Bill Gates stood in front of the Class of 2007 as a member of a minority. Much like Mr. Gates, the seniors gathered at Tercentenary Theatre were certainly well-acquainted to excellence and success. But in believing that “reducing inequity is the highest human achievement” Mr. Gates likely found himself with scarce company amid a class that had been cultivated in a collegiate environment oriented toward the achievement of financial success and prestige. Though Mr. Gates is correct in noting that among our peers, recognition of global inequities far exceeds that of previous generations, such knowledge levels have not yet transcended a vague awareness of global disparities in wealth and human rights. It certainly has not yet produced a general consensus that fighting inequity is the greatest form of human achievement. Nor has it compelled undergraduates to believe that, both in their current roles as students and in their lives beyond, they should care more about inequity given how well placed they are to chip away global disparities.

Above Dexter Gate, through which students pass on a daily basis en route to their classes within Harvard Yard lies the inscription “Enter to grow in wisdom.” Upon exiting the Yard, students are in turn called to utilize this newly acquired wisdom in “depart[ing] to serve better thy country and thy kind.” Though university mission statements generally call for knowledge generation and the inculcation of social responsibility among student constituents, Gates’ speech highlights the continuing poor performance of elite universities in what Gates deems the most important measure of a modern public institution: impact on social inequity. Despite Gates’ hopeful remarks that we have attained an increased awareness of current social inequities, our experience has strongly suggested that Harvard as well as its peer universities have largely failed to challenge their students to grow in their understanding of and desire to ameliorate the causal roots of poverty and inequality.

Knowledge about inequity represents a critical first step in improving ourselves and our institution against Gates’ criteria for two reasons. First, an under-
standing of inequity begets a deeper moral concern about inequity. As freshman, we were lucky enough to find ourselves challenged by Dr. Paul Farmer, the Presley Professor of Medical Anthropology at Harvard Medical School and co-founder of the renowned medical non-profit Partners in Health. Asked to deliberate upon the primary risk factor for contracting HIV, we debated the relative contributions of “high sexual activity,” “intravenous drug use,” “homosexuality,” “living in a high HIV prevalence area,” not recognizing for a moment the role of “restricted material agency.” It was through this realization of how intimately intertwined poverty is with the inequitable distribution of disease risk, access to treatment, and likelihood of recovery that we came to see that inequities in health simply mirrored fundamental social injustices. This newfound understanding combined with increased insight into how such disparities could be ameliorated through comprehensive community-based interventions galvanized us to action.

Second, understanding inequity is crucial to fighting inequity. If we fail to contextualize, we cannot succeed in coming up with the best answers to the problems of global inequity. Andrew Natsios, the former director of the U.S. Agency for International Development (USAID), despite his academic credentials and impressive public health career, once proclaimed that Africans could not be put on AIDS treatment because they “do not use western means for telling time.” Natsios was responding to preliminary indications that adherence to HIV drug regimens was more difficult in resource-poor settings. It was only through a broader understanding of poverty that policymakers came to realize that by providing only a few extra dollars to alleviate social difficulties including clinic transport, patients in resource-poor settings consistently show adherence rates far higher than those in “Western” settings. Yet it is a problem oft neglected in our classrooms, in our curriculum, and in our pre-professional tracks.

However, knowledge of inequality will not alone ensure that students of our generation internalize Gates’ vision of placing the reduction of inequity as our highest collective priority. Rather, strengthening social ideals—which reinforce the notion that combating inequality is a worthwhile pursuit—will be critical to recruiting minds of our generations to social justice. For elite universities, perhaps the most important challenge is establishing an ethos across the institution which is passionate about issues of social equity. Seeing role models, including administrators and professors, deeply concerned with poverty and inequity is likely to leave a lasting impression that a student should not only seek to understand inequity,
Matthew Basilico and Connie Chen

but to do something about it.

Nevertheless, though we have begun by contending that Mr. Gates has been slightly over-optimistic about our current awareness of inequity, we agree with him that if elite universities are serious about stepping up to the challenge of inequity, an important first step is that they “will answer with [their] policies.” These policies must ensure that universities, in their research, teaching and service activities, address the needs of global poor; they must also serve to cultivate not just intellectual curiosity but moral consciousness and reflective awareness of social injustice. We believe that a first step in addressing global inequity would include adopting the following policies, all of which center around our area of familiarity, global health disparity.

LEVERAGING UNIVERSITY RESEARCH

**Promote Equal Access to Research**

In his speech, Gates declared “humanity’s greatest advances are not its discoveries—but in how those discoveries are applied to inequity.” In a world of unrelenting biomedical innovation, where stem cells and gene therapy are projected to one day prolong life almost indefinitely for those with the means and providence of living in the developed world, ten million individuals die each year around the world because they are unable to access the most basic and essential of medicines. In other words, scientific breakthroughs must challenge universities and other public research institutions to—in tandem—search for ways to distribute the fruits of science in an equitable manner.

As the pipeline for novel biomedical therapeutics and devices relies heavily upon university research and innovation, out-licensing to biotech and pharmaceutical companies for downstream development creates a moment of opportunity for universities to negotiate licensing terms that will most benefit those in need. Specifically, when university-owned intellectual property is necessary for the development of a potential health-related product, universities should require the inclusion of licensing terms in exclusive technology transfer agreements that ensure low-cost access to health-related innovations in the developing world. For technologies such as biologicals and healthcare devices subject to different scientific and technical constraints that might limit generic production, universities should develop a transparent, case-by-case global access strategy to ensure access when licensing provisions will not serve access objectives. In its Grand Challenges in Global Health initiative, the Bill and Melinda Gates Foundation already requires that grantees outline ex ante licensing strategies to ensure that any health products created with Grand Challenges funds will be available at affordable prices in poor countries.

Students, as university constituents, are uniquely positioned to ensure that their universities take responsibility for their technologies beyond licensing. In 2001, the student advocacy group, Universities Allied for Essential Medicines (UAEM) as its first campaign successfully convinced Yale University and Bristol-
Meyers Squibb to permit generic production of a critical Yale-discovered HIV-AIDS drug in South Africa, triggering a 96 percent price reduction within a year. Since then, UAEM has established dialogues with researchers and technology transfer officials at universities across the United States, Canada, and United Kingdom, drawn attention to the role of universities in promoting access to research through numerous publications, and worked closely with Senator Patrick Leahy (D-VT) in introducing legislation that would mandate humanitarian licensing terms modeled on the terms UAEM is urging universities to adopt voluntarily. Last year UAEM released a statement of policy principles called the “Philadelphia Consensus Statement” that has since been endorsed by hundreds of luminaries in science, medicine, and health policy as well as thousands of other student and faculty supporters at over a hundred campuses around the world. The Netherlands and Kenya, on behalf of the 46 World Health Organization (WHO) African Region Member States explicitly referenced UAEM’s statement in their recommendations to the 2007 WHO Intergovermental Working Group on Public Health, Innovation, and Intellectual Property.

This wave of activity has already led to movement by key schools. In March 2007, eleven leading research universities took an important step forward by jointly endorsing a white paper on best licensing practices. The next step to consensus around the idea that “Universities should strive to construct licensing arrangements in ways that ensure that these underprivileged populations have low- or no-cost access to adequate quantities of these medical innovations” is concrete policy change.

If elite universities are serious about stepping up to the challenge of inequity, an important first step is that they “will answer with [their] policies.” These policies must ensure that universities, in their research, teaching and service activities, address the needs of global poor; they must also serve to cultivate not just intellectual curiosity but moral consciousness and reflective awareness of social injustice.
Increase Research on Neglected Diseases

In the private sector, drug design is guided by market profitability. However, under current market driven research and development systems, tropical infectious diseases find themselves severely neglected in terms of research funding and activity. Though these "neglected diseases" are disabling and disfiguring, because they affect the world’s poorest individuals, the private sector lacks sufficient incentives to develop safe, effective, and critically needed treatments. For example, despite tuberculosis’ position as the infectious disease killing the highest number of people in the world, it is still diagnosed using ineffective tests designed a century ago.

Over half of the basic science research conducted in the United States takes place within public research institutions. Universities, rooted in the generation and dissemination of knowledge in the public interest, have an opportunity and responsibility to take part in alleviating the severe dearth of neglected disease research. In-house university research and development for neglected diseases treatments could be achieved through increased administrative support, faculty development, incubator funding, and physical space. Similarly, universities could also engage with non-traditional partners to create new opportunities for neglected-disease drug development and carve out a neglected-disease research exemption for any patents held or licenses executed. Supported by funding from foundations such as Gates’, partnerships between product development entities are likely to yield promising new approaches for neglected disease work. At the University of California Berkeley, for example, collaboration with the non-profit pharmaceutical company Institute of OneWorld Health and the small biotech company Amyris Biotechnologies has allowed the partner organizations to pool their resources and know-how in developing a new production process for microbial artemisinin, one of the world’s most effective antimalarial therapy regimens, whose supply has long been limited by its lengthy agricultural production process.

EDUCATION

Develop Core Curriculum Offerings focusing on Global Inequity

Elite universities, with their rich financial, intellectual, and technological endowments, boast many of the greatest contemporary thinkers on global inequity—yet the vast majority of undergraduates are allowed to graduate without ever encountering them, or their ideas on inequity, in the classroom. For an age in which global inequity is possible the most important feature of our global landscape, and that work to combat inequity—according to Gates—is possibly the greatest use of our efforts, it seems a tragedy that we consistently miss something that matters greatly in our lives. Indeed, Gates noted that his “one big regret” was that he “left Harvard with no real awareness of the awful inequalities in the world.”

Though divergent in their scope and mandated areas of study, “core curricula” remain the cornerstone of education across the majority of elite universities. Though such curriculum requirements are aimed toward the cultivation of moral consciousness and intellectual inquiry, it is entirely possible for today’s students to
make their way through their “broad academic exploration”—on, say, astronomy, Bach, Homeric epics and World War II history—without ever encountering the realities of modern global disparities and the structures which maintain, improve or exacerbate them. As universities re-work and modernize their curricula, they should make sure to develop a core area solely devoted to inequity, or to stock current core areas with many more inequality-focused courses. A simple first step would be to recruit luminaries such as the Joseph Stiglitzs and Jim Kims of the world to teach a core course on structural violence, social justice, and global health inequity.

Expand Options in Career Services

Career services centers play an important role in advising college students on their vocational choices and making opportunities available for post-graduate work. At Harvard, the Office of Career Services has an impeccable record at placing students into lucrative private sector jobs, such as those in investment banking, corporate finance, and consulting. Throughout junior and senior years, students are flooded with information sessions hosted by corporations, receive refined advice from a network of business tutors and career counselors, and have an extremely simplified online “e-recruiting” application process which puts hundreds of post-graduate job opportunities at one’s finger tips. It is no surprise then that at Harvard over half of each senior class has consistently entered private sector employment following graduating.

In contrast, despite new waves of interest and considerable pressure from students, opportunities in global health, remain extremely lacking. Offices of career services have an opportunity and a responsibility to make positions in global health equity much more widely available through their systems. Achieving this goal, however, will take significant effort on behalf of the offices, which are typically accustomed to well-resourced employers beating down their doors in eagerness to attract talent. Even the most established of today’s organizations on the front lines of global health have very constricted budgets for staffing and hiring. Regardless of their need for new recent graduates, they will never have the capacity to reach out to University career offices in the same manner as Goldman Sachs. Therefore, the onus is upon career services offices to adopt proactive strategies in building adequate capacity in global health opportunities. Through simple partnerships with on-campus global health institutions, schools of public health and alumni working in global health, career service offices should have no problem organizing career fairs, publicizing informational sessions, educating counselors on available opportunities, and streamlining opportunities into their on-line database. Global health opportunities highlighted by career services offices should certainly not be limited to clinic based positions with well-known NGOs such as ‘Medicins San Frontiéries’. Grassroots organizations often have greater human resource needs; neither should it be overlooked that water, sanitation, agriculture, female empowerment, among many other areas, are also inextricably linked to health. These efforts would be well-rewarded by Gates’ metric, and would help to
Matthew Basilico and Connie Chen

send scores of highly capable graduates into the careers directly fighting for global equity.

**Expand Options for Overseas Experience in Education and Service**

For those students who are currently considering careers on the front lines of global health, well-developed internship programs for undergraduates are very difficult to identify. Where they do exist, they are extremely competitive.

The University, however, has the capability to make these types of opportunities far more accessible to its students. Many of the service providing NGOs that undergraduates desire to work with do not take students for very rational reasons: students often do not have cultural competency, practical training, and general understanding of public health and professionalism. Universities, however, can overcome these gaps by providing targeted training to make their students more useful to service providing NGOs in resource poor settings.

A possible solution would be to establish two-summer programs in global health in which students would spend a summer at their home institution receiving training in practical and theoretical issues—including cultural competency—as well as professionalism in conduct in order to go serve an NGO overseas in the second summer. Second summer placements could be made before the beginning of the first summer, enabling the curriculum to include language, historical and cultural studies directly relevant to the student’s experience the following year. Internships are a very important part of career exploration in a student’s life, and multitudes of opportunities currently exist for paths less related to fulfilling Gates’ criteria of “reducing inequity.” Universities should take the necessary steps to make these types of opportunities available to their students, and ensure their students arrive in service positions overseas with the skills, understanding, and maturity necessary to make a contribution in complex and sensitive settings.

Though record-breaking levels of students are currently studying abroad, the percentage of students traveling to developing countries remains low, with only 4 percent of study abroad students, for example, choosing to travel to Africa. Even when students manage to access programs in developing countries, they find it difficult to escape capital cities where they are frequently surrounded by American expatriates, diminishing their interaction with local students. Universities should develop programs that will allow students long-term academic and cultural immersion in resource-poor settings. Within the sciences, “twinning” with international research partners would provide researchers with unique exposure to different research resources and systems of science. The Global Science Corps proposed by Nobel prize winning scientist Dr. Harold Varmus in which United States institutions and foreign universities would implement one-year exchange fellowships for scientists represents one such model.
GLOBAL SERVICE

In her recent fall welcome address, newly inaugurated Harvard President Drew Faust reminded the students and parents of the Class of 2011 that universities are unique because of their “missions of public service.” However, despite President Faust’s proclamations, universities have long primarily limited their global health involvement to teaching and research with limited engagement in long-term service delivery in developing world settings. However, in order to conduct research and educate students about health delivery, universities must actually engage in service provision on-the-ground so that students and faculty can learn and address first hand the practical challenges of global health. As Dr. Paul Farmer has frequently stated, “It’s not as if students who want to do this work want to go and be spectators to poverty. They want to do something useful to the people they are around. We need to have “effector arms” so that we can have an impact on poor communities.” University teaching hospitals are well situated to lending their experience in establishing increased training and research opportunities in the poorest of settings.

Where the University is already engaged in service provision on the ground, it is important that indirect overhead costs retrieved by the University remain within appropriate measures. Since most Universities do not presently have a category for implementation of direct service work when classifying activities, ambiguity has often lead Universities to extract a significantly higher indirect overhead premium than non-academic organizations which perform similar services. For example, Harvard University initially negotiated an indirect overhead rate of over 45 percent in a $107 million grant for AIDS treatment from the United States Office of the Global AIDS Coordinator “PEPFAR” program. This exorbitant figure sent tens of millions of dollars intended for AIDS patients in Tanzania, Nigeria, and Botswana to instead fund the maintenance of Harvard’s offices, the administration of its libraries, and the salaries of its administration. Universities must resist the temptation to leverage their monopsony power as one of only a handful of service providers in many countries overseas, and only charge overhead rates that would be comparable to non-governmental organizations which do similar work. The adoption of a new classification for “off-campus service provision” with an indirect rate of 20 percent or lower would be a positive beginning.

AVENUES FOR STUDENT ENGAGEMENT IN GLOBAL HEALTH

Earlier this Fall, just under a thousand Boston and Cambridge students and residents gathered inside the John F. Kennedy Forum Room at the Harvard Institute of Politics to hear Dr. Paul Farmer and Mr. Ira Magaziner, Chairman of the Clinton Foundation HIV/AIDS Initiative speak on potential avenues for student engagement in global health. Despite the many challenges that remain in global health equity, the mood was one of optimism. The success of the Partners in Health model, its recent expansion into Africa with the Clinton Foundation and its pro-innovations / fall 2007
posed scale-up throughout entire countries seemed to be only a glimmer of what is possible in the future of global health. Both Dr. Farmer and Mr. Magaziner emphasized that their scaling these large mountains is not the sole purview of late-career professionals: students not only have a role to play, but their position and influence in the movement has been crucial. From driving support for Presidential candidates platforms on HIV/AIDS through the ’08 StopAIDS Movement, lobbying pharmaceutical companies to improve their access policies in developing countries to lobbying Universities to adopt policies similar to those outlined above, students remain an irreplaceable part of the global movement to make health a human right.

As Gates says: “Don’t let complexity stop you. Be activists. Take on the big inequities. It will be one of the great experiences of your lives.”

2. In 2002 alone, it is estimated universities contributed $19.6 billion to the drug development pipeline in the United States. Between 1993 and 2003, the number of patents and license agreements executed by universities approximately doubled, and it is projected that the number of patents executed by universities for pharmaceutical technologies will only continue to increase (AUTM, 2003; PhRMA, 2005). Universities hold the patent rights to a number of critical therapeutics ranging from HIV drugs such as stavudine (Yale University), abacavir (University of Minnesota), lamivudine (Emory University), emtricitabine (Emory University), and enfuvirtide (Duke University) to cancer drugs such cisplatin and carboplatin (Michigan State University), permetrexed (Princeton University) and cetuximab (University of California, San Diego) (Kapczynski et al, 2003). 80% of today’s prescriptions for AIDS medications include at least one drug covered by Emory’s intellectual property rights (Emory TTO, 2007).
5. For a detailed description of the project and collaboration, see http://oneworldhealth.org/diseases/artemisinin.php.