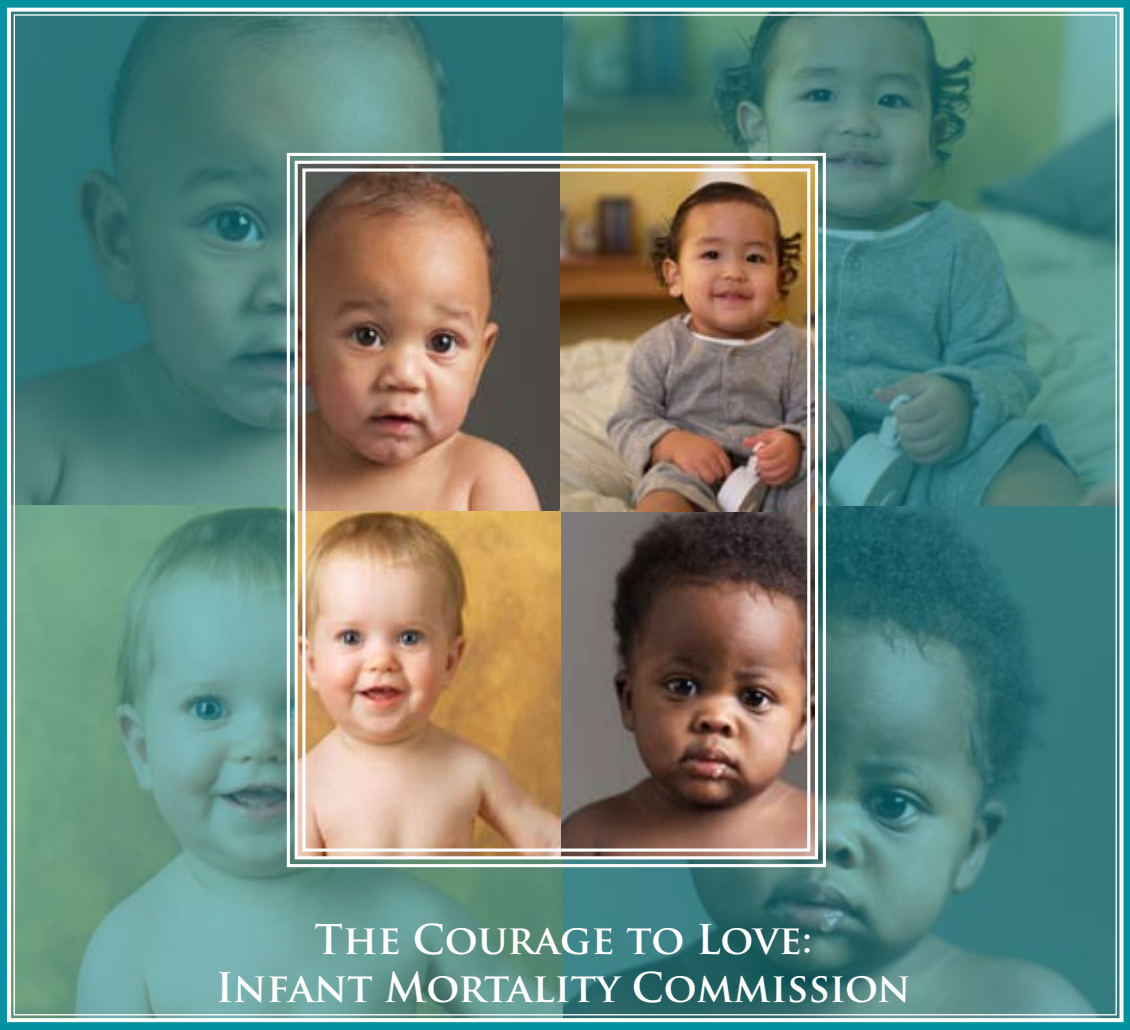
Joint Center for Political and Economic Studies Health Policy Institute

INEQUALITY MATTERS: INFANT MORTALITY IN THE GLOBAL VILLAGE



Ronald David

The Courage to Love: Infant Mortality Commission
Implications for Care, Research, and Public Policy to
Reduce Infant Mortality Rates

INEQUALITY MATTERS:
INFANT MORTALITY IN THE GLOBAL VILLAGE

Ronald David

Joint Center for Political and Economic Studies
Health Policy Institute
Washington, D.C.

Printed in the United States.

CONTENTS

PREFACE

Solutions to the problem of higher infant death rates among black families have eluded medical, health policy, and research communities for decades. African American women continue to face a disproportionately higher risk for delivering premature and low birthweight babies, many of whom die within their first year of life.

Although infant mortality in the United States decreased among all races between 1980 and 2000, the overall black-white gap for infant mortality widened—and this pattern has continued. A 2002 Centers for Disease Control and Prevention analysis of infant mortality rates in 1995-1998 in the 60 largest U.S. cities revealed that the median infant mortality rate for blacks was 13.9 per 1,000 live births, compared to 6.4 and 5.9 for whites and Hispanics, respectively. Nationwide, the most recent data (2003) show that the infant mortality rate for blacks is 13.5 per 1,000 live births, compared to 5.7 for non-Hispanic whites and for Hispanics. The lack of progress in closing the black-white gap is largely due to a persistent two- to threefold higher risk for low birthweight and very low birthweight among black infants compared to white infants.

Healthy People 2010 is this nation's health promotion and disease prevention initiative. It includes a national objective to reduce deaths among infants (aged less than one year) to fewer than 4.5 per 1,000 live births within all racial and ethnic groups. If current infant mortality rates among African Americans persist, however, such national health objectives to reduce infant mortality and to eliminate related racial and ethnic disparities will not be met.

The root causes of persistent racial disparities in infant mortality are not thoroughly understood. Many theories have been proposed. The high incidence of infant deaths among African Americans has been attributed to high teen pregnancy rates, single motherhood, lower education levels, poverty, and—most recently suggested—genetic causes. These theories fade in the light of robust research, however; alarmingly high levels of infant mortality persist, even when most factors are controlled. African Americans have higher infant mortality rates in every age category; maternal characteristics, such as marital or employment status, do not alter disparities; nor do education or income levels. The genetic theory is weakened by research that shows better birth outcomes among foreign-born black women; regardless of their socioeconomic status, native-born African American women fare worse in birth outcomes compared to white women at every income and education level. Most recently, the Institute of Medicine's 2006 Report on Preterm Birth concluded that racial/ethnic differences in socioeconomic condition, maternal behaviors, stress infection, and genetics cannot fully account for disparities. The report called for research that continues to prioritize efforts to understand factors contributing to the high rates of preterm birth among African American infants.

If age, marital status, education, income, and/or genetics cannot be seen as a singular root cause for racial and ethnic disparities in infant mortality, what variables or set of variables might be seen as common among African American women and others who experience poor birth outcomes? Are these variables or set of variables responsive to intervention? The search for answers to these perplexing questions led the Health Policy Institute of the Joint Center for Political and Economic Studies to establish a national commission to study infant mortality within a new context of "relationality"—the notion that relationships are constitutive of what it means to be human. The central role of relationships and their associated effects upon maternal and infant well-being have generated a new understanding of the infant mortality challenge. This new approach is grounded in social determinants of health theory; women and their babies must be viewed not only as individuals, but as members of families, communities, and larger systems that have either positive or negative impacts upon their psychological and physical states. The economies, opportunities, environmental influences, as well as risk and protective factors within their places of work, life, and play must be considered.

The Courage to Love: Infant Mortality Commission, co-chaired by Ronald David, MD, MDiv, and Barbara Nelson, PhD, was formed by the Joint Center Health Policy Institute, in collaboration with the University of California, Los Angeles (UCLA) School of Public Affairs, to review the history of infant mortality rate analysis and interpretation, examine basic assumptions, redefine the problem, and imagine new possibilities for action. The Commission's intentional focus on relationality has potential implications for improved pregnancy outcomes, economic prosperity, and meaningful civic participation for all women and for African American women in particular.

To better understand the issues and to inform its deliberation in formulating recommendations for policy, research, and practice, the Commission asked experts in various fields related to maternal and child health and infant mortality to prepare background papers on specific issues. This background paper seeks to expand our understanding of the causes and effects of infant mortality within a broader global context. It offers

comparisons between infant mortality in the U.S. and in other nations across the globe, providing a compassionate examination of the impact of social and economic inequalities on population health and infant mortality. The author concludes with policy recommendations to help mitigate or eliminate the inequalities that contribute to infant mortality. This analysis complements and reinforces the recommendations of other Courage to Love: Infant Mortality Commission background and framing papers on infant mortality and maternal nutrition; infant mortality and resilience; the role of breastfeeding in maternal and infant health; the historical framework of policies and practices to reduce infant mortality; and the authentic voices of those affected by infant mortality.

The work of the Courage to Love: Infant Mortality Commission is part of the larger effort by the Joint Center Health Policy Institute (HPI), whose mission is to ignite a "Fair Health" movement that gives people of color the inalienable right to equal opportunity for healthy lives. Funded by the W. K. Kellogg Foundation, HPI seeks to help communities of color identify short- and long-term policy objectives and related activities that:

- Address the economic, social, environmental, and behavioral determinants of health;
- Allocate resources for the prevention and effective treatment of chronic illness;
- Reduce infant mortality and improve child and maternal health;
- Reduce risk factors and support healthy behaviors among children and youth;
- Improve mental health and reduce factors that promote violence;
- Optimize access to quality health care; and
- Create conditions for healthy aging and the improvement of the quality of life for seniors.

We are grateful to Dr. Ronald David for preparing this paper and to those Joint Center staff members who have contributed to the preparation, editing, design, and publication of this paper and the Commission's other papers. Most of all, we are grateful to Drs. David and Nelson, the members of the Commission, and Dr. Gail C. Christopher, Joint Center vice president for health, women and families, for their dedication and commitment to improving birth outcomes for African Americans and reducing racial and ethnic disparities in infant mortality rates.

Ralph B. Everett
President and CEO
Joint Center for Political and Economic Studies

INTRODUCTION

Despite the rhetoric of poverty reduction and aid that marks much of today's foreign policy debate, the life of a child in a low-income country is worth less to those with political power than the life of a child in a high-income country. Those lives are worth less to those with political power because they are worth less to the people who elect politicians into power—either through ignorance or through a conscious decision to weigh life differently for different peoples.

~ Richard Horton[1]

The following work was commissioned by the Health Policy Institute of the Joint Center for Political and Economic Studies to complement its in-depth analysis of infant mortality as it is manifest in America generally and in the African American community particularly. This work represents an effort to look beyond our borders and self-centeredness in order to expand our understanding of the causes and effects of—as well as the potential solutions to—the tragedy of infant deaths.

Among the potential limitations of such a sweeping review is that the reader will experience the data in abstraction; the data are at least impersonal, if not overwhelming. However, it is this reviewer's conviction that a sustained response to the problem before us requires a hard head and a soft heart. A sustained response must include rigorous reasoning and courageous compassion. To evoke or inspire such a response, I begin with the voice of a particular woman—a "radical existentialist and politically engaged" anthropologist—who bears witness to her sister, a poor woman of Brazil who suffers the loss of her infant children again and again.

I implore the reader to let this story frame the studies I review—not the other way around. Without further ado, I introduce Nancy and Nailza.

> "Why do the church bells ring so often?" I asked Nailza de Arruda soon after I had moved into a corner of her tiny mud-walled hut near the top of the Alto do Cruzeiro. It was the dry and blazingly hot summer of 1964, the months following the military coup, and save for the rusty, clanging bells of Nossa Senhora das Dores Church, an eerie quiet had settled over the town. Beneath the quiet, however, were chaos and panic.
>
> "It's nothing," replied Nailza. "Just another little angel gone to heaven." Nailza had sent more than her share of little angels to heaven, and sometimes at night I could hear her engaged in a muffled, yet passionate, discourse with one of them: two-year-old Joana. Joana's photograph, taken as she lay eyes opened and propped up in her tiny cardboard coffin, hung on a wall next to the photo of Nailza and Zé Antônio taken on the day the couple had eloped a few years before. Zé Antônio, uncomfortable in his one good, starched, white shirt, looked into the camera every bit as startled as the uncanny wide-eyed toddler in her white dress.
>
> Nailza could barely remember the names of the other infants and babies who came and went in close succession. Some had died unnamed and had been hastily baptized in their coffins. Few lived more than a month or two. Only Joana, properly baptized in church at the close of her first year and placed under the protection of a powerful saint, Joan of Arc, had been expected to live. And Nailza had dangerously allowed herself to love the little girl. In addressing the dead child, Nailza's voice would range from tearful imploring to angry recrimination: "Why did you leave me? Was your patron saint so greedy that she could not allow me one child on this earth?" Zé Antônio advised me to ignore Nailza's odd behavior, which he understood as a kind of madness that, like the birth and death of children, came and went.
>
> It was not long after before Nailza was noticeably pregnant, and the nightly prayers to Joana ceased, momentarily replaced by the furtive noises of stolen marital intimacies. By day, Nailza's appetite and her normally high spirits returned, much to my relief. The peacefulness was, however, soon rent by the premature birth of a stillborn son. I helped Nailza dig a shallow grave in our *quintal*, the trash-littered excuse for a backyard where pigs and stray goats foraged and where we hoped to dig a pit latrine before the start of the winter rains. No bells would ring for this tiny fellow, nor would there be any procession of the angels accompanying his body to the graveyard. Stillbirths remained (in those days prior to hospital delivery for Alto women) outside the net of public and medical surveillance. And when curious neighbors commented the next day on Nailza's flat stomach, she tossed off their questions with a flippant "Yes, free and unburdened, thanks be to God!" Or with a sharp laugh, she would deny having been pregnant at all. Even living with Nailza in our close quarters, I had a hard time knowing what she was experiencing in the weeks and months that followed, except that Joana's photo disappeared from the wall, and her name was never again mentioned as long as I lived in that house. The stillborn

son returned Nailza to her senses and to an acceptance of the reality in which she lived. Neighbors would say approvingly that Nailza had learned to *se conformar* to the unalterable conditions of her existence. But at what price, I wondered; at what physical, psychic, and social cost to Nailza and other women like her and at what risk to their seemingly unbroken succession of "replacement" babies and subsequent angel-children?[2]

Indeed, at what physical, psychic, and social cost do we resign ourselves to prevailing circumstances?

OVERVIEW: INFANT MORTALITY IN THE GLOBAL VILLAGE—DESCRIPTION AND PRESCRIPTION

Each year in the global village, approximately four million infants die within the first four weeks of their birth. That number—four million—is a conservative estimate given that children of color in developing countries account for 98 percent of neonatal deaths worldwide, and in the Two-Thirds World,[3] many infant deaths go unseen and/or undocumented.[4] Still, experts estimate that these four million neonatal deaths comprise 36 percent of the mortality rate for all children younger than five years of age. Indeed, while mortality rates for infants and toddlers have declined significantly over the past thirty years in developing countries, the proportion of neonatal deaths has increased.[5]

This state of affairs is so troubling, if not dire, that two of the world's most prestigious medical journals, *Pediatrics*[6] and *The Lancet,*[7] have published comprehensive documentation of the scope of the problem, with the expressed hope of informing and inspiring a political response. The editor of *The Lancet* asserts that the aim of that journal's series "is to erase the excuse of ignorance for public and political inaction once and for all. If we now continue to fail children under threat, we will be delivering a verdict of wanton inhumanity against ourselves. We will be a knowing party to an entirely preventable mass destruction of human life." Departing even further from the ostensibly apolitical objectivity of scientific journalism, the editor continues: "The weapon that will be wielded in this crime will not be a bomb, a biological agent, or an aeroplane. It will be something far more sinister—withdrawal from the universe of human reason and compassion into a national solipsism that degrades the values that we claim to revere."[8]

Laudable (or lamentable) though the foregoing political activism may be, the prescribed response is predictable and necessary, but insufficient. The prescription is for medical interventions to treat the symptoms of social and economic inequity rather than resolving the inequities themselves. Contributors to the *Pediatrics* series explicitly limited their review to "evidence-based" cost-effective measures with "biological plausibility," including, for example, protein supplementation, antibiotics for bacterial vaginosis, newborn resuscitation, breastfeeding, kangaroo mother care, and vaccination against Hepatitis B. The authors acknowledge that they yield to "pragmatic" concerns for immediate impact—a response from clinicians that is both predictable and necessary. Yet the authors of the *Pediatrics* series also note that their review "does not attempt to evaluate the benefits of investing in social development, reducing inequity, and promoting economic growth among impoverished populations of developing countries."[9] For this reason their prescriptions are woefully insufficient.

Similarly, the authors of the *Lancet* series assert that "the package of interventions that would best reduce mortality in women and also in newborn infants—female education, family planning, community-based maternity care, and referral services for women with obstetric complications—has received inadequate resources and attention from global policymakers and national decision-makers."[10] The authors focus on these clinical approaches even as they acknowledge the adverse effects of poverty and declare, "Addressing inequity should be a priority of all strategies for improving survival of newborn babies."[11]

Their shortcomings notwithstanding, the aforementioned reviews, politically motivated yet scientifically rigorous, draw the reader's attention to a compelling and recurring concern in the public health literature: inequalities matter.

INEQUALITIES MATTER

To people whose medical training had taught them to think about the effects of exposure to particular chemicals or germs, talk of the social and economic structures affecting health sometimes seemed as remote as astrology.

~ R. G. Wilkinson[12]

In 1996, Wilkinson published what many consider the germinal treatise on the relationship between social and economic inequalities and population health. Most succinctly, Wilkinson asserts, "it is not the richest countries which have the best health, but the most egalitarian. Having been demonstrated by a number of different people using different data sets and different control variables, this relationship is now firmly established."[13] Moreover, Wilkinson makes this intriguing claim:

> Looking at a number of different examples of healthy egalitarian societies, an important characteristic they all seem to share is their social cohesion. They have a strong community life. Instead of social life stopping outside the front door, public space remains a social space. The individualism and the values of the market are restrained by a social morality … These societies have more of what has been called "social capital" which lubricates the workings of the whole society and economy. There are fewer signs of anti-social aggressiveness, and society appears more caring. In short, the social fabric is in better condition. The research tells us something very important about the way the social fabric is affected by the amount of inequality in a society.[14]

Immediately one's attention is drawn away *from* chemicals, germs, and genes *to* the social and economic structures affecting health. While some question the meaning and measure of "social cohesion" as a concept,[15] and others have been critical of the concept of "social capital" for its failure to consider the dynamics of class, race, and gender power and politics,[16] few question that there is a relationship between social and economic inequalities and health.[17] Rather, the chorus of voices and corpus of data affirming Wilkinson's thesis have only grown larger and ever more persuasive. The data are most robust for developed nations and are nowhere better summarized than in the work by Navarro and his colleagues in *The Political and Social Contexts of Health.*[18]

In their book, Navarro et al. have compiled and analyzed a voluminous data set on labor market and welfare state variables, strength of labor unions, social inequalities (for which income inequality is taken as a proxy measure), and infant mortality and life expectancy in member countries of the Organization for Economic Cooperation and Development (OECD). Overwhelmingly, the data support their conclusion that both the absolute levels of wealth and the manner in which wealth and other resources are distributed affect levels of population health. In particular, for the entire period of their study (1950-1998) and in the majority of OECD countries, there was a negative relationship between income inequality and infant mortality and life expectancy.

Unfortunately, the data bearing on the lives and deaths of children in the Two-Thirds World are remarkably limited, especially since 99 percent of those deaths occur among the poor and politically disfranchised.[19] Two notable exceptions are works by Wagstaff, an economist, and Scheper-Hughes, an anthropologist.

Recently, Wagstaff attempted to outline novel yet reliable methods of measuring health inequalities between the poor and the privileged, and to generate evidence of the magnitude of inequalities between them with respect to mortality for children under five years of age.[20] As lead economist for the World Bank's Development Research Group, Wagstaff sought to fill a gap in available data as more and more nations and international organizations were committing themselves to reducing the disease and mortality burden suffered by the poor. Upon examining data from Brazil, Côte d'Ivoire, Ghana, Nepal, Nicaragua, Pakistan, the Philippines, South Africa, and Vietnam, Wagstaff affirmed what was already known to be the case for industrialized nations: infant and under-five mortality rates are greatest among those who are economically worse-off.[21]

In a moving and prescient book published before either Wagstaff or Wilkinson's germinal works, Scheper-Hughes, a medical anthropologist, described childhood mortality in Brazil as follows:

> Approximately one million children younger than five die each year in Brazil, or about forty children every hour. An estimated 25 percent of all infant deaths in Latin America occur in Brazil, and of these more than 50 percent take place in the Nordeste, which has an estimated infant mortality rate of 116/1,000 live births, one of the highest in the hemisphere and comparable to the poorest parts of Africa. Official statistics are, however, at best an approximation of an underreported phenomenon. The inefficiency of basic public health and medical services in the Northeast is such that an estimated two-thirds of those infants who die do so without a medical diagnosis … Hence, counting dead infants in Northeast Brazil is every bit as daunting as U.S. census workers' attempts to count the homeless in American cities.[22]

Scheper-Hughes challenged the prevailing assumptions that economic and social "underdevelopment" of the poor themselves is responsible for the high childhood mortality rates. Such theories anticipate "that with advances in industrialization and with the penetration of modern, capitalist modes of relations of production in the 'backward' hinterlands of Brazil," the high infant mortality rates would decline. But, Scheper-Hughes argued, those same theories obscured "the role of pernicious class relations in the social production of child morbidity and mortality" and "have failed to note the macroparasitism of uncontained 'market forces' that has fed and preyed on the bodies of the young, the vulnerable, and the powerless."[23]

In recounting the history of analysis and interpretation of infant mortality rates in Brazil, Scheper-Hughes reminds us that in the late 1800s, enslaved black women were held responsible for high infant death rates because of poor hygiene and ignorance. However, there was a notable exception: the first Brazilian medical text that focused solely on the problem of child mortality, *Causas da Mortalidade das Crianças no Rio de Janeiro*, by José Maria Teixeira, published in 1887. Contrary to the prevailing wisdom of his day, "Teixeira laid the blame for high childhood mortality on the political economy of slavery itself and all the perversions that it reproduced in both the big house and *senzala*."[24]

It is evident, then, that as has been the case historically in the United States, public health experts in the global village have been at least somewhat aware of the social forces that adversely affect maternal and child health. Yet throughout the world—as in America—those professionals have sought to reduce infant mortality rates by educating mothers and providing more medical interventions. It is as if the acknowledged oppressive social forces are immutable, and vulnerable persons must learn to adapt thereto and/or be treated by clinicians for *their* failure (interpreted as ignorance, recalcitrance, or genetic frailty) to adapt.

HOW ARE INEQUALITIES AND HEALTH RELATED?

The question, then, is not *whether* social inequalities—particularly as measured by the proxy index of income inequality—are related to population health. Rather, the question is *how* the two are related. Is the relationship merely associational? That is, are income inequality and poor health co-morbid outcomes of some other personal or social pathology? Alternatively, is the relationship causal? For example, are unhealthy persons less able to earn income? Or are persons with lesser incomes relatively or absolutely deprived of material resources necessary for biological survival?

It matters whether the relationship is causal or associational, as argued cogently by Marmot, a preeminent epidemiologist.[25] It is important to attempt to discern the nature of the relationship between inequalities and health with respect to potential public policies, for example. If, on the one hand, inequality and poor health are the effects of some pathology as yet unidentified, policies to reduce inequality, such as the redistribution of wealth, would amount to (largely) ineffective symptomatic treatment that leaves the inciting cause(s) of disease and death unchecked. If, on the other hand, income inequality causes poor health by depriving persons of material resources needed for survival, policies to counteract growing inequalities would be justified.

Upon close examination of the alternatives posed by Marmot, it is evident that the options are not mutually exclusive. Absolute privation is associated with adverse health outcomes. So, too, is relative privation—"differing [lesser] opportunities for social participation, for leading a fulfilling and satisfying life, and for control over one's life."[26] In some measure, how inequalities are related to population health depends on the country in which the question is asked. In developing countries (not the focus of Marmot's analysis), a per capita Gross National Product (GNP) below US $5,000 is more likely to be associated with material (absolute) privation that is detrimental to health. Therefore, the "pragmatic" interventions, included in the aforementioned series in *Pediatrics* and *The Lancet*, are necessary though insufficient. In developed nations, such as England, Canada, and the United States (the subjects of Marmot's analysis), for per capita GNPs above the threshold of material privation, restrictions on social participation in hierarchies of dominance/power are more important relative to health outcomes. In this context, Marmot concludes that a policy favoring income redistribution "would improve overall [population] health by relieving the fate of the poor more than it hurt the rich."[27]

Wagstaff and Doorslaer have written an interpretive essay critically assessing conclusions that might be drawn from extant studies about the nature and direction of the effect of income inequality on health.[28] They have created a typology for potentially competing hypotheses, and distinguished between studies of aggregate data (e.g., infant mortality rates for a nation), individual data (e.g., perinatal/neonatal deaths experienced by a particular woman), and an intermediate-level of "community" data (e.g., infant mortality rates in a circumscribed municipality such as Harlem, New York).[29]

For the purposes of illustration, consider three of the five hypotheses set forth by Wagstaff and Doorslaer.[30] The first hypothesis, named the Absolute Income Hypothesis (AIH), might be stated this way: there is a curvilinear relationship between a person's absolute level of income and health. As income increases, a person is better able to purchase goods and services that are beneficial to health, but to a diminishing extent (beyond a certain point, further increases in income have no effect on health). If this hypothesis proved to be true, one would expect that population health in a particular nation or community would improve as the average income increased and income inequality decreased.

The second hypothesis, the Relative Income Hypothesis (RIH), states that an individual's health will worsen to the extent that his or her income deviates (downward) from the population mean. Citing the work of Wilkinson, Wagstaff and Doorslaer observe that poor persons in the United States may have mortality rates comparable to poor persons in Bangladesh, though the income for the American citizen is relatively higher, because their income reflects one's social standing rather than one's living standards.[31]

The third hypothesis is the Income Inequality Hypothesis (IIH). It posits that an individual's health is directly affected by income inequality, as the inequality reflects the degree of social cohesion or lack thereof—greater inequalities signify lesser cohesion.

Wagstaff and Doorslaer conclude that only individual-level studies, as opposed to aggregate-level studies, are able to discriminate between the competing hypotheses. The available individual-level studies (all using U.S. population data) "provide strong support for the 'absolute-income hypothesis' and no support for the 'relative-income hypothesis.'" The limited support for the "income-inequality hypothesis suggest[s] that income inequality at the state level affects mainly the health of the poor." The authors concede that the hypotheses under study have good but limited explanatory power, as they do not adequately capture the psychosocial factors that may be important in relating income inequality to health. Among the psychosocial factors not captured by these studies is social participation in hierarchies of dominance/power, which is of concern to Marmot and others previously noted.

At some risk of muddying the matter further, this reviewer argues that the difficulty, if not impossibility, of definitively "proving" the nature and direction of the relationship between inequalities and population health lies both in the complexity of being human and, correlatively, in the limits of science. Human beings are both autonomous *and* communal creatures. Hence, neither individual-level studies nor aggregate-level studies can fully or exclusively capture the true essence of the duality. The more accurately we are able to measure one—say, the autonomy implied in individual-level studies—the more imprecise will be our measure of the other (i.e., the communality implied in aggregate-level studies).[32] It may be argued that this very complexity has spawned a generation of epidemiological studies in which investigators have attempted to analyze aggregate, or "ecological," and individual-level exposure simultaneously by using advanced, multi-level statistical methods.[33] Such refinement of analysis of quantitative data may prove to be helpful in further validating the existence of a relationship between inequalities and health. However, determining the meaning and direction of the relationship (causal or associational) will likely require the synthesis of qualitative data, such as the experience of participatory human relationships.

LEARNING FROM PARTICIPATORY HUMAN RELATIONSHIPS

While the complex duality of autonomy *and* community may be immeasurable, the power and significance of that duality can be appreciated by observing participatory relationships in process. Arguably, the observation of dynamic participatory relationships helps us to understand how inequalities affect health better than do more static concepts such as social cohesion, social fabric, or social capital. To appreciate why this might be so, the reader is invited to consider the relatively atypical studies of when things go well in otherwise poor countries and when things go poorly in otherwise well countries.

When Things Go Well in Otherwise Poor Countries

Nepal serves to illustrate that things can go well in relatively poor circumstances—infant mortality rates can be reduced despite persisting material impoverishment. In Nepal, the GDP per person is US $1,500, life expectancy is 60.2 years, the infant mortality rate is 65.3 per 1,000 live births, and the maternal mortality ratio is 415 for every 100,000 births.[34] In this setting, Manandhar et al. conducted a study in the Makwanpur district of Nepal, where 90 percent of women gave birth at home—most unattended by a trained assistant.[35]

Aware of the extraordinarily limited health care infrastructure in rural communities, the investigators sought to structure interventions based on communities rather than individuals to reduce infant mortality. Manandhar et al. carefully matched and randomly selected control and intervention groups from pre-existing geopolitical clusters. The women taking on the role of facilitator for these groups were selected from shortlists of nominations made by community leaders. The nominees were literate local residents with no background in health care. Once selected as facilitators, they were trained in "participatory communication techniques" and given some knowledge of potential perinatal health concerns and interventions. Facilitators convened meetings once monthly in their local wards.

The first step in the intervention was for the facilitators to learn about the prevailing childbirth and childcare practices, in uncomplicated and complicated pregnancies, from the women in their groups. Then, in the course of monthly meetings, the participants designed and implemented strategies for intervention. The different groups employed a variety of

strategies, including community-generated funds for maternal or child care, the production and distribution of clean delivery kits, and raising awareness.

Despite the variety of strategies adopted and implemented by the intervention groups, overall neonatal mortality rate was reduced by 30 percent compared to paired controls. Moreover, the maternal mortality rate was 80 percent lower in the intervention groups compared to controls, although maternal mortality was not a predefined study outcome.[36]

Having explicitly employed "participatory communication techniques" as key to their intervention strategy, Manandhar et al. lament that "participation is typically seen as an adjunct to implementation rather than as a primary intervention." Failing to make that distinction, therefore, leads to didactic approaches to health education at the community level rather than a participatory approach to developing strategies for intervention.[37]

Cuba also serves to illustrate that things can go well despite relative material impoverishment. More specifically, as recently as 1985, Cuba's infant mortality rate was more than 50 percent higher than the overall rate in the United States. However, the degree of decline in the infant mortality rate has been steeper for Cuba—such that its total rate was less than that for the U.S. in 2006 (6.2/1,000 versus 6.4/1,000, respectively).[38] Even between 1991 and 1994, when Cuba faced severe economic hardship due to increased U.S. sanctions and the demise of Cuba's trading partnership with the former Soviet Union, the rate of infant deaths still declined slightly. Within two years of the imposition of the embargo, the earlier speed of decline in infant mortality rates was reestablished despite the ongoing economic sanctions.[39]

Cooper et al. attribute this remarkable rate of decline and its resilience in the face of severe hardships to the existence of the centralized Maternal-Child Programme (*Programa Nacional de Atencion Materno-Infantil*).[40] Chief among the infrastructure resources available were the "maternity waiting homes." Cuba constructed its first "maternity waiting home" in 1962 in order to provide care for women who lived some distance from a hospital and who were at high risk for complications in pregnancy. As of 1998, there were 209 maternity homes throughout Cuba.[41] The majority of the women admitted to the homes are from rural areas where they are subject to significant burdens of work at home and in the fields during their pregnancy. There appears to be an association between the advent of maternity houses and reductions in infant mortality, although there are no empirical data to substantiate a causal relationship.[42]

Still, there is ample reason to believe that there is a causal relationship between care provided in the maternity homes and reductions in infant mortality rates. In addition to providing mothers with opportunities for rest from undue hardship, the homes promote breastfeeding. Renz reports on one of her visits to Hogar Materno, a Spartan four-room, 15-bed maternity home in Vinales, Cuba. There the "rooms had concrete floors and virtually barren walls with the exception of two murals promoting breastfeeding." Significantly, the postpartum education at the maternity home includes lactation support: "Ninety-five percent of new Cuban moms leave the hospital exclusively breastfeeding their newborns. Eighty percent of Cuban moms solely breastfeed their babies through the fourth month of life."[43]

Arguably, the support of breastfeeding matters more than the existence of maternity homes *per se* as an intervention to reduce infant mortality rates in Cuba. Further, enhanced infant survival rates in Cuba may the product of a more general ethos of care for the well-being of women and children that is evident in public health policy and the political economy (described below in the section titled "Women, Work, and Worry").

When Things Go Poorly in Otherwise Well-off Countries

Sweden serves to illustrate that infant mortality rates can remain stubbornly elevated even in countries with relative prosperity. Examination of this anomalous circumstance gives us a hint of the importance of participation.

Among nation-state members of the Organization for Economic Cooperation and Development, Sweden has had the lowest infant mortality rates for the longest time. The estimated infant mortality rate for 2006 is 2.76 per 1,000 live births, the maternal mortality rate is 8 per 100,000 births, life expectancy at birth is 80.5 years, and the GDP per capita is US $31,600.[44]

In this relatively privileged context, Brenner and Levi studied the effects of job loss and long-term unemployment on women in Sweden. The authors note that in Sweden, a "high material standard of living, low mortality rate, and extensive social welfare system are based on a social policy that emphasized equality, solidarity, and labour as basic human rights." From their study they learned that "the strain of job loss has significant psychological and physiological effects." Their findings pertain even as the country's social welfare policies mitigate economic impoverishment. The study suggests that meaningful participation in work valued by the community promotes health.[45]

In a complementary study, using the methodological tradition of grounded theory, Starrin and Larsson sought to identify and articulate a typology of responses to unemployment among women in Sweden.[46] They discerned four main patterns of reactions among women who were unemployed. There were those described as "giver-uppers" for whom there was no hope of getting a job and no sense of control over everyday life, and among whom no effort was made to find a job. There were those described as "clenchers," women for whom psychological, social, and economic well-being was intimately tied to wage labor. "Refocusers" comprised a third group; these were women who were able to find fulfillment in other spheres of life and had ceased to actively search for jobs. The fourth group was "the ambivalents"—women actively searching for work yet eager to maintain time for other endeavors, especially family life.

Subjective experiences of ill-health were greatest among the "giver-uppers" and the "clenchers" in this study. Although such subjective experiences are not necessarily associated with suboptimal birth outcomes (which were not the focus of the foregoing studies), there are at least two reports that make the relationship highly plausible if not probable: a study of the effect of threats to employment on low birthweight, and a review of the bio-behavioral responses to stress in females.

Catalano and Serxner hypothesized that the rate of low-weight births increases with the threat of unemployment (or threat to secure employment) for women in the United States.[47] In undertaking two tests of this hypothesis, the authors were persuaded by two lines of evidence. First, theory and empirical data affirm the hypothesis that "maternal anxiety induced by social stressors" is a significant risk factor for premature birth. Second, with both the actual and anticipated loss of a job, an individual may suffer anxiety and its sequelae. For women who are pregnant, the threat of job loss may be associated with physiological changes that adversely affect the health of their fetuses. Catalano and Serxner further hypothesized that anxiety is more likely to occur with unexpected changes in labor demands compared to anticipated cyclical changes: "The proportion of pregnant women fearing lost income is therefore likely to be higher when demand for labor is unexpectedly low."

The authors observed that earlier studies testing similar hypotheses yielded varying results—some affirming, others refuting. In this study, they concluded that "unexpectedly low levels of employment may induce anxiety among pregnant women that in turn increases the risk of low birthweight among white males without Spanish surnames and Spanish-surnamed males." The effect did not appear to extend to black infants. Still, the authors conclude that their findings "support the longstanding suspicion among sociologists that perceived economic insecurity adversely affects health."

The work of Taylor and colleagues provides a potential link between the experiences of the women in Nepal and Sweden. Specifically, Taylor et al. theorize that a female's bio-behavioral response to stress is more likely to "tend-and-befriend" than to "fight or flee" as is commonly understood to be the case.[48] These investigators observe that tending involves nurturing activities "designed to protect the self and offspring that promote safety and reduce distress; befriending is the creation and maintenance of social networks that may aid in this process." The neuroendocrine concomitant of this behavioral response is the release of oxytocin, a hormone that is involved in lactation as well.

In essence, the reader is asked to consider the proposition that human beings are relational creatures that live and move and have their being in fully participatory relationships. The stress of poverty is mitigated partially in communal experiences such as those described in the foregoing studies carried out in Nepal. Likewise, the buffering effect of material wealth is dampened by the loss, actual or threatened, of opportunities for meaningful participation in a sphere of work valued by the community, as seen in the foregoing studies conducted in Sweden (and the United States). Whether at the micro-community level (Nepal) or the macro-community level (Sweden), participation matters.

Women, Work, and Worry: A Critical Caveat

To this point in my review and analysis, I have written as though employment outside of the home is unequivocally and univocally desired or desirable. It is not. Rather, the desirability and salutary effect of employment outside the home pertains when the value of one's work is a proxy for being valued generally. Evidence indicates that women and their work are devalued more often than not. To illustrate how women and their work may be valued differently, examples of women of color at work in America and Cuba are considered briefly below.

In the U.S., work for women of color too often becomes a forced choice from among limited options with equally limited remuneration. Women of color are viewed with distain, and such attitudes and beliefs inform welfare policy. The trope "welfare queen" signifies and reifies the myth of hyper-sexuality, fecundity, and sloth as characteristic of women of color. The trope is so tenacious in our American social psyche that it is a major motive force in mean-spirited welfare policies; women of color are expected to work outside of the home and to limit or stop

childbearing. These policies reveal a thinly veiled double standard. Limbert and Bullock observe, "While middle-class mothers are criticized for relying on daycare providers rather than staying home full time with their children, poor mothers are told that staying home will undermine their children's work ethic."[49] This is hardly a salutary situation. Such evident disdain and devaluation of work are significant factors contributing to the well-known and persistent disparity in mortality rates for black and white infants in America.

In contrast to women of color in America, Cuban women have realized significant cultural, social, political, and economic support. Valle reports, "Cuban women are more than 44 percent of the labor force of the country in the state-civil sector, 36 percent of the members of Parliament, and more than 33 percent of all people on managerial levels. Women are more than 66 percent of all technicians and professionals in the country, and 62 percent of the university graduate students."[50]

Equally important, in truly recognizing the fundamental role of families in society, the Cuban government provides childbearing mothers full-paid maternity leave for six weeks prior to delivery and three months postpartum. Moreover, a mother is eligible to receive sixty percent of her salary if she chooses not to work between three and twelve months following the birth of her child. Alternatively, by dint of a newly enacted law, a child's father may opt to remain at home receiving sixty percent of his salary until his child is a year of age.[51]

In the final analysis, work is salutary when it is freely chosen, when it is meaningful to the community being served and, as a corollary, when it is adequately remunerated, as appears to be the case in Cuba. Moreover, caring for children is valued work in Cuba. It is not in America—except in political rhetoric.

INEQUALITY—THE VIEW FROM DOWN UNDER

It is useful to consider the example of Australia in reflecting on the relationship between inequality and infant mortality. Australia is close to the United States in infant mortality and development indices, as shown in Table 1. (Table 1 includes infant mortality and development indices for other nations referenced in this paper as well.)[52]

A less obvious parallel between Australia and the United States is that the infant mortality rate for the Aboriginal population of Australia is 2.5 to 3 times the rate of the more privileged members of that nation, just as is the case for African Americans compared to European Americans.

In an essay on the "scourge of inequality," Lawrence examines global and Australian trends and, in accord with Galbraith and Coburn, concludes that policies favoring the globalization of unregulated markets are a major contributor to growing international and intra-nation inequalities. Lawrence is president of the Australian Labor Party. She and her associates are

TABLE 1
INFANT MORTALITY & NATIONAL DEVELOPMENT INDICES

	IMR1[1]	GDP[2]	Gini[3]	HDI[4]	HDI Rank[5]	GDI[6]	GDI Rank[7]	HDI-GDI[8]
Sweden	3	$26,750	25.0	0.949	6	0.947	4	2
Australia	6	$29,632	35.2	0.955	3	0.954	2	1
U.S.	7	$37,562	40.8	0.944	10	0.942	8	2
Brazil	31	$7,790	59.3	0.792	63	0.786	52	11
Nepal	66	$1,420	36.7	0.526	136	0.511	106	30

1=Infant Mortality Rate per 1,000 live births (2001 IMR data; 2003 Development Indices).
2=Gross Domestic Product in U.S. dollars.
3=Gini Coefficient; a measure of income inequality. A value of 0 represents perfect equality; a value of 100, perfect inequality.
4=Human Development Index; utilizes three measures of human development—longevity, literacy, and standard of living.
5=Relative ranking among 177 nations.
6=Gender Development Index; uses same indicators as HDI but captures inequalities in achievement between women and men.
7=Relative ranking among 177 nations.
8=HDI rank minus GDI rank; the greater the disparity between women and men, the lower the GDI relative to the HDI.

responsible for Aboriginal Affairs. Lawrence argues that, "Rising inequality, especially in a society accustomed to seeing itself as fair, creates a nagging sense of unfairness and threatens social solidarity and stability. It undermines the perception that we are all equal."[53] With great concern, Lawrence observes circumstances that ominously reflect those in the U.S.

> There is also a clear danger that increasing gaps may weaken the willingness of those who have to share by concentrating more and more resources into hands less inclined to be willing. This tendency threatens the ability of the society to provide for the weak, the poor and the old and sparks bitter debate about welfare payments and other benefits which go to the most disadvantaged. While inequality is considerably greater in the U.S. than here, Galbraith's observation that it is accompanied by increasing pressure to withdraw resources from the public to the private domain has echoes in Australia.[54]

The lesson seems abundantly clear. From the northern to the southern hemisphere and from the east to the west in the global village, social and economic inequality is a scourge, a crime, a form of "structural violence" associated with—if not causally related to—poor population health.

INEQUALITY AND ECONOMIC HEALTH

To this point, I have argued that inequalities adversely affect population health both because of limited availability of needed material resources and because of limited engagement in valued relationships. However, income inequality, in itself and as a proxy for social inequality, bodes as poorly for economic health as it does for population health measures such as longevity and infant mortality. For example, on June 9, 2005, the former chair of the U.S. Federal Reserve Board, Alan Greenspan, lamented before the Joint Economic Committee of the U.S. Congress that the "divergence and increased concentration of income" was "not the type of thing a democratic society, a capitalist democratic society can really accept without addressing."[55] A little more than a month later, Greenspan repeated this concern before the U.S. House of Representative's Committee on Financial Services. He said then, "I think that there is a really serious problem here, as I have mentioned many times before this committee, in the consequent concentration of income that is rising."[56]

In his June 9, 2005 address to Congress, Greenspan appeared resigned to the economic orthodoxy of the day. Specifically, that orthodoxy argues that income inequality is the unfortunate consequence of a rising demand for skilled labor and greater need for education and training to meet the demands of a technology-based economy. Still, Greenspan expressed some reservation regarding this widely accepted truth-claim. At a 1998 symposium sponsored by the Federal Reserve Bank of Kansas City, Greenspan observed:

> That this supply-demand gap has been an important source of widening earnings inequality is now widely accepted within the economics profession. However, the considerable diversity of experiences across countries as well as the finding that earnings inequality has also increased *within* groups of workers with similar measured skills and experience suggest that we may need to look deeper than skill-based technological change if we are to fully understand widening wage dispersion.[57]

Indeed, James K. Galbraith does "look deeper" in his challenge to conventional economic wisdom. Galbraith is the son of John Kenneth Galbraith, the renowned economist, and he is highly regarded as an economist in his own right. In an essay titled "A Perfect Crime: Inequality in the Age of Globalization," James Galbraith argues persuasively that the growing wage inequality, most marked since the early 1980s, is a direct consequence of misguided Federal Reserve policy that is informed, in turn, by a neoliberal philosophy.[58]

Coburn describes the basic tenets of neoliberalism: (1) markets allocate the production and distribution of resources best and most efficiently; (2) wholly autonomous persons comprise societies and those persons are motivated primarily by economic concerns in their relationships; and (3) competition is the market's major motive force for innovation.[59] Coburn posits that it is this very ideology and associated political doctrines that produce higher income inequality, lower social cohesion and, thence, poor health.

Though for different reasons, public health experts and economists—conservative and progressive alike—essentially find income inequalities problematic. Moreover, such inequalities are neither necessary nor inevitable. Rather, inequalities are determined by economic and social policies and political will.

STRUCTURAL VIOLENCE AND HUMAN SUFFERING AND DYING

Paul Farmer, a physician and medical anthropologist, has borne witness to suffering and death in Haiti, Cuba, Mexico, and Russia, among other places in the global village. As an intimately engaged witness, Farmer testifies to the reality of "structural violence," a term he employs to connote a panoply of assaults to human dignity, including "extreme and relative poverty, social inequalities ranging from racism to gender inequality, and the more spectacular forms of violence that are uncontestedly human rights abuses."[60]

Income inequality is a manifestation of structural violence to the extent that it is not inevitable, but the adverse consequence of deliberate public and economic policy choices. For the sake of health and healing in human communities, the response to structural violence—and the disease, despair, and death left in its wake—must be a social justice response. The struggle for social justice implies a struggle for social, economic, and "health" rights for the world's poor and dispossessed. This struggle, Farmer argues, must take place in "pragmatic solidarity" with those who have been marginalized.

To a fault, Farmer's book, *Pathologies of Power*, focuses on cost-effective ways to provide medical care in impoverished communities in order to exemplify the joining of sentiment (solidarity) with the actual provision of goods and services (pragmatic) to reduce hardship.[61] Farmer clearly ascribes to liberation theology—a movement that links theological reflection to sociopolitical action. Inspired by Latin American Catholics, liberation theology asserts that the Christian Gospel demands that the church be instrumental in efforts to liberate people of the world from poverty and oppression. It is in the context of this theology that Farmer articulates his praxis of pragmatic solidarity. He clearly means to communicate more than the importance of bearing witness or providing care in difficult circumstances. That there is much more is evident in this epigraph, which Farmer uses to begin his chapter on "health, healing, and social justice":

> If I define my neighbor as the one I must go out to look for, on the highways and byways, in the factories and slums, on the farms and in the mines—then my world changes. This is what is happening with the "option for the poor," for in the gospel it is the poor person who is the neighbor par excellence … But the poor person does not exist as an inescapable fact of destiny. His or her existence is not politically neutral, and it is not ethically innocent. The poor are a by-product of the system in which we live and for which we are responsible. They are marginalized by our social and cultural world. They are the oppressed, exploited proletariat, robbed of the fruit of their labor and despoiled of their humanity. Hence the poverty of the poor is not a call to generous relief action, but a demand that we go and build a different social order.[62]

From America to Zimbabwe, pragmatic solidarity with the women of the world—like Nailza, whose story is told at the beginning of this paper—requires transformation of the social order that threatens healthy childbearing and rearing. Bearing witness and providing survival kits to Nailza and her sisters simply will no longer suffice—if such care ever did.

PRAGMATIC SOLIDARITY AND PUBLIC POLICY

The apparent indifference of Alto mothers toward the deaths of some of their infants is but a pale reflection of the "official" indifference of church and state to the plight of poor mothers and children.

~ N. Scheper-Hughes[63]

Few people are persuaded rationally until first motivated emotionally. Throughout the history of infant mortality rate analysis, public health professionals have attempted to awaken the moral imagination of the community to respond, to overcome the "official" indifference to the plight of women and children. Scheper-Hughes writes of the lamentable "routinization" of the death of children in Brazil, "meaning a set of conditions that places the infant at great jeopardy of sickness and death, accompanied by the normalization of this state of affairs in both public and private life."[64] Is the failure to see or bear witness to such tragedy a function of "the hostile gaze, the punitive net of surveillance cast by the state and its disciplinary and biomedical technicians over the sick and deviant majority," or the "averted gaze," the simple turning away? While this paper may do little to transform the hostile gaze, perhaps it will serve to gently correct the averted gaze.

I have offered a narrative here consciously appealing to the moral imagination of our community. In significant measure, infants and their mothers are victims of a structural economic violence manifest as income inequality. A social justice response requires pragmatic solidarity, which includes mitigation or elimination of those inequalities. Toward that end, the following policy recommendations pertain.

- Promote civic discourse and critical reflection on alternative political economies in order to compare and contrast their relative impact on income inequality, economic stability, human agency, inclusivity, and human development.

- Promulgate enforceable legislation for equal employment and pay for women; develop a taxation and benefits structure that treats reproduction as an economic activity.[65]

- Protect labor collective bargaining and support initiatives to increase the minimum wage.

- Engage women as active participants in decisions about their health and well-being. For example, determine their hopes and needs for employment, as attempted in the Swedish study on typologies of women's responses to employment and the threat of unemployment.

- Change policy measures of development from the Gross Domestic Product to the Human Development Index and/or some measure of inequality such as the Gini coefficient; focus particularly on using, refining, and responding to the Gender Development Index.

- Adopt those policies pertaining to employment in the Joint Center Health Policy Institute framing paper entitled *The Case for Relationality: The Historical Framework of Policy and Practice on Infant Mortality*, commissioned by the Courage to Love: Infant Mortality Commission.[66]

As eloquently articulated by Lawrence, we must somehow begin to understand "that people have a basic need for security, relationship, meaning, solidarity, and mutual recognition, needs which are often placed at risk in the rush to accommodate the demands of the market."[67]

NOTES

1. R. Horton, "Newborn Survival: Putting Children at the Centre," *Lancet* 365, no. 9462 (2005): 821-2.

2. N. Scheper-Hughes, *Death Without Weeping: The Violence of Everyday Life in Brazil* (Berkeley: University of California Press, 1992), 268-9.

3. The term "Two-Thirds World" is used by development workers to counter the pejorative tone and elitist ideology implied in the term "Third-World."

4. D. Manandhar, D. Osrin, B. P. Shrestha, et al., "Effect of Participatory Intervention with Women's Groups on Birth Outcomes in Nepal: Cluster-randomized Controlled Trial," *Lancet* 364, no. 9438 (2004): 970-9.

5. J. E. Lawn, S. Cousens, G. L. Darmstadt, V. Paul, and J. Martines, "Why Are 4 Million Newborn Babies Dying Every Year?" *Lancet* 364, no. 9450 (2004): 2020.

6. A. B. Zulfigar, G. L. Darmstadt, B. S. Hasan, and R. A. Haws, "Community-Based Interventions for Improving Perinatal and Neonatal Health Outcomes in Developing Countries: A Review of the Evidence," *Pediatrics* 115, no. 2 (2005): 519-617.

7. In addition to the editorial comment cited in footnote #1 (Horton), see the following citations published as a series. Note that the authors of the citations in *Pediatrics* and *Lancet* are largely the same persons. A. Tinker, P. T. Hoope-Bender, S. Azfar, F. Bustreo, and R. Bell, "A Continuum of Care to Save Newborn Lives," *Lancet* 365, no. 9462 (2005): 822-5; Lawn et al., "Why Are 4 Million Newborn Babies Dying Every Year?"; J. E. Lawn, S. Cousens, and J. Zupan, "4 Million Neonatal Deaths: When? Where? Why?" *Lancet* 365, no. 9462 (2005): 891-900; G. L. Darmstadt, Z. A. Bhutta, S. Cousens, T. Adam, N. Walker, and L. de Bernis, "Evidence-based, Cost-effective Interventions: How Many Newborn Babies Can We Save?" *Lancet* 365, no. 9462 (2005): 977-88; R. Knippenberg, J. E. Lawn, G. L. Darmstadt, G. Begkoyian, H. Fogstad, N. Walelign, and V. K. Paul, "Systematic Scaling Up of Neonatal Care in Countries," *Lancet* 365, no. 9464 (2005): 1087-98; J. Martines, V. K. Paul, Z. A. Bhutta, M. Koblinsky, A. Soucat, N. Walker, R. Bahl, H. Fogstad, and A. Costello, "Neonatal Survival: A Call for Action," *Lancet* 365, no. 9465 (2005): 1189-97.

8. Horton, "Newborn Survival," 822.

9. Zulfigar et al., "Community-Based Interventions," 520.

10. Tinker et al., "A Continuum of Care," 822.

11. Lawn et al., "4 Million Neonatal Deaths," 896.

12. R. G. Wilkinson, *Unhealthy Societies: The Afflictions of Inequality* (London: Routledge, 1996), 2.

13. Ibid., 3.

14. Ibid., 4.

15. See, for example, D. Coburn, " Income Inequality, Social Cohesion and the Health Status of Populations: the Role of Neo-liberalism," *Social Science & Medicine* 51 (2000): 135-46.

16. See, for example, V. Navarro, "A Critique of Social Capital," *International Journal of Health Services* 32, no. 3 (2002): 423-32.

17. See, for example, K. Judge, "Income Distribution and Life Expectancy: A Critical Appraisal," *British Medical Journal* 311 (1995): 1282-5.

18. V. Navarro, ed., *The Political and Social Contexts of Health* (Amityville, NY: Baywood Publishing, 2004).

19. Lawn et al., "4 Million Neonatal Deaths."

20. A. Wagstaff, "Socioeconomic Inequalities in Child Mortality: Comparisons Across Nine Developing Countries," *Bulletin of the World Health Organization* 78, no. 1 (2000): 19-29.

21. Ibid.

22. Scheper-Hughes, *Death Without Weeping*, 279. See especially chapter 7, "Two Feet Under and a Cardboard Coffin: The Social Production of Indifference to Child Death," 268-339.

23. Ibid., 280.

24. Ibid., 278. *Senzala* is the term applied to a group of houses for slaves in the fazenda grande (plantations, colonial farms) in Brazil.

25. M. Marmot, "The Influence of Income on Health: Views of an Epidemiologist," *Health Affairs 21*, no. 2 (2002): 31-46.

26. Ibid., 32.

27. Ibid., 44.

28. A. Wagstaff and E. V. Doorslaer, "Income Inequality and Health: What does the Literature Tell Us?" *Annual Review of Public Health* 21 (2000): 543-67.

29. For an in-depth review of individual versus aggregate levels of study in epidemiology, the reader is referred to H. Morgenstern, "Ecologic Studies in Epidemiology: Concepts, Principles, and Methods," *American Review of Public Health* 16 (1995): 61-81.

30. Wagstaff and Doorslaer conclude that there is no empirical evidence and only indirect evidence to support the remaining two hypotheses (the "Relative-Position Hypothesis" and the "Deprivation Hypothesis," respectively).

31. Ibid., 547.

32. This paradox may be analogous to the wave-particle duality of light and its relationship to the Heisenberg Uncertainty Principle in quantum physics. Light's particle (autonomous) properties cannot be measured simultaneously with its wave (communal) properties.

33. T. A. Blakely and A. J. Woodward, "Ecological Effects in Multi-level Studies," *Journal of Epidemiology and Community Health* 54 (2000): 367-74.

34. Central Intelligence Agency, "The World Factbook 2007 — Nepal," https://www.cia.gov/cia/publications/factbook/geos/np.html (accessed Feb. 8, 2007); United Nations Development Programme, "Millennium Development Goals, Goal Five: Improve Maternal Health," http://www.undp.org.np/publication/html/mdg2005/08_MDG_NPL_Goal5.pdf (accessed Feb. 8, 2007).

35. Manandhar et al., "Effect of Participatory Intervention," 977.

36. Similarly dramatic reductions in neonatal and maternal mortality were reported for studies carried out in India and Bolivia. See "Results from Recent Research," *Journal of Perinatology* 22 (2002): S20-4.

37. Manandhar et al., "Effect of Participatory Intervention," 977.

38. Central Intelligence Agency, "The World Factbook 2007 — Cuba," https://www.cia.gov/cia/publications/factbook/geos/cu.html (accessed Feb. 8, 2007); Central Intelligence Agency, "The World Factbook 2007 — United States," https://www.cia.gov/cia/publications/factbook/geos/us.html (accessed Feb. 8, 2007).

39. R. S. Cooper, J. F. Kennelly and P. Orduñez-Garcia, "Health in Cuba," *International Journal of Epidemiology* 35 (2006): 817-24.

40. Ibid., 819.

41. Pan American Health Organization, "Cuba," *Health in the Americas 1998* (1998), http://www.paho.org/English/HIA1998/Cuba.pdf (accessed Feb. 8, 2007).

42. World Health Organization, "Maternity Waiting Homes: A Review of Experiences," http://www.who.int/reproductive-health/publications/MSM_96_21/maternity_waiting_homes.pdf (accessed Feb. 8, 2007).

43. H. Renz, "Cuban Maternity Homes," *Midwifery Today with International Midwife* 61 (2002): 52.

44. Central Intelligence Agency, "The World Factbook 2007 — Sweden," https://www.cia.gov/cia/publications/factbook/geos/sw.html (accessed Feb. 8, 2007); World Health Organization, "Mortality Country Fact Sheet 2006 — Sweden," http://www.who.int/whosis/mort/profiles/mort_euro_swe_sweden.pdf.

45. S. O. Brenner and L. Levi, "Long-Term Unemployment Among Women in Sweden," *Social Science and Medicine* 25, no. 2 (1987): 153-61.

46. B. Starrin and G. Larsson, "Coping with Unemployment—A Contribution to the Understanding of Women's Unemployment," *Social Science and Medicine* 25, no. 2 (1987); 163-71.

47. R. Catalano and S. Serxner, "The Effect of Ambient Threats to Employment on Low Birthweight," *Journal of Health and Social Behavior* 33 (1992): 363-77.

48. S. E. Taylor, L. C. Klein, B. P. Lewis, et al., "Biobehavioral Responses to Stress in Females: Tend-and-Befriend, Not Fight-or-Flight," *Psychological Review* 107, no. 3 (2000): 411-29.

49. L. M. Limbert and H. E. Bullock, "'Playing the Fool': U.S. Welfare Policy from a Critical Race Perspective," *Feminism & Psychology* 15, no. 3 (2005): 253-74.

50. M. D. Valle, "New Cuban Law: Shared Maternity," http://209.157.128.91/countries/americas/cuba/foodAndMeds/1511.html (accessed Oct. 17, 2006).

51. Ibid.

52. Cuba is not included because data on the Gross Domestic Product and the Gender Development Index are not available for the years in question.

53. C. Lawrence, "The Scourge of Inequality: Global and Australian Trends," accessed on May 1, 2006 at http://www.carmenlawrence.com/Version3_carmen/texts2004/pdf_inequality/scourge_inequality.pdf.

54. Ibid.

55. Hearing Before the Joint Economic Committee Congress of the United States, One Hundred Ninth Congress, First Session, June 9, 2005, page 10.

56. Hearing Before the Committee on Financial Services, U.S. House of Representatives, One Hundred Ninth Congress, First Session, July 20, 2005, page 23.

57. A. Greenspan, "Income Inequality: Issues and Policy Options," remarks made by Chairman Greenspan at a symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 28, 1998. Transcript accessed May 1, 2006 at http://www.federalreserve.gov/boarddocs/Speeches/1998/19980828.htm.

58. J. K. Galbraith, "A Perfect Crime: Inequality in the Age of Globalization," *Dædalus* 131, no. 1 (2002): 11-25.

59. Coburn, "Income Inequality, Social Cohesion and the Health Status of Populations," 138.

60. P. Farmer, *Pathologies of Power: Health, Human Rights, and the New War on the Poor* (Berkeley: University of California Press, 2005), 8.

61. Farmer, *Pathologies of Power*, 146.

62. G. Gutiérrez, *The Power of the Poor in History* (Maryknoll, New York: Orbis Books, 1983); cited in Farmer, *Pathologies of Power*, 139.

63. Scheper-Hughes, *Death Without Weeping*, 272.

64. Ibid., 272.

65. Adopted from Z. Tzannatos, "Women and Labor Market Changes in the Global Economy: Growth Helps, Inequalities Hurt and Public Policy Matters," Social Protection Discussion Paper No. 9808, The World Bank, siteresources.worldbank.org/INTGENDER/Resources/tradezafiris.pdf (accessed October 10, 2006).

66. R. David, *The Case for Relationality: The Historical Framework of Policy and Practice on Infant Mortality* (Washington, DC: Joint Center for Political and Economic Studies, 2007).

67. Lawrence, "The Scourge of Inequality," 15.

About the Author

Ronald David earned his undergraduate and medical degrees from the State University of New York at Buffalo and his master's of divinity degree from the Virginia Theological Seminary. He is board certified in pediatrics and neonatal/perinatal medicine. Dr. David is an ordained priest in the Episcopal Church and supervisor of clinical pastoral education at the Hospital of the Good Samaritan in Los Angeles, California. He first served as an assistant professor of pediatrics/obstetrics & gynecology at the University Health Center of Pittsburgh before his appointment as deputy and acting secretary of health for the Commonwealth of Pennsylvania. Thereafter he was a lecturer in public policy at Harvard University's John F. Kennedy School of Government and, then, chief medical officer for the D.C. Health and Hospitals Public Benefit Corporation. More recently, Dr. David was a lecturer and research associate at the UCLA School of Public Affairs and, with the dean of the School of Public Affairs, co-chaired the Courage to Love: Infant Mortality Commission under the auspices of the Joint Center for Political and Economic Studies. The unifying thread running through all of Dr. David's vocational endeavors is the abiding theological, medical, and political conviction that relationships are primary; all else is derivative.

About the Joint Center Health Policy Institute

The mission of the Joint Center Health Policy Institute (HPI) is to ignite a "Fair Health" movement that gives people of color the inalienable right to equal opportunity for healthy lives. HPI's goal is to help communities of color identify short- and long-term policy objectives and related activities in key areas. The Joint Center for Political and Economic Studies is a national, nonprofit research and public policy institution. Founded in 1970 by black intellectuals and professionals to provide training and technical assistance to newly elected black officials, the Joint Center is recognized today as one of the nation's premier think tanks on a broad range of public policy issues of concern to African Americans and other communities of color.

Staff Acknowledgments

Project Management: Carla Gullatt, Director of Operations & Outreach, Health Policy Institute

Editing: Susanna Dilliplane, General Editor

Cover & Text Design: Marco A. White, Creative Designer

Research Assistance: Danielle Huff