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Anthropology and Global Health

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political economy of health, critical medical anthropology, globalization of bioscience, international health policy, civil society, global health governance, population health

Abstract

This article addresses anthropology's engagement with the emerging discipline of global health. We develop a definition for global health and then present four principal contributions of anthropology to global health: (*a*) ethnographic studies of health inequities in political and economic contexts; (*b*) analysis of the impact on local worlds of the assemblages of science and technology that circulate globally; (*c*) interrogation, analysis, and critique of international health programs and policies; and (*d*) analysis of the health consequences of the reconfiguration of the social relations of international health development.

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DEFINING GLOBAL HEALTH

Defining global health in relation to anthropological research and practice is a challenge. Although in common use in a variety of disciplines, the term defies simple delineation. It frequently serves as a gloss signaling complexities inherent in linking health and accelerating and intensifying global processes, although it sometimes simply refers to work that has an international (read: low-income country) dimension. In his recent book on the subject, Nichter (2008) suggests that anthropology intersects global health along a number of dimensions, ranging from the study of popular health culture and local perceptions as a way to both critique and improve international public health, to the study of ethics, governance, and emergent forms of biological citizenship. Cast in such a broad framework, though, these intersections could characterize much of the development of medical anthropology to the present, including, especially, much of the ethnographic applied research on local social and cultural factors linked to improving community health in developing countries (Foster 1976; Hahn & Inhorn 2009; Inhorn & Janes 2007; Nichter 1989, 1991; Paul 1955). To further complicate matters, until recently anthropologists have not typically invoked the term global health as a referent for a subdisciplinary domain of research or practice or in description of their own identity as scholars. Although a recent upsurge in publications and several recent editorials suggest that global health may at last be finding a home in anthropology, definitional clarity is needed (Adams et al. 2008, Erickson 2003, Inhorn 2007a, Nichter 2008, Pfeiffer & Nichter 2008, Whiteford & Manderson 2000b).[1]

As noted, global health is used to either supplant or mirror the longstanding conceptual domain of international health. This distinction is complicated by the fact that international health references a better-defined set of research and applied skills, many of which are derived from the disciplines that constitute public health and development studies (including anthropology; e.g., Nichter 2008). In contrast, global health remains a diffuse and highly diverse arena of scholarship and practice (Inst. Med. 2009, Macfarlane et al. 2008). The political scientist Kelley Lee, a prolific writer on global health, distinguishes the two by highlighting the construct of transnationalism. Lee argues that global health, as opposed to international health, should be a field of scholarship and practice that focuses on health issues that transcend the territorial boundaries of states (Lee 2003c). International health becomes global health when the causes or consequences of ill health "circumvent, undermine, or are oblivious to the territorial boundaries of states, and thus beyond the capacity of states to address effectively through state institutions alone" (Lee et al. 2002, p. 5).

Lee (2003a,c) argues for a model that specifically positions health as an outcome of processes that have intensified human interaction, given that previous boundaries separating individuals and population groups "have become increasingly eroded and redefined, resulting in new forms of social organization and interaction across them" (Lee 2003a, p. 21). She identifies three such boundaries or dimensions of globalization: the spatial, the temporal, and the cognitive. As she and others note, in this sense global health has come to occupy a new and different kind of political space that demands the study of population health in the context of power relations in a world system (Brown et al. 2006, Kickbush 2003, Lee 2003c).

Lee's model merges with writing in anthropology and sociology that looks at globalization from the perspective of local, though not necessarily spatially bound, social contexts. Appadurai (1991, 1996), for example, has invoked the idea of "scapes" that have come to

[1] A review of articles indexed in PubMed reflects both an increasing tendency to cast medical anthropological work as global health and an increasing diversity of subjects so classified. Using the search terms "anthropology" and "global health," PubMed returns (in January 2009) ∼2000 citations from its complete database (dating to the mid-1960s). Of these, about half have been published since 2004. A review of titles indicates a dizzying array of subjects, ranging from the narrowly epidemiologic to the broadly programmatic.

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stand in place of older place-based divisions. Burawoy (2000), who with his graduate students developed a theoretical and methodological program to "ground globalization," observes that the "mishmash of migrations, capital flows, hostilities, and opportunities jostling within the hot signifier of globalization" (p. ix) can be sorted along three axes. These axes are global forces, including global economic and political processes as mediated by agents, institutions, and ideas; global connections, referring to the underlying social grids, networks, flows, and new forms of sociality; and the global imagination, which addresses the adoption of values and images that circulate globally.

Burawoy takes these abstractions of globalization and applies them to understand something local. Yet what constitutes the "local" in the context of globalization is contested (Ferguson 2005, Janes 2004, Morgan 2001, Ong & Collier 2005a). Although the concept of locality is worthy of extended analysis, we take a pragmatic approach: As ethnographers we study people-in-places or people-in-contexts. We thus prefer the definition advanced by Ginsburg & Rapp (1995b): "[T]he local is not defined by geographical boundaries but is understood as any small-scale arena in which social meanings are informed and adjusted" (p. 8).

What does this mean for understanding health? Both theoretically and methodologically the task is to understand how various assemblages of global, national, and subnational factors converge on a health issue, problem, or outcome in a particular local context. Ong & Collier (2005a) refer to these processes collectively as the "actual global," and they prefer the more fluid, irreducible, and emergent concept of the "global assemblage" to "the global": An assemblage "does not always involve new forms, but forms that are shifting, in formation, or at stake" (p. 12). These heterogeneous global assemblages interact with local institutions, social worlds, and cultural identities through unpredictable and uncertain processes (Whiteford & Manderson 2000b). Consistent with Burawoy's (2000) approach to grounded globalization, anthropological work in global health thus requires a focus on the instantiation of global assemblages in local social arenas, however defined. Methodologically, Burawoy (2000) argues for the grounding of globalization through what he identifies as the extended case method: "extending from observer to participant, extending observations over time and place, extending from process to external forces, and extending theory" (p. 28). In so doing, the ethnographer is positioned to "construct perspectives on globalization from below" (p. 341).

With this information as a brief background, and for purposes of this exercise, we offer the following definition of global health as it pertains to anthropology: Global health is an area of research and practice that endeavours to link health, broadly conceived as a dynamic state that is an essential resource for life and well-being, to assemblages of global processes, recognizing that these assemblages are complex, diverse, temporally unstable, contingent, and often contested or resisted at different social scales. This includes work that focuses on health inequities; the distribution of resources intended to produce health and well-being, including science and technology; social identities related to health and biology; the development and local consequences of global health policy; the organization of health services; and the relationship of anthropogenic transformations of the biosphere to health. The ultimate goal of anthropological work in and of global health is to reduce global health inequities and contribute to the development of sustainable and salutogenic sociocultural, political, and economic systems.

Although global health conceptually includes all peoples regardless of social, economic, and political contexts, its ethical and moral commitment is to the most vulnerable. However, and given the impending and hitherto unprecedented scale of global catastrophe that environmental destruction, mass species extinction, and anthropogenic climate change presage, global health might benefit from redefining the vulnerable to include all of us (McMichael & Beaglehole 2003).

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So defined, the anthropological project in global health can be arranged along several axes. Here we review what we consider key arenas of research and practice: ethnographic studies of health inequities in political and economic contexts; analysis of the impact on local worlds of the assemblages of science and technology that circulate globally; interrogation, analysis, and critique of international health programs and policies; and analysis of the health consequences of the reconfiguration of the social relations of international health development.

EXPLAINING HEALTH INEQUITIES

The anthropological contribution to the study of health inequities has primarily been to ground globalization (as anticipated by Burowoy 2000 and Nichter 2008) through exposing processes by which people are constrained or victimized or resisting external forces in the context of local social worlds (Baer et al. 2003; Farmer 1997, 2003, 2004; Farmer et al. 1996; Kim et al. 2005; Maternowska 2006; Pfeiffer & Nichter 2008; Scheper-Hughes 1993). This research encompasses different registers, mainly in the depth of engagement with local materials, the care by which the local is nested within higher-level social structures, and the degree to which the analysis is used as a platform for public health advocacy. However, this work tends to share a common, critical theoretical perspective that focuses on explicating or grounding health inequities in reference to upstream constellations of international political economy, regional history, and development ideology. It is closely linked with critical medical anthropology, a research tradition that seeks to identify the social origins of distress and disease, recognizing that these origins are ultimately located within the processes and contradictions inherent in the capitalist world system (Baer et al. 2003, Singer & Baer 1995). Farmer (2004) has used the concept of "structural violence" to explain this impact of political-economic regimes of oppression on the health of the poor.

Such work has contributed to redefining the concept of risk in epidemiology by redirecting attention from risky behaviors to structural factors that constrain or determine behavior. For example, early reports on the epidemiology of HIV/AIDS tended to focus on individual behaviors rather than on the impact of poverty and marginality that differentially affected men and women within particular populations and communities (Farmer et al. 1996, 2001; Simmons et al. 1996). Pointing to the tendency of some public health researchers to conflate poverty and cultural difference, Farmer and colleagues argued against "immodest claims of causality" and for a focus on, and mitigation of, the structural violence that produces ill being on a massive scale among the poor (Farmer 2003, Farmer et al. 2001, Simmons et al. 1996, Singer 1997). In similar fashion, anthropological research on infectious diseases, particularly HIV/AIDS, TB, and cholera, has contributed significantly to moving global public health away from a narrow focus on risk groups (Baer et al. 2003, Trostle 2005).

The social origins of infection with HIV are often bound up with or linked to a number of other threats to health and well-being, and in turn, the coexistence of two or more diseases may synergistically interact to produce a higher degree of pathogenesis (an example would be HIV and TB coinfection). Termed syndemics, these synergistic processes suggest a biosocial model of disease (Nichter 2008, Singer 2009, Singer & Clair 2003) that conceives "of disease both in terms of its interrelationships with noxious social conditions and social relationships, and as one form of expression of social suffering. . . it would make us more alert, as well, to the likelihood of multiple, interacting deleterious conditions among populations produced by the structural violence of social inequality" (Singer & Clair 2003, p. 434).

Many researchers experience a tension between a close rendering of the local and effective engagement with the global. Analytically and methodologically, how does one extend ethnographic work to incorporate globalization while portraying faithfully the rich human stories

that bring voice to the poor and suffering, without conceptually flattening, simplifying, or objectifying one or the other (Butt 2002)? Farmer and his colleagues often juxtapose stories of individual suffering with political-economic givens, offering sometimes thin analyses of intervening processes and structures. Some have observed that the concept of structural violence is a black box, rarely unpacked (Bourgois & Scheper-Hughes 2004, Wacquant 2004). Future work on global health inequities might thus profitably employ ecosocial epidemiology (Krieger 2001) by addressing, for instance, the interplay among exposure, susceptibility, and adaptation at meso- and macroscales across the life course (Nichter 2008). Application within global health contexts of the construct of "intersectionality" also provides a way to unpack the concept of structural violence. Derived primarily from feminist studies, this theoretical and methodological perspective emphasizes the importance of simultaneously considering how different aspects of social location (e.g., gender, ethnicity, class, age, geography, sexual identity) interlock and the impact of systems and processes of oppression and domination (Hankivsky & Cormier 2009, Hulko 2009).

Whether explicitly identified as critical medical anthropology or not, a substantial body of scholarly work in anthropology seeks to link wider social, economic, and political forces to local experiences of sickness and suffering. We believe that this work is an important adjunct to the emerging scholarship on the social determinants of health that tends to focus more on patterns evident at population levels (Comm. Soc. Determinants Health 2008). A few examples include studies of extreme hunger and scarcity in northeastern Brazil (Scheper-Hughes 1993); the global circulation of tobacco and its impacts (Nichter & Cartwright 1991, Stebbins 1991); parasitic and infectious diseases (Briggs & Mantini-Briggs 2003, Farmer 1999, Feldman 2008, Ferguson 2005, Inhorn & Brown 1997, Kendall 2005, Manderson & Huang 2005, Whiteford & Hill 2005); reproductive health, fertility, and infertility (Inhorn 2003, 2007b; Janes & Chuluundorj 2004; Maternowska 2006; Morsy 1995); mental ill health (Desjarlais et al. 1995, Kleinman 1988); alcohol and drug use (Singer 2008); and life style transitions and noncommunicable diseases (Dressler & Bindon 2000, Evans et al. 2001, McElroy 2005).

Although anthropologists have engaged with many of the core themes of health equity studies in global public health, they lag in taking up some emerging concerns. Gaps are apparent in the domain of environmental change affecting and affected by global processes. Examples range from climate change broadly (Baer & Singer 2009, Guest 2005, McMichael & Beaglehole 2003, Patz et al. 2005) to specific problems such as microbial resistance (Orzech & Nichter 2008). Many of the models of human impacts of climate change point to the need for more research to identify factors that affect the vulnerabilities of local populations in the context of political economy (Intergov. Panel Climate Change 2007). We anticipate that in the next decade medical anthropology will begin to investigate more systematically the relationship of global environmental transformations to health.

GLOBAL TECHNOSCAPES

Invoking the term technoscape, Appadurai (1996) refers to the "global configuration... of technology, and the fact that technology, both high and low, both mechanical and information, now moves at high speeds across various kinds of previously impervious boundaries" (p. 34). The global technoscape as it pertains to health is comprised of an inextricable mix of things (e.g., medicines, medical devices, machines), techniques (e.g., medical procedures), and bundles of shared understandings and epistemological practices that together constitute science in the global north. Far from being a homogenizing influence, the global circulation of science and technology engages various localities as one component of a global assemblage (Ong & Collier 2005a). This assemblage of things, ideologies, and representations interacts with communities in diverse ways, both

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shaping and being transformed by local beliefs and practices. Questions central to investigation of global science concern how paradigms, practices, and results are negotiated and unfold far from their places of origin (Adams et al. 2005). As many scholars have noted, the products and purported benefits of science and technology are unevenly distributed; some sites and groups have greater access than others do (Ginsburg and Rapp 1995b, Inhorn 2003).

Examples of key works in this area include the local impact of biomedical research practices, such as those involving translation of the ethical principles of scientific research, especially clinical trials, in specific cultural contexts (Adams et al. 2005, Petryna 2005); the circulation of medicalized objectifications of body and behavior, such as those having to do with sexuality in this era of HIV (Parker 2000, Pigg & Adams 2005); the transformations of local beliefs and understandings about the body, life, and death that are entailed by the globalization of human organ replacement therapies (Lock 2001, Marshall & Daar 2000); local acceptances of and resistance to contraceptive technologies (Maternowska 2006, Rak & Janes 2004); the complex local/global dynamics of organ transplantation and medical tourism (Cohen 2005; Scheper-Hughes 2000, 2005), including the definitional exercises needed to create harvestable tissues and organs (Lock 2001, Marshall & Daar 2000); and cases illustrating complexities of corporate practices, medicalization, and the politics of biomedical knowledge through the interwoven dynamics of drug production, marketing, and sales practices, the classification of disease, and patterns of clinical practice (Applbaum 2006, Hayden 2007, Singer & Baer 2008).

A particularly robust area of research has focused on the globalization of reproductive and prenatal diagnostic technologies (Browner & Sargent 2010; Erikson 2003; Ginsburg & Rapp 1995a; Inhorn 2003, 2005, 2007b; Ong & Collier 2005b). Writing of the globalization of treatments for infertility, Inhorn (2003) observes that "[l[ocal considerations, be they cultural, social, economic, or political, shape and sometimes curtail the way in which these Western-generated technologies are both offered to and received by non-Western subjects" (p. 1844). Cultural or religious proscription of procedures such as donor insemination has led to increased global demand and rapid circulation of more expensive technologies such as in-vitro fertilization (Inhorn 2003). In Egypt, for example, men and women contending with infertility are confronted by constraints that are deeply embedded in local social and cultural contexts. These arenas of constraint include local understandings of reproductive biology, social and economic barriers to access, gender dynamics within marriage, and local understandings of Islam (Inhorn 2003, p. 1844; 2005; 2007b).

Globalization also sets into motion people, for example, the export of physicians and nurses (the "brain drain") from low-income countries to rich countries (Pfeiffer & Nichter 2008), and "medical tourists" and others who travel to places where desired technologies exist or are affordable (Kangas 2002). As noted above, it also enables the flow of organs, tissues, and genetic materials (Marshall & Daar 2000, Scheper-Hughes 2005). Described as an artifact of "second coming" capitalism, the worldwide spread of medical procedures and technologies has produced "strange markets and 'occult' economies" (Comaroff & Comaroff 2001, cited in Scheper-Hughes 2005, p. 149).

Bioscience is not the only set of ideas about bodies, physiology, and health that circulates globally. Countervailing creativities also exist, whereby what were formerly "local" and "nonwestern" engage both the imagination and the markets at the center of the world system. This is the case for Asian medicines, both brought by immigrants and practiced by immigrant communities, but also adopted by New Agers and others challenging the hegemony of conventional biomedicine. In their places of origin and their global circulation, the content and practice of these medical traditions are transformed (Alter 2005, Høg & Hsu 2002, Janes 2002). In many cases these processes of transformation involve at their core the

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commoditization of medicinal substances, which is in turn based on the reduction of complex systems of diagnosis, explanation, and healing to the exchange and consumption of medicinal substances (Janes 1999).

Medicines—*materia medica*—are at the heart of much of what we might define as "medical technologies." Although medicines, especially pharmaceuticals, were ignored as a focal topic more often than not by medical anthropologists in the first decades of the discipline, work by van der Geest and other anthropologists in the 1980s and 1990s initiated a florescence of research on their uses in the context of global influences and on factors affecting their production, distribution, demand, and consumption (Trostle 1996; van der Geest et al. 1988, 1996). This trend continues, spurred in part by the ethical and practical challenges represented by the need for people everywhere who live with HIV/AIDS to receive treatment (Farmer et al. 2001, Robins 2009, Whyte et al. 2006). Addressing access needs requires investigation into pharmaceutical governance, trade practices, patent protection, distribution channels, and alternative industries and markets, as well as local organizations and the cultural and ritual properties of medicines (Petryna et al. 2006). Approaches to understanding how medicines function in society increasingly include attention to the context of global assemblages, including greater attention to formal and institutional sectors (Hayden 2007, Kim 2009, Mather 2006, Oldani 2004). As anthropologists reflect on medication use, including not just underuse but also overuse, inappropriate use, and errors in delivering appropriate medications to patients, they increasingly situate these practices within global institutional and perceptual systems (Nichter 2008). Medicines, whether originating in local traditions or developed through the pharmaceutical pipeline, are global citizens.

One dimension of the global circulation of expert, biomedical knowledge on disease, therapeutic regimes, and prevention is the creation of novel social forms (Biehl 2007, Lee 2003a, Nguyen 2005, Rose & Novas 2005). In the context of HIV, notes Nguyen (2005), these groups are "more than social movements articulated around objectives" and are a "complex biopolitical assemblage, cobbled together from global flows of organisms, drugs, discourses, and technologies of all kinds" (p. 125). Nguyen is interested particularly in how the constellations of technoscientific understandings of prevention and treatment that together constitute the global AIDS industry are translated locally by groups and organizations to mobilize a response to the epidemic. Similarly, Petryna (2002) shows how the Chernobyl disaster and its impacts on health provided an avenue for affected individuals, joined by a biologically mediated identity, to make claims on the state for resources. The development of therapeutic groups is increasingly entangled with the industry of health development (Nguyen 2005, p. 125). This form of citizenship represents evolving subjectivities, politics, and ethics that result from the globalization of biomedical developments and discoveries (Ecks 2005, Rose & Novas 2005).

INTERROGATING HEALTH POLICY

Analysis of the formation, dissemination, and local consequences of expert knowledge forms the core of the anthropological critique of global public health policy (Castro & Singer 2004, Whiteford & Manderson 2000b). This critique focuses on both the process and consequences of policymaking: ideological and political-economic relations that influence decision makers and the policymaking process and the impacts, intended or otherwise, of specific policies on the health and well-being of the intended beneficiaries. In regard to the latter, it is common for observers to report on the problems inherent in localizing global health policies (Whiteford & Manderson 2000b). Central to the interrogation of health policy, an area only a few anthropologists have explored in any depth (e.g., Justice 1986), are the processes by and through which the substances of international health policymaking—knowledge,

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ideology, politics of representation, competing vested interests, processes of persuasion and advocacy, etc.—come to constitute it. In a pure and perhaps idealized form, policy represents translating knowledge into action. What are these processes of translation? Is it possible, thinking here in ethnographic terms, to expose these processes through careful analysis of global policymaking communities? And how might anthropologists proactively affect these translational processes?

Nichter (2008) suggests that policymakers tend to simplify and frame problems in ways that limit the thinking about possible solutions; these "key social representations" dominate health and development discourse as "master narratives" (p. 2). Lee & Goodman (2002) argue that the networks of so-called experts in global health tend to be fairly small but are positioned strategically to create and successfully advocate for solutions to key international agencies. Such networks comprise what are in international relations and globalization literatures termed epistemic communities (Adler & Haas 1992), loose networks of actors that develop common frameworks of knowledge, values, and beliefs that underlie configurations of public health policy and action. Although presumably oriented to technical matters, these epistemic communities are powerful because they, as representatives at least implicitly of the global capitalist class (Singer & Castro 2004), can set agendas, frame issues, identify problems, and propose solutions. These networks extend into major universities, especially in the fields of economics and public health (Lee & Goodman 2002) and are now at the core of global health governance (Adams et al. 2008).

Van der Geest (2006), in commenting about pharmaceutical matters, critiques an overemphasis in global health on policies as a solution, commenting about the lip service and culture of policy makers whose mandate is to produce planning reports and documents (e.,g., about essential medicines, their distribution, etc.) but who are not invested in program implementation. Whyte & Birungi (2000) found that World Health Organization (WHO)-inspired model policies were ineffective in changing local-level and lay practices around inappropriate prescription and use of pharmaceutical medicines. Hardon (2005), also critical of policymakers, asserts that their work often entails a focus on "magic bullets." She notes that recent policy shifts reflect a growing acknowledgment in the policy sectors that people without economic resources or literacy can and do use HIV/AIDS treatments appropriately. Yet although many more people now have access to previously far too expensive treatments, the policies have had side effects. The prices of pharmaceuticals are still extremely high for people on the margins of the economy, and entire family networks may experience cash depletion and food insecurity as they shift the household economy to procure medicines for a family member who is ill (Whyte et al. 2006).

The global circulation of expert knowledge produces particular relations of power between policy makers and policy subjects. The collapse of the primary care initiatives fostered at Alma Ata in 1978, the resurgence of selective forms of primary care and vertical public health programs, and the ascendency of the World Bank as the principal health policymaking institution provide a glimpse of how these processes work themselves out (Janes 2004, 2009; Janes et al. 2005; Lee & Goodman 2002; Paluzzi 2004). Deploying a set of strategies to reframe health and health care in narrow technical terms (i.e., the development of the disability adjusted life year, or DALY) subject to the principles of classical economics, a relatively small group of individuals crafted an approach to health care that removed it from public governance and placed it largely in the hands of the market, complementing and bolstering processes of structural adjustment begun in the 1980s (Farmer 2003, Farmer & Castro 2004, Janes 2004, World Bank 1993). The result has been increasing inequities and contradictions at local levels, for example reforms that mandate selling medicines to poor people who cannot afford them (Keshavjee 2004). Although it is remarkable that the WHO is currently attempting to reclaim the discourse on health

reform and reassert the principles of primary health care (World Health Organ. 2008), it remains to be seen whether rights-based approaches will be able to trump the neoliberal orthodoxy that dominates health sector policy.

Population and reproductive policy is a significant area in which deeply held beliefs about the causes and consequences of poverty, and the role of scientific development and expert knowledge of demographic processes in remediating poverty, have come to drive health and social policy (Escobar 1995, Maternowska 2006). For example, in a series of works focusing on population policy in China, Greenhalgh (2005) has shown how the development of coercive family planning practices linked a version of Western population science with socialist planning and party-led community mobilization in order to achieve demographic modernity. Although the International Conference on Population Development held in Cairo in 1994 urged countries to move away from a narrow focus on fertility targets and to respect and protect women's rights to make an informed choice about their reproduction, in many contexts oppressive and coercive regimes of family planning have continued, directed primarily at poor women (Castro 2004, Greenhalgh 2005, Maternowska 2006, Morsy 1995). Other important works also focus on the problematic disjuncture between global reproductive health policy and the lived experiences of local women and men (Berry 2009, Browner & Sargent 2010, Castro 2004, Ginsburg & Rapp 1995a, Rak & Janes 2004, Towghi 2004).

The anthropological literature documenting the problematic implementation of international health development policy is vast. Other examples include, in addition to the above, work on child immunization (Justice 2000, Nichter 1995); implementation of therapeutic regimes for tuberculosis (DOTS) and treatment of multiple-drug-resistant forms of the disease (Farmer 2003, Kim et al. 2005, Nichter 2008); disaster management and resettlement (Whiteford & Tobin 2004); the globalization of bioethics and ethical issues, including especially those arising in the context of organ transplantation and drug development (Marshall 2005, Marshall & Koenig 2004, Petryna 2005); the local impact of the global extension of regimes of monitoring and evaluation of public health programs, a variant of "audit cultures" (Nichter 2008, Strathern 2000); ideologies of community participation and political will in international health program planning (Janes 2004; Morgan 1989, 1997, 2001); and HIV/AIDS treatment and prevention policies (Bastos 1999, Biehl 2007, Desclaux 2004, Farmer 1999, Farmer et al. 2001).

AN UNRULY MÉLANGE

Neoliberal development strategies initiated in the health sector since the 1980s have systematically reduced the size, scope, and reach of public health services. As a result, a number of of private organizations, grouped collectively under the general heading of civil society, have become a cornerstone to health development. These include everything from small, local private organizations, to faith-based charities, to local offices of large international philanthropies. Favored as implementing agents by bilateral and international donors, including the major foundations and development banks, these agents of civil society have in many locales effectively supplanted government in the provision of primary health care. Often uncoordinated, competing with one another for donor and ministerial attention, duplicating efforts, and distorting local economies through the demands for food, housing, transportation, and entertainment by their expatriate staffs, they comprise, as Buse & Walt (1997) note, an unruly mélange (Adams et al. 2008; Pfeiffer 2003, 2004).

Despite their prominence in health development, nongovernmental organizations (NGOs) have received relatively little attention as social and cultural phenomena in their own right (though see Abramson 1999; Markowitz 2001; Pfeiffer 2003, 2004; Redfield 2005). Pfeiffer (2003, 2004) has documented how in Mozambique the operation of NGOs, instead of strengthening health services, may have in

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fact had the opposite effect, undermining local control of health programs and contributing to the health human resource crisis by recruiting public-sector employees from public health service. Pfeiffer also gives us a glimpse of the social dynamics of NGOs, observing that in the interaction between the elite, educated technicians from the rich countries and community members living in extreme poverty, the exercise of power is laid bare: international NGOs intensify unequal social relations at the local level.

The expansion of NGOs is but one example of a growing number of transnational institutions that have become active in global health. Along with existing bilateral donors, intergovernmental institutions, and public private partnerships, these include economic interest groups, large philanthropic organizations, and multinational pharmaceutical companies. The effective practice of global health regardless of disciplinary background increasingly requires not just understanding of how to work effectively at a local level to improve health and well-being, but also skills to work across these many, and often competing, interest groups (Adams et al. 2008).

CONCLUSION: REFLECTIONS ON THE ECONOMY OF KNOWLEDGE IN GLOBAL HEALTH

A colleague of ours, reflecting on the virtual invasion of Africa by international scholars, suggested that the continent's new export was information for university-based researchers and pharmaceutical companies. In addition, academic programs in global health (like our own), located primarily in schools of public health in North America, send thousands of students abroad each year to complete global health practice placements. Presumably these students gain through these experiences the knowledge and skills they need to "do" global health. This experience raises the spectre of a new form of colonialism: extending uses of sites in the global south to study their disease burdens to satisfy the needs of science (particularly, these days, the AIDS industry) to find new subjects and explore new problems. Citing his colleague, Jim Yong Kim, Farmer (1999, p. 35) has wryly observed that we are now in the midst of a global "Tuskegee experiment." We are mindful of the fact that global health, a field of exploding popularity largely in Europe and North America, is deeply involved in this manner of knowledge creation, exploitation, and exchange.

We argue that a central ethical problem for anthropologists, as for scholars of global health more generally, is consideration of the fairness of the terms of this exchange and whether their work contributes to social justice and the remediation of structural violence where it is the most severe. This problem provokes two questions: Are the products of anthropological scholarship in global health—conceptually, theoretically, methodologically, and pragmatically—relevant to those broadly interdisciplinary efforts to improve health and well-being? And, is anthropology, principally an academic discipline, prepared in the context of global health to engage in what we refer to here as principled engagement and intervention?

Partly in response to these questions, it is useful to reflect on anthropology's relevance to global health, which we have encapsulated into four main areas of research and practice. In the first of these, through ethnographic analysis of health inequities, anthropologists have added considerable depth to the project of identifying the social determinants of health (Comm. Soc. Determinants Health 2008). By specifying links among local life worlds and the global forces of neoliberal development, anthropologists have laid bare the lines of power, exploitation, and structural violence. Although more conceptual development is needed, this work has pointed to inherent flaws in health development programs that do not take poverty and environmental degradation, their root causes and consequences, as primary problems.

Second, and what now currently seems to be a popular avenue of research, is the study of global technoscience. Here anthropologists focus on the global circulation of technology

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and the bundles of meanings, representations, and understandings that together constitute biomedical science in the global north. The intent here is twofold: to unpack and explicate the cultural context of science and its products, and then to understand how science, as a social and cultural product, interacts with the local, where it is transformed and transforms, through being adopted, used, and resisted. Theoretically complex, this research area nevertheless has simple, direct, and profound implications for global health problems related to access to medicine and technology, the impact of western bioscience on conceptions of the body, ethical issues related to experimentation, the commoditization of body parts, identity and citizenship, and emerging processes of governance.

Third, an investigation of the globalization of western bioscience facilitates interrogation of entailed policies. How are policies made? Who makes these policies, and what ideologies, discourses, representations, and systems of knowledge do they draw on to craft decisions? How are policies made by global communities implemented, and to what effect, in highly variable local settings and contexts? Here, as with the study of the global technoscape, the focus is on examining the unintended consequences of policy for locals, reflecting on the fact that for the poor and vulnerable it is an unlevel playing field (Whiteford & Manderson 2000b).

Fourth, it is clear from the analysis of global health policymaking that the institutional landscape in health development has been transformed. The proliferation of nonstate actors and neoliberal development practices that both constitute and engage civil society has produced a complex mix of groups and organizations at state and community levels. Successful health development entails both coordinating across this unruly mélange and understanding the social and cultural effects of their various operations. Yet there is much we do not understand about how civil society operates in global health. The principal questions appear to be when and how private organizations operating in parallel to the state foster, or compromise, positive health outcomes, and whether they in fact contribute to reducing, or increasing, health inequities.

Although clearly relevant, we have to ask whether anthropology has contributed, or is capable of contributing, in substantive ways to the kinds of engagement and interventions that promise to reduce health inequities, foster social justice, and address the challenges to global health presaged by global climate change, habitat destruction, and mass species extinction, as well as the global economic crisis. Here we are less sanguine. We have promising examples, and the work that many researchers have done lends itself clearly to concrete, appropriate policies, programs, and interventions. Like many, we are buoyed by the work of Farmer and his colleagues at Partners in Health in a variety of country and community settings, from poverty-stricken neighbourhoods in the United States to postgenocide Rwanda. We are also mindful of the several generations of anthropologists who, largely external to the academy, through hard work at community to policy levels, through clear and principled commitment to socially and culturally relevant public health efforts, have made a difference. These efforts are, in many ways, both the foundation and the backbone of current medical anthropology and constitute in large measure the substance of promise and hope that we hold out to our students. Nevertheless, we also recognize that many anthropologists continue to be reluctant to do work identified as "applied" or "public health," or, perhaps perceived as worse, glossed as "development" (Escobar 1995, Ferguson 1997).

Although writing of current work in pharmaceutical anthropology, van der Geest (2006) offers an opinion that is a cautionary note to other anthropologists working in global health:

> Overcoming the "temptation" of just writing about the intriguing [pharmaceutical] nexus should be a first concern of medical anthropologists. We owe it to our informants to contribute to the actual improvement of distribution and use of pharmaceuticals. Ironically, however, that imperative of turning our

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> paper medicines into medicines that cure and protect people is not exactly what mainstream anthropology encourages us to do. Applied medical anthropology is somewhat slighted as diluted anthropology and as too subservient to policy and medical science. My view, however, is that uncommitted ethnographers lack reflexivity and fail to see themselves in the nexus of pharmaceuticals and of culture in general. Their methodological innocence gives way to epistemological naïveté. (pp. 313–14)

To this we add simply that the problems living beings face globally are too vast and the assaults on social justice and the environment too egregious for us to worry overly much about the sullying effects of doing applied work. Commitment and action are sometimes messy; the fine points of theory and abstract conceptualization may appear irrelevant in the worlds of suffering, injustice, and environmental degradation that we face, and being a principled "public intellectual" is sometimes not enough. What we should be worried about, as we consider our disciplinary position as producers and consumers of knowledge in the global political economy, is the pressing question of "so what?" We are called to apply our tools and knowledge, to seek interdisciplinary and intersectoral partnerships, and to both propose and engage directly in potential solutions.

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