the research ethics enterprise—and how their

actions are perceived by the rest of society; and second, the guidelines, public and institutional policies, legislation, regulations, institutions, public accountability and civil society mechanisms that will direct and shape the activities of the people. Together these determine the ways in which the research ethics enterprise functions, what values are influential, and how. At present, we have virtually no empirical basis for understanding these complex social phenomena in either developed or developing countries.

It is important, at this point, to state that current approaches to capacity building in research ethics are exciting and enormously promising and that none of my comments should be construed as being critical of them. Rather, my aim is to argue that, to be truly effective, the goals of capacity building activities must be made more explicit and that current capacity building efforts must be supported by actions at a deeper, more foundational level of the enterprise. How, therefore, might my goal of a culture of ethical conduct in research inform capacity building efforts in research ethics? It should be clear from my account of “capacity” above, that capacity building efforts could span a broad spectrum of activities and targets. To illustrate this spectrum I will briefly sketch two potential levels of capacity, framed in terms of the culture of ethical conduct in research—the goal of capacity building that I have outlined briefly above—that might be achieved through capacity-building activities. The first demonstrates what I believe to be representative of most current capacity building efforts in research ethics, which I call the “shallow” culture of ethical conduct, and a second “deep” culture that might follow from attention to some of the deeper social, economic and political considerations described

above. Both, it should be noted, can represent meaningful and important advances in a given country.

### *Features of a “Shallow” Culture of Ethical Conduct in Research*

“Shallow” culture has 4 main features: (1) there must be a cohort of people within the country with sufficient education, training and authority to create, refine or develop the culture of ethical conduct in research; (2) the leaders of the relevant institutions within the country must demonstrate a real commitment to the development of a culture of ethical conduct in research through meaningful actions such as committing funds in support of system development and in releasing both senior and junior people for periods of time to pursue additional education and training in research ethics; (3) there must be some infrastructure developed or committed to permit the relevant development to occur. Depending upon the degree of advancement of a given country in research ethics, infrastructure commitment may vary from access to modest support staff, office space, internet access, fax machines, and meeting space, to more elaborate staff and perhaps even designated buildings and programs; (4) there should be some form of institutional expression of the “system”, e.g., national research ethics guidelines or policies, national research ethics commission or research ethics committee, the establishment of a professional society, and/or the establishment of a specific training center, or center for advanced study and education in research ethics (and/or bioethics in general), which could sustain some focus and build momentum for further advancement.

Training, education and skill-building activities, however, no matter how comprehensive, cannot be relied upon to be decisive shapers of a culture of ethical conduct in the absence of deeper enabling conditions in public and institutional policy, public opinion, institutional support, and the necessary mechanisms to bring the training and education to bear in the research ethics enterprise. A “shallow” culture of ethical conduct in research, therefore, presumes that even when its four main features are established and function as designed, it will lack meaningful influence on the main ethos and approaches to health research policy and practice in the country. If this claim is true, then it suggests that more and different capacity building actions might be required to transform shallow culture to something with a greater ability to permeate and transform the ethos of health research.

#### *Features of a “Deep” Culture of Ethical Conduct in Research*

In addition to the first 4 conditions of “shallow” culture, therefore, a “deep” culture of ethical conduct in research is achieved when there is a successful and meaningful intergration of these features of the system within other aspects of health policy as well as other aspects of social policy and law. If guidelines and research ethics review are thought of as the “tip of the iceberg”, then “deep” culture is concentrated at the level of the rest of the iceberg, i.e., in the essential underpinnings that will maximize the value, symbolic importance and effectiveness of the research ethics enterprise within a given country. Therefore, the first feature of “deep” culture is that it is focused beyond the activities of research ethics review to concerns about deeper values in society, e.g., democratic ideals, fairness of process, legitimacy of authority, and accountability, and

that these deeper values are clearly reflected in the policy context of the research ethics enterprise.

For example, the way physicians are compensated for their participation in research is an issue that is often addressed through codes of practice of professional associations and/or institutions and may even find expression in laws and regulations. But compensation mechanisms can exert an important influence on physicians involved in research (45) and can ultimately introduce powerful motives for physicians to act, in their research activities, in ways that might fall outside the ethics and conventions of the profession in general. In a country with a “deep” culture of ethical conduct in research, approaches to physician compensation in research would minimize the likelihood that recruitment of human subjects and selection of research priorities are driven, primarily, by physicians’ financial interests. Another example is the way the privacy of health records and information related to diagnosis, treatment and prognosis are managed, either through separate legislation related to personal health information, or through a variety of laws and regulations. A country with a “deep” culture of ethical conduct in research will have recognized the great potential for ethical conflict related to privacy in health research—from epidemiology and other forms of public health research, to emerging research practices in population genetics—and struck the necessary balances, regardless of how complex or imperfect these might initially prove to be in practice. In contrast, in countries with a “shallow” culture of ethical conduct in research these issues might be addressed solely in guidelines, which might have only marginal authority and whose

enforcement is difficult, thus preserving—even if inadvertently—incentives for unethical behaviour in research.

A second feature of “deep” culture is that it provides clear and convincing public accountability for research practices, and research-related risks, within a society. The simplest form of this accountability is to ensure that human subjects in research are protected from research related risks through the implementation of appropriate safeguards, including the freedom to decline to participate in research, and scrutiny by investigators and institutional representatives. But also that when harms do occur—they are inevitable in even the best systems in the world, in part because of the unpredictable nature of biological systems—they are accompanied by fair and timely compensation, where appropriate, and adequate public accessibility to explanations of what went wrong and what has been done to rectify any existing shortcomings in the system. Relevant accountability mechanisms include the ability to withdraw funding, stop research, refuse to approve studies, or prevent institutions from carrying out research. These mechanisms may serve not only the specific purposes related to research with human subjects, but since they involve considerable public powers, in many countries of the world where such mechanisms are rare, or poorly developed, they might also provide examples of working models of accountability that could serve broader practical and symbolic purposes in society. This feature of “deep” culture assumes public support for research and a commitment to meaningful opportunities for public engagement in research.

A third feature of “deep” culture is that the country’s research ethics enterprise must be comprehensive and self-sustaining, i.e. able to function without the undue influence or assistance of other countries. This element of “deep” culture would be manifest in the moral authority that is vested in the research ethics enterprise, measured in public and professional confidence, and recognized by other collaborative research partner countries. This is anything but a *carte blanche* condition, meant to liberate the authorities from scrutiny or public accountability. Rather, it is the recognition that the development of a research ethics enterprise that is meaningful and appropriate within the broad cultural and societal norms of a given country requires the moral authority to make substantive decisions about individual research protocols and general research practices, even if some of these decisions do not mesh perfectly with judgements of other countries who might hold conflicting values, or express similar values differently. If a country has no prospect of an autonomous system in this regard, then I suspect that a “deep” culture of ethical conduct in research holds no promise of ever being realized.

Some developing countries already have a strong history of health research and some also have strong institutions and civil society. To develop “deep” culture, some of these countries may only require attention to be paid to the integration of the research ethics enterprise more thoroughly and meaningfully into the broader health and social policy context. But for other countries, their background social, economic and political circumstances may not be well enough developed to permit the flourishing of the “deep” account of capacity presented above. For these countries to develop a “deep” culture of

ethical conduct in research might require attention to even more fundamental concerns than those outlined above.

But what are these “even more fundamental concerns” and how do they relate to the research ethics enterprise? One of my main aims in this paper is to provide a plausible account of how social, economic and political circumstances in a given country—fundamental concerns—relate to the ability of that country to establish a “deep” culture of ethical conduct in research. But in order to do so, it will first be necessary to engage in a brief analysis of the nature of the research ethics enterprise itself, as viewed from the privileged perspective of a developed country with a well established research ethics enterprise.

### *The Nature of the Human Subjects Research Ethics Enterprise*

The research ethics enterprise can be thought to have two main goals: (1) to ensure that appropriate mechanisms are in place across all relevant policy domains in order to (a) maximize the protection of human subjects from research-related risks and (b) to promote ethical conduct in research; and (2) to provide a social and political context for research that is consistent with and facilitates a strong culture of ethical conduct in research. The current approach to research ethics review, regulation and oversight in developed countries generally emphasizes (1)(a), above, and involves 5 main activities: (1) identifying representatives from research institutions, research communities, and increasingly from specific patient groups and the general public to serve on research

ethics review committees and other oversight bodies; (2) scrutiny of documents, records and data, and in some cases face-to-face meetings in which the investigator's approach to a given research project or program of research may be scrutinized and challenged, regardless of her/his status within the institution; (3) the exercise of legitimate authority by these research ethics committees in approving, denying, or requiring modification to research protocols; (4) monitoring and overseeing the conduct of the research itself, including scrutiny of interim data for the purposes of ensuring the on-going safety of human subjects; and less frequently (5) imposing corrective actions, sanctions and/or penalties on researchers who find themselves in violation of the rules and/or prevailing conventions within the country. This final category also includes those cases in which the actions of investigators, their supporting institutions, and/or the sponsors of research breach standards of civil or criminal law.

For these mechanisms to operate as intended in society, it is also necessary that the investigators whose work is the subject of scrutiny, and often challenged, accept these practices as legitimate and accede to the will and judgement of the committees (with the appropriate mechanisms of appeal). In countries such as the United States, where these practices are governed by federal regulations, this also implies—more basically—that investigators, research sponsors and other interested parties will recognize and abide by the rule of law. In other countries, such as Canada, where research ethics practices are governed largely by federal guidelines (46), as opposed to a specific framework of federal regulations, interested parties must accept decisions related to approval, funding,

and potentially even interventions such as stopping trials, even in the absence of a specific legislative framework.

For these systems to work as intended, they must be administered more or less fairly and they must be perceived to function as such. In particular, it should be difficult for anyone to exert personal or political influence to shape the process or the outcomes of these processes (though there are many subtle ways in which such influence can be exerted). In order to ensure widespread acceptance or “buy-in” for these systems, therefore, it is likely that there must exist a high level of trust in society in some of the basic transactional practices and in the legitimacy of the institutions involved. This, in turn, presumes to a fairly high degree, a culture of accountability between public institutions and the people they serve. Whether this is best obtained by social contract mechanisms or through elaborations of the legal system is debatable.

The activities that form the bulk of research ethics practices are quite highly specialized. In order for the research ethics enterprise to function in the ways described above, it is essential that the appropriate educational opportunities exist in medicine, public health, research methods, concepts of risk and risk assessment, law, and philosophy—to name a few—and that sufficient opportunities for gainful employment in (or meaningfully related to) the research ethics enterprise exists for people with specialized training in these disciplines. Likewise, and even more fundamentally, research ethics, like any social enterprise, requires a healthy working population. The current social destruction being wrought by HIV/AIDS in sub-Saharan Africa and other areas hardest hit by the pandemic

offer a chilling illustration of how disease and inadequate access to healthcare can fundamentally alter the nature and importance of a wide range of social enterprises.

Finally, research ethics, as practiced in developing countries, takes as its fundamental premise that human participants must be free to determine whether or not they are willing to assume the risks of potential harm posed by their participation in any given research project—risks that have been deemed, in advance by an appropriately constituted research ethics committee, to be reasonable in relation to any anticipated benefits.

Although there are many important instances in which the communication of risk, the weighing of risks and potential benefits, and judgements about the reasonableness of assuming personal risk are complex, confusing and even troubling for prospective participants, none of these undermines the central tenet that the prospective participants must have the freedom to maintain personal boundaries of risk and that inducements (financial for example) are not permitted to cross those boundaries. Institutional mechanisms to limit risk exposure, such as a research ethics committee's directive to an investigator to alter a potentially risky feature of a given protocol, complement this central feature, but they do not alter it.

My motivation for elaborating the nature of the research ethics enterprise in this way is to encourage a greater appreciation of the challenges and important opportunities related to capacity building efforts in research ethics in developing countries; particularly in achieving a “deep” culture of ethical conduct in research. Even those of us who work

within such systems take them largely for granted, yet to ignore these details simply because they are overly familiar is, I believe, to miss an important opportunity.

### **The Roots of a “Deep” Culture of Ethical Conduct in Research**

The dimensions of the research ethics enterprise that I have described above reflect deeper and more fundamental aspects of developed societies than we usually pay attention to in research ethics. Yet it is these foundational aspects of society that provide the necessary underpinnings of the research ethics enterprise and that, I believe, provide the somewhat elusive link between social, economic and political influences and research ethics. For these reasons, my approach to characterizing the research ethics enterprise has not been haphazard. Instead, it has been informed by Amartya Sen’s recent account of development as freedom (47) in which he argues that development is best understood as the manifestation of 5 fundamental freedoms in society—political freedoms, social opportunities, economic facilities, transparency guarantees and protective security—and that these freedoms represent both a means to, and the proper ends of, development. By utilizing Sen’s framework, I am adopting, in effect, a three-step argument: (1) that a culture of ethical conduct in research, characterised by ethical behaviour, attitudes and shared critical moral commitments, is necessary for mechanisms such as guidelines and research ethics review to function as intended in a given country; (2) that a culture of ethical conduct in research requires the support of a rich and comprehensive system of policies and accountability mechanisms across many sectors in society (among many other things); and (3) that these conditions are more reliably produced in societies that

have achieved adequate development, according to Sen's model. What constitutes "adequate" development, or adequate *demonstration* of development, are, in themselves, important and challenging questions. I will deal with them only very briefly below.

In *Development as Freedom*, Sen reveals a promising link between his concerns about development and the feasibility of any broad social enterprise:

What people can positively achieve is influenced by economic opportunities, political liberties, social powers, and the enabling conditions of good health, basic education, and the encouragement and cultivation of initiatives. The institutional arrangements for these opportunities are also influenced by the exercise of people's freedoms, through the liberty to participate in social choice and in the making of public decisions that impel the progress of these opportunities. (47, p. 5)

If my assessments of "deep" culture and the nature of the research ethics enterprise are correct, then Sen's framework would appear to provide a useful explanatory framework for why poor social, political and economic conditions in society—the absence or poor development of Sen's five fundamental freedoms—hinder the successful development and functioning of the institutions, policies, government and other civil society mechanisms that I have argued are necessary to support a "deep" culture of ethical conduct in research. But the potential relevance of his framework to the social enterprise of research ethics becomes even more apparent as he elaborates on the role of social values:

"...social values and prevailing mores...can influence the freedoms that people enjoy and have reason to treasure. Shared norms can influence social features such as gender equity, the nature of child care, family size

and fertility patterns, the treatment of the environment and many other arrangements and outcomes. Prevailing values and social mores also affect the presence or absence of corruption, and the role of trust in economic or social or political relationships. The exercise of freedom is mediated by values, but the values in turn are influenced by public discussions and social interactions, which are themselves influenced by participatory freedoms.” (47, p. 9)

Thus the fundamental social, economic and political concerns related to the research ethics enterprise that I have described above are, in fact, reflected in the 5 fundamental freedoms that, in Sen’s view, form the proper ends of sustainable development.

Political freedoms are first in Sen’s list. These refer to people’s opportunities to choose leaders and by what principles, the ability to scrutinize and criticize authorities, the freedom of political expression and an uncensored press, opportunities of political dialogue, dissent and critique as well as voting rights and participatory selection of legislators and executives.

Economic facilities refer to opportunities for economic exchange of all kinds and the enabling powers of income and wealth in society. Social opportunities refer to arrangements for education, health care and related opportunities, which influence the individual’s ability to live a better life and for more effective participation in economic and political activities. Transparency guarantees refer to the understanding that society operates on some basic presumption of openness and trust. Transparency guarantees have a clear role in preventing corruption, financial irresponsibility and underhanded dealings.” And finally, protective security provides a scheme of social and institutional arrangements for preventing the affected population from being reduced to abject misery, and in some cases even starvation and death. (47, pp. 38-40)

Sen's framework represents an original way of understanding development, but it also, inadvertently, provides a powerful way of conceptualizing the social, economic and political conditions necessary to support a culture of ethical conduct in research. The specific relationship between Sen's freedoms and the features of the research ethics enterprise described above are shown in Table 1.

Table 1. Sen's Fundamental Freedoms and the Research Ethics Enterprise

Freedoms	Description	Research Ethics Enterprise
Political Freedoms	<ul style="list-style-type: none"> <li>-opportunities to choose leaders</li> <li>-ability to scrutinize and criticise authorities</li> <li>-freedom of political expression and an uncensored press</li> <li>-opportunities for political dialogue, dissent and critique</li> </ul>	<ul style="list-style-type: none"> <li>-establishing fair and appropriate representation on research ethics review committees</li> <li>-scrutiny and challenges of investigators' proposals</li> <li>-widespread acceptance of authority, legitimacy and decisions of research ethics review committees (with appropriate appeals mechanisms)</li> <li>-authority to impose corrective actions, sanctions or penalties for non-compliance</li> </ul>
Economic Facilities	<ul style="list-style-type: none"> <li>-opportunities for economic exchange of all kinds</li> <li>-enabling powers of income and wealth</li> </ul>	<ul style="list-style-type: none"> <li>-economic feasibility of participating in the research ethics enterprise</li> <li>-sufficiently high economic priority granted to research ethics in society so as to ensure protection and accountability commensurate with research activity and potential for harm</li> <li>-requires strong civil society, which is enabled by economic facilities</li> </ul>
Social Opportunities	<ul style="list-style-type: none"> <li>-arrangements for education, healthcare and related opportunities</li> </ul>	<ul style="list-style-type: none"> <li>-research ethics requires appropriate educational opportunities in many disciplines</li> <li>-meaningful opportunities for gainful employment for people who pursue specialized training in research ethics</li> <li>-general necessity of a healthy working population</li> </ul>

Transparency Guarantees	-basic assumptions of openness and trust in society -mechanisms that minimize risk of corruption, financial irresponsibility and underhanded dealings	-independence of committees from undue institutional and/or personal influence -requires high level of trust in basic transactional practices in society
Protective Security	-scheme of social and institutional arrangements for preventing serious harm	-requires mechanisms to ensure that research participants are free to determine personal boundaries of risk -requires mechanisms, and appropriate authority, to limit risk exposure -requires authority to challenge and end, where necessary, research activities that entail undue risk

### **Opportunities and Implications of the Proposed Model**

The proposed model of the relationship between development and the ability to support and maintain a culture of ethical conduct in research arose out of attention to the question: by what standards should international collaborative research be judged to be ethically acceptable? There are at least 3 ways in which the proposed model contributes to a more durable answer to the question than currently exists. First, it provides a preliminary account of how focusing capacity-building efforts on guidelines and research ethics review alone will be insufficient to ensure a “deep” culture of ethical conduct in research. Ideally, this might also help to identify potential features and shortcomings in “shallow” cultures of ethical conduct, encourage a more comprehensive view of capacity-building approaches, and encourage participation in capacity-building efforts by a wider range of actors.

Second, by providing an account of how a country's social, economic and political conditions might underpin the weight and authority of its guidelines and research review mechanisms, the proposal expands the prevailing view of research ethics to a more complex social enterprise. One potential effect would be to encourage the increased recognition of the research ethics enterprise, not simply as the domain of academic bioethicists, but as an important and integral dimension of a country's health research policy in general, with all the attendant challenges. And third, this expanded account of the research ethics enterprise and its social, economic and political underpinnings provides a robust conceptual framework upon which capacity-building objectives and comparative analyses may be based.

Although strengthening the research ethics enterprise is a reasonable goal for any individual country to pursue, there are also other policy objectives related to the ethics of international collaborative research that would require means of comparing the performance of the research ethics enterprise between and among countries. One example is the World Health Organization's World Health Report, which in 2004 is scheduled to examine the performance of health research systems. Since the research ethics enterprise is now widely acknowledged to be an integral part of any well-functioning system of health research, it is conceivable that the analysis provided above could contribute to the conceptualization of measures used to make global comparisons of health research systems. Whether or not this exercise might result in some sort of global standards for research ethics systems is a question that may become relevant when the comparisons are made public.

Another example of a potential application for comparative purpose is in the United States' mechanism for determining whether a given country's institutions provide protection for human subjects that is at least equivalent to those provided in the U.S. regulations governing human subjects research (48). These rulings of "equivalent protection", as they are known, have received important attention recently both in the National Bioethics Advisory Commission's Report on Ethical and Policy Issues in International Collaborative Research (10) and in the policy objectives of the Office of Human Research Protections, one of the U.S. agencies charged with the authority to make such rulings. Although these rulings could play an enormously important role in fostering and developing collaborative research relationships between the United States and other countries of the world—developed countries included—I believe there is a considerable risk in adopting measures of equivalence that are based on too "shallow" an account of the capacity of research ethics systems. The proposed model might be used, not only to provide a conceptual framework upon which to construct measures of equivalence, but also as a platform to frame and encourage on-going collaborations and capacity-building relationships.

At first glance, both of the potential applications of the "deep" culture goal of capacity building might appear daunting, not only in measurement terms—which they surely are—but also in terms of the practical challenges they pose for developing countries. But I believe that these criticisms are poorly founded for 2 main reasons. First, the more comprehensive account of the research ethics enterprise provided in the framework need

not—and should not—be seen merely as a checklist for a cross-sectional account of performance. In fact, this is likely to be the least productive application of such a framework. Improvements are likely to come from long-term attention to the relationships between various levels of the framework, the measures themselves would serve only to gauge the effectiveness of interventions and to track overall progress.

Second, if capacity building is viewed as a form of international collaborative engagement, then it is surely conceivable that this framework, or a refined version of it, could provide on-going guidance for developing countries in thinking through some of the many relationships between a wide variety of factors in a society and how these might enhance or impede the local culture of ethical conduct. In this way, the framework may serve as guide to development and evaluation of various interventions, such as educational programs, policies, and political reforms, and may, therefore serve as a valuable and constructive tool for self-directed development, rather than a menacing, punitive one to be used by another country to impose foreign values and publicize poor performance. There is also no reason whatsoever that such a framework could not be used in developed countries as well, perhaps as a way to direct comparative, collaborative empirical research in this area that might benefit developed and developing countries alike.

Finally, as the importance of open and mutually respectful foreign relations grows by the day, I submit that the framework described above of a culture of ethical conduct supported by a robust policy environment and accountability mechanisms, and enabled

by appropriate achievement in development, if envisioned as a framework for examining and improving the capacity of developing countries to participate wholly in international collaborative health research, might also function as a basis for furthering other international policy goals beyond health research, such as human rights, and even technology transfer and trade.

## **Conclusions**

Current efforts to improve research ethics in the developing world focus inordinately on guidelines and research ethics review. Although these are necessary activities, I have argued that for these mechanisms to function fully as intended in a given country requires a “deep” culture of ethical conduct in research. This culture of ethical conduct, in turn, requires the support of a rich and comprehensive system of policies and accountability mechanisms across many sectors in society. And finally, this system of policies and accountability mechanisms must be supported by certain fundamental social, economic and political conditions in a society, which I have described using Sen’s model of instrumental freedoms. This deeper account of the research ethics enterprise and the necessary enabling mechanisms may offer fruitful avenues for comparative analyses aimed at improving the capacity of individual countries to engage more fully in international collaborative research.

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