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More Than a Pill: The Impact of American Family Planning Policy on Sub-Saharan Africa

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Acronyms and Abbreviations

ABCD “Abstain, Be faithful, use a Condom...or you Die”

BCC Behavioral Change Communication

GDP Gross Domestic Product

HDI Human Development Index/indicators

ICPD International Conference on Population and Development

NGO Non-Governmental Organization

PPAG Planned Parenthood Agency, Ghana

USAID United States Agency for International Development

1. Introduction: Just a Few of the World’s Problems

Comprehensive and factual sex education has the ability to empower young adults with the information they need to make safe decisions about their sexuality; and not just in the United States. Young adults, and young women in particular, benefit widely from information about family planning all over the world. The United States, because of its role in many international institutions, plays a significant part in determining outcomes in this area. However, despite a variety of legislation on this issue, we are still grappling with problem of acceptance of family planning measures domestically. This policy confusion is then reflected in our foreign policy.

The United Nations Population Division estimates that there will be nine billion people by 2050, and as many as ten billion by 2100.¹ Much of this growth will occur in Africa, one of the few remaining areas where birth rates are still far above the replacement level of two children per couple.² This rapid population growth negates any economic progress the region has made. If economic growth is slow or non-existent, and the population is growing, per capita GDP—an indicator of national wealth—will fall. This has been the case in Niger, where the population

growth rate has exceeded the economic growth rate. In South Africa, high population growth during the 1990s negated much of the economic growth the country was experiencing; average real growth of 3.1 percent dropped to an actual rate of about 1.1 percent after accounting for the population expansion.³

In Africa, fertility and family size are still very much tied to tradition which believes that a man's large family is a source of pride. Respect for high fertility, the horror of barrenness, and the belief that births are necessary to reincarnate one's ancestors are also central to traditional African religions. As a result, after much debate and a few attempts in the 1970s, the subject of population control has been largely ignored or passed over for less controversial development programs. The success of the Green Revolution, which introduced technology to combat neo-Malthusian⁴ concerns about the ability of our planet to support the ballooning population, may also have contributed to reduced concerns about a growing population.

United Nations projections suggest that the expanding world population is a cause for concern. Education offers one solution to controlling population growth; however, it alone is not enough. Multimedia campaigns to increase awareness and change culture-based fertility decisions should also be included in family planning programs. So should simple payment programs, mobile clinics, and support for women's agency.⁵ But if these programs are going to work well, they will have to be structured with the developing world in mind. African family planning policy, because of its reliance on American aid flows, is negatively impacted by American ideas about family planning and population control. Policy designed for the Western world, however, would simply not fit other regions without significant cultural modification.

2. Background of the US Policy on Birth Control

The modern birth control movement started with Margaret Sanger in the late nineteenth century. Sanger was shocked by the inability of most women to obtain accurate and effective birth control, which she believed was fundamental to securing freedom and independence for working women.⁶ During a brief stint in England, where she had fled to avoid persecution for dissemination of information on birth control methods in the United States, she developed relationships with myriad British radicals, feminists, and neo-Malthusians. Their social and economic theories helped Sanger to develop broader justifications for the use of birth control. Upon her return in 1916 Sanger opened a women's health clinic in Brooklyn, New York; where she hoped to provide information to mothers who could not afford another child. Sanger was constantly looking for simpler, more cost effective contraceptives. She played a critical role in funding the first hormonal birth control pill in the 1950s. However, it was not until *Griswold v. Connecticut* in 1965, that the birth control pill became legal for married couples.⁷ In spite of early concerns, the increased ability of women to control their fertility decisions did not spark a sexual revolution. But neither did it immediately cause the fertility rate to drop. In fact the drop in fertility rate was not identified until almost a decade later in the 1970s.⁸

Sixty years after its creation, the pill, and birth control in general, continue to be controversial. Daniel Grossman, a senior associate at Ibis Reproductive Health in San Francisco writes that, "After fifty years of data about how safe this drug is, it's crazy that we still have these barriers to gaining access."⁹ While the pill easily fits the Food and Drug Administration's criteria for an over-the-counter drug, it remains prescription only.¹⁰ Access is further complicated by the lack of coverage under the Patient Protection and Affordable Care Act (also known as Obamacare).

3. The Debate on Abortion Continues

Another problem is the longstanding controversy within the United States over abortion rights; or, more generally, whether or not a government entity has the right to interfere with the decisions a woman makes in conjunction with her doctor about her health. In the landmark Supreme Court case *Roe v. Wade*, Roe, a single pregnant woman, brought a class action challenging the constitutionality of the Texas criminal abortion laws. These laws banned abortion except on medical advice for the purpose of saving the mother's life.¹¹ A childless married couple, the Does, who were not pregnant at the time, attacked the laws separately. They based their case on the future possibility of contraceptive failure, pregnancy, unpreparedness for parenthood, and impairment of the wife's health as justification for an abortion. A three-judge District Court, which consolidated the two cases, held that Roe had standing to sue and presented judicable controversies, while the Does did not. The court declared the abortion statutes void on the basis that the same were vague, and broadly infringed upon the plaintiffs' Ninth and Fourteenth Amendment rights, and ruled that relief was warranted.

State laws regard abortion as a criminal act that is justifiable only when there is no other option to save the life of a mother. However, such laws violate the Due Process Clause of the Fourteenth Amendment, which protects the right to privacy against state action, including a woman's qualified right to terminate her pregnancy. So, as of January, 1973, women in the United States were permitted to use birth control of any method, and to end a pregnancy if they felt that it was in their best interest to do so.

4. Domestic Policy Meets Foreign Policy

4.1 American Policy toward the Developing World

Regardless of abortion's legality in the United States, 1984 saw President Reagan signing the Mexico City Policy, named after the location of the International Conference on Population and Development (ICPD) in the same year. The policy directed the United States Agency for International Development (USAID) to withhold funds from non-governmental organizations that would use the funding to provide advice, counseling, or information regarding abortion; or to lobby a foreign government to legalize or provide abortion facilities.

The policy was retracted by President Clinton in 1993, and then reinstated by President Bush in 2001. The Bush administration extended the policy to include limitations on voluntary population planning support provided by the Department of State. The "Mexico City Gag Rule," (or the "Global Gag Rule,") as it is sometimes known, now required non-governmental organizations to "agree as a condition of their receipt of [U.S.] federal funds" that they would "neither perform nor actively promote abortion as a method of family planning in other nations."¹²

President Obama reversed the Mexico City Policy in January 2009, thus showing support for voluntary, safe and effective family planning in developing countries. His actions were supported by many international organizations working toward population control. Tod Preston, a vice president at Population Action International contends that, "President Obama's actions will help reduce the number of unintended pregnancies, abortions and women dying from high-risk pregnancies because they don't have access to family planning [tools]."¹³

4.2 *Impact of US Policies on the Developing World*

Contraceptive and sex education policy in the United States inarguably has an impact on the rest of the world. When the Planned Parenthood Agency of Ghana's (PPAG), an international health and family planning organization, refused to sign the Gag Rule policy following its imposition, the group saw a 50 percent increase in the number of women seeking post-abortion services as a result of lack of contraceptives.¹⁴ The reason was that the Agency no longer received funding from USAID or the State Department, without which non-abortion family planning service levels also fell, resulting in the increases noted above.

Because of policies like the Mexico City Rule, and the prevalence of abstinence only sex education in the United States, the main focus of sexual education programs funded by the United States in Africa is on alternative strategies. In Kenya, for example, this means a combined effort from civic groups, churches, international organizations and government groups which come together to emphasize the ABCD approach: *Abstain*. If that does not work, *Be* faithful and use a *Condom*. The underlying threat was, "or you *Die*."¹⁵

The non-contraceptive rhythm method is another alternative to comprehensive sex education. The Catholic Church has supported this method¹⁶ since mid-twentieth century when the exponential rise in birth control use forced them to make a decision to either support or not support birth control. But without knowledge of when in a woman's cycle she is likely to get pregnant, and lack of communication between partners about this information, the rhythm method more often results in pregnancy. The Catholic Church and any other group who would like to discourage modern contraceptives may well be within their rights to do so provided that they educate teens and young adults about alternative methods that they find acceptable. However, so far there is no indication that the matter has been a priority with them.

The controversies on the appropriateness of sex education; discussions about sexuality; and the morality of pre-marital sex are not the subjects of this paper, but for one important point. Banerjee and Duflo point out in *Poor Economics* that ABCD type programs presume “that adolescents are not responsible or smart enough to weigh the costs and benefits of sexual activity and condom use.”¹⁷ However, if sixteen year olds can be trusted to drive a car, and eighteen year olds to make college decisions that can impact the rest of their lives, it seems condescending to presume that teenagers are then incapable of making decisions about keeping their own bodies safe. Restricting access to clear, research proven information, could prevent teens, whether they are in the United States or Sub-Saharan Africa, from making informed decisions. Full access to knowledge about our innate human sexuality may not be a right granted only to adults.

4.3 *Serving the Most Vulnerable Groups in Sub-Saharan Africa*

A multi-county study by Singh et al conducted in Sub-Saharan Africa established that only about two-thirds of participants knew of, or had heard of, a modern method of birth control other than condoms. The qualifier here is, “have heard of,” not “know where to find” or “how to use.” The authors concluded that teens should be made aware of HIV and pregnancy prevention measures starting from a young age, ideally before age fifteen.¹⁸ A majority of adults in Sub-Saharan Africa agreed with this point, especially given that most young people will become sexually active at some point in their lives, whether it is before or after marriage. This is particularly true in rural areas where the lack of other forms of entertainment results in higher numbers of sexual partners at a younger age.¹⁹

Young people, whether in the US or in Africa, constitute the most vulnerable group when it comes to family planning and sex education issues. The attendance of a teenager in school in

Sub-Saharan Africa very often is a determining factor in whether or not he or she knows about and uses modern birth control. One study by Gupta, for example, found that only six percent of teens that did not attend school followed safer sex procedures, while thirty-six percent of those in school did.²⁰

While teens that are able to attend school are fairly easy for family planning advocates to access, being in a remote area complicates outreach. Then there are obstacles which make it difficult to attend school at all; for example, in rural areas the distance between home and school can be prohibitive. Also, many teenage girls and boys stay at home to take care of younger siblings, or are required to work to support the family. Besides, in certain areas it is difficult to engage with both teens and middle aged women because there is little media exposure and health care services are almost non-existent.²¹ These two demographics present different challenges: the first group needs information about safe sexual practices and delaying pregnancy, while the second is often in search of information on how to slow or stop the growth of their current family.

5. Policy Options

Domestic policy and attitudes in the United States have played a large role in determining the amount of funding and support that family planning programs receive at home and abroad. This is largely a result of looking at the issue from a conservative morality point of view. If one group does not agree with the idea of contraception, and presses this view upon other groups without regard for the benefits of contraception, family planning advocates are set up for failure in the future. Larger family size is a problem that will end up affecting everyone as resources are spread among ever more people. If we do not want to grapple with issues of massive water and

food shortage in the future, policy makers need to do something now. There are a few simple programs that have shown success in the Sub-Saharan region of Africa that do not directly deal with providing contraceptive services, thereby bypassing the morality arguments propagated by conservatives, and still allowing for the benefits gained by increasing women's agency and family planning power.

5.1 *Mobile Clinics in Rural Areas*

Mobile clinics provide an answer to some of the problems women in rural areas face. Such clinics may be a group of health care providers that travel with a physical unit (a trailer for example) or a group with a fixed location with volunteers that make house calls within a village. Mobile clinics have been successful in reaching women of all ages in rural areas.²² Teenagers, young mothers and middle aged women, especially, benefit when they can interact with health workers close to home where they are most comfortable. In Tanzania, it was only after sex education programs were expanded into the rural sector that fertility levels dropped.²³

These clinics, and the health care workers who staff them provide much needed support in areas where there is little else being done to support women's health. One fixed clinic in Hammanskraal, Gauteng, South Africa is staffed by roughly five to ten volunteers who then travel throughout the community assisting over one hundred families who have been affected by the AIDS epidemic. They are also tasked with the often difficult job of disseminating information on condom use to protect one partner from the other's disease. These volunteers play a very important role by acting as a middle man between larger reproductive health centers and women in rural areas.²⁴

5.2 *Increasing Educational Attainment*

Reducing the cost of education improves educational attainment, which in turn can reduce fertility rates. For example, young women can be paid a stipend to stay in school, or girls can be provided with school uniforms. Both options help women to continue their education by cutting out the cost associated with attending school. This also allows them to avoid early marriage and by association, larger family size.²⁵ The payoff from further education, therefore, is high. Not only does increased maternal education increase the individual woman's chance of higher income and a longer lifespan, but that success is also reflected in her future children's health and capabilities.

5.3 *Changing Culture through the Media*

When access to education is limited, media could step in as an educating and information spreading force. In *Poor Economics*, Banerjee and Duflo discuss the role of telenovelas in Brazil in changing fertility choices.²⁶ As access to television expanded between the 1970s and 1990s, more women began to watch the telenovelas. In the predominantly Catholic country, the government wanted to stay far away from discussions about birth control. Television producers, however, began to introduce shows where the main character was a young educated woman who only wanted or had one child. This was in complete opposition to a traditional culture that stressed large family size and rejected contraception. Fertility rates in areas with access to television dropped sharply after introduction of this program. The women even began to name their children after the characters in their favorite shows, demonstrating the importance the shows had for them. The example shows the powerful influence media can have, even in shaping something as ingrained as culture and desired family size.

Behavioral change communication (BCC) theory helps to explain the influence of media, and offers suggestions for future planning. BCC seeks to influence cultural behavioral patterns by modeling a behavior different from common culture by using the media. BCC also looks to multimedia campaigns to change the knowledge base of the community, garnering approval for a new concept as it gains increased attention. Eventually, BCC aims to encourage a new practice. Once that practice becomes more ingrained, users will advocate it to their friends.²⁷ In Nepal, behavioral change communication increased inter-community and inter-friend group communication about contraceptives. In Mali and Tanzania, exposure to information about the benefits of contraceptives increased positive perceptions and discussions.²⁸

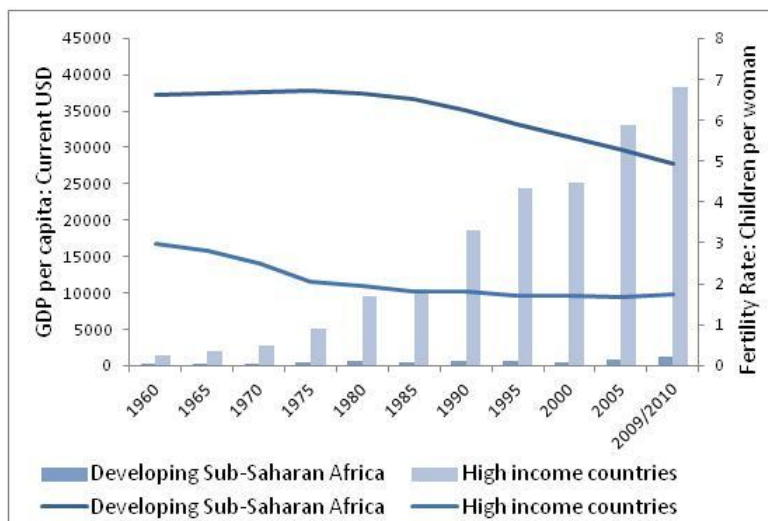
Increased exposure to discussions about contraceptives appears to be linked to increased intention to use a modern method of birth control.²⁹ For example one cross-cultural study longitudinal showed that the use of modern methods of birth control increased by seven percent for women and sixteen percent for men over a period of eight years.³⁰

5.4 *The Link between Fertility Rate and Economy*

Another alternative to actively promoting contraceptive use is to encourage women's participation in a country's economy. One just has to look at the example of Bangladesh since the 1950's to see the link between population control and economic factors. Until the mid-1980s, the fertility rate in Bangladesh was over six children per woman. Yet something happened to change the birth rate, which had been fairly constant until that point. It is posited that the introduction of clothing factories to Southeast Asia increased the number of women in the work force, thus limiting the number of children they had time to support.

Besides, there seems to be a relationship between economic growth and fertility rates. For example, one study showed that increases in the United Nations Human Development Indicators, not a family planning program, helped to drop fertility rates in Kenya and Ghana.³¹ Given that increases in HDIs often reflect economic gains, the researchers were able to match longitudinal gains in HDIs with decreases in fertility rates in those two countries starting in the 1970s. When improvements to HDIs slowed in the mid-1990s, so did reductions in the population growth levels.

Figure 1: GDP/Capita Growth and Birth Rate Trends Since 1960³²



Source: World Bank Development Indicators

As Figure 1 suggests, there is a relationship between the growth of GDP/capita and decreasing number of children per woman. This could be explained in two ways. On a more mathematical level, if the population is staying fairly constant, regular economic growth within the nation will be spread across steady number of people, so GDP/capita will be higher than it

would be if the population continued to grow at a higher rate. Alternatively, Figure 1 tells us that as economic opportunities and growth occur within a region, the number of children each woman has will decrease, as was likely the case in Bangladesh, Ghana and Kenya. Better economic circumstances help people everywhere to have more control over their choices.

6. Arguments Against Family Planning

6.1 Demographic Shift

Opponents of family planning aid posit that the cost of family planning will be a smaller labor pool, the harmful effects of which are demonstrated quite clearly by the current situation in Japan.³³ However, most developing nations do not have the life expectancy that Japan has, so the probability they will face a geriatric population is not as high, and thus this could be less of an issue. Moreover, Japan is also a special case of a post demographic transition society.³⁴ The challenge of dealing with a relatively short term issue of an aging population could be far outweighed by the benefits of sustaining many lives over time, given limited resources. Additionally, it is illogical to assume that any increase in sexual health or family planning education would bring the population growth rate down below replacement level within a single generation, especially given the cultural forces advocates of family planning seem to be working against.

Related to issues of demographic shift are the economic benefits families in developing nations receive from having many children. As the opponents to family planning point out, when health and lifespan variables are uncertain, families will choose to have more children, assuming that at least some of them will survive. This helps to bring income into the family, as well as

ensures that there is a child around to help take care of the parents into old age. Where few forms of institutionalized insurance exist, it is intuitive that families should rely on each other instead.³⁵

6.2 *Amorality Arguments*

Finally, there is the opposition from conservatives who argue on the point of morality. They have played and continue to play a large role in the policy debate in the United States. Their opposition has impacted foreign policy decisions, the most obvious being the Mexico City Rule. As a result of this policy, several international family planning agencies stopped receiving funding from the United States. Not everyone agreed with the ruling, and testifiers before the House Committee on Foreign Affairs on the Global Gag Rule impressed upon members of Congress the negative impact of the law. For example, Ejike Oji MD, Country Director for Ipas-Nigeria, a women's reproductive health NGO, said that, "the Global Gag Rule exacerbates the situation in Nigeria whereby women have no choice about how to manage their own lives."

The Mexico City rule prevented USAID from working with organizations that could most effectively increase the use of family planning, largely through rural distribution. Oji continued, "This is an incredibly dangerous gamble in Nigeria where nearly one-third of women say they have had an unwanted pregnancy and half of those have attempted an abortion."³⁶ Ghana was also hurt by the Mexico City rule. According to Dr. Nerquaye-Tetteh, Executive Director of Planned Parenthood Agency of Ghana, as a result of U.S. policy, access to family planning has been significantly reduced. The number of unintended pregnancies and new sexually transmitted infections also increased.

7. Moving Forward

African family planning policy, because of its reliance on American aid flows, is subject to American ideals of morality and the laws which reflect these values. If policy programs funded and ideologically backed by the United States are unable to provide contraceptives and other family planning information and services, there are a number of alternatives, some described above, that avoid this potentially sensitive subject. Ideally though, programs that can directly provide contraceptives and information to women and the youth should be adopted. Not only would this help to mediate pressures on the environment, but the number of accidental pregnancies could also be reduced.

Seventeen percent of women in Sub-Saharan Africa would like to avoid pregnancy, but less than half are using a modern form of contraception.^{37, 38} That means 60 percent of the women having sex are trying to avoid pregnancy; yet they often lack, like American women, even basic knowledge about their reproductive system. Increased access and exposure to birth control methods not only raises the chance that unintended pregnancies will fall, but there is also evidence that the number of abortions (legal or otherwise) would also decrease as other preferable methods of pregnancy prevention are utilized.

A family planning program designed for the Sub-Saharan region should be mindful of a few issues. First, African society does not encourage talking about sex and family planning. Second, at this point, the goal is largely to help with birth spacing, as large family sizes are culturally more desirable. Women would also like help in delaying the first pregnancy, which would allow them to stay in school longer. Finally, a sizable number of female users, 6-20 percent, prefer a covert contraceptive such as injectables³⁹ as their first choice. Also, many

women cite a need to be able to hide the fact that they are on a form of birth control from their partner, so contraceptives that can be discovered are less desirable.

Ultimately, family planning programs require sustained commitment over a long period of time. Kenya, for example, offers a story of initial success in curbing the birth rate. At the height of the concern about population control, the nation started its own national family planning program, which decreased average children per woman from eight to five. But since then, the shift in development priorities and a lack of funding has allowed fertility rates to return to where they were pre-program for all but the upper class.

8. Final Thoughts

Despite the success of family planning measures in a few of the African nations, the subject of women's reproductive health and agency worldwide continues to be largely ignored. The ICPD Conference in Cairo in 1994 was one of the first to stress the need to focus on women's and girls' health and agency after initial global interest in the 1970s. This brief focus, however, was interrupted by massive cuts to budgets for family planning throughout the 1990s.⁴⁰ Eighteen years later, the World Bank has made women's agency and gender equality the topic of the World Development Report for 2012. Support for family planning has long been held back because of resistance from the United States at both the governmental and individual level.⁴¹

Babatunde Osotimehin, the executive director of the United Nations Population Fund, has continued to call for action to meet the contraceptive and maternal health needs of the roughly 215 million women in developing countries. However, as he pointed out, although women would like help in planning and spacing births, they do not have access to modern contraception. He

further added that “neglect of sexual and reproductive health results in an estimated 80 million unintended pregnancies; 22 million unsafe abortions; and 358,000 deaths from maternal causes — including 47,000 deaths from unsafe abortion.”⁴²

In the end, contraception and informed family planning policy help us to make life better for those who are left to live it. The choice between a high number of survivors and high quality of life could be made easier⁴³ if we could provide people access to materials and information they need to make decisions that they consider to be in their best interest.

¹ "World Population to Reach 10 Billion by 2100 if Fertility in all Countries Converges to Replacement Level" (United Nations Population Division, May 3, 2011). http://esa.un.org/unpd/wpp/Other-Information/Press_Release_WPP2010.pdf (November 26, 2012).

² Malcom Potts and Martha Campbell, “Foreign Policy: Without Birth Control, Planet Doomed” (NPR.org, May 11, 2011). <http://www.npr.org/2011/05/11/136201025/foreign-policy-without-birth-control-planet-doomed> (April 12, 2012).

³ Anthony Butler, *Contemporary South Africa* (New York: Palgrave Macmillan, 2009), p 56.

⁴ “Malthusianism” refers primarily to ideas derived from the political and economic thought of Reverend Thomas Robert Malthus, as laid out initially in his 1798 writings, “An Essay on the Principle of Population,” which describes how unchecked population growth is exponential while the growth of the food supply was expected to be arithmetical. “Neo-Malthusianism” generally refers to people with the same basic concerns as Malthus, who advocate for population control programs using contraceptives in order to ensure resources for current and future populations.

⁵ Women’s agency is best described as the capacity, condition, or state of exerting power. It is used in the development literature to describe the increased ability of a woman to control her own well-being and life decisions.

⁶ Concepts described as women’s agency by the World Banks World Development Report 2011.

⁷ “Biographical Sketch” (New York University Margaret Sanger Papers Project, May 3, 2010). <http://www.nyu.edu/projects/sanger/secure/aboutms/index.html> (April 26, 2012).

⁸ Rita Rubin, “The Pill: 50 Years of Birth Control Changed Women's Lives,” USA Today (May 8, 2010). http://usatoday30.usatoday.com/news/health/2010-05-07-1Apill07_CV_N.htm (April 26, 2012).

⁹ Ibid.

¹⁰ They are not toxic or addictive, and users can safely take them without a doctor’s supervision.

¹¹ “Roe v. Wade” (Cornell University Legal Information Institute). http://www.law.cornell.edu/supct/html/historics/USSC_CR_0410_0113_ZS.html (April 20, 2012).

¹² “The Global Gag Rule: Undermining Women's Health and US Foreign Policy” (Population Action International, June 2010). <http://populationaction.org/wp-content/uploads/2012/01/GGR2010.pdf> (April 20, 2012).

¹³ Peter Baker, “Obama Reverses Rules on US Abortion Aid,” *New York Times*, January 24, 2009, A13.

¹⁴ Katie Porter, “The Global Gag Rule in the Crosshairs” (Population Action International, November 5, 2007). <http://www.rhrealitycheck.org/blog/2007/11/05/global-gag-rule-in-the-crosshairs> (April 20, 2012).

¹⁵ Abhijit V. Banerjee and Esther Duflo, “Pak Sudarno's Big Family,” in *Poor Economics*, by Abhijit V. Banerjee and Esther Duflo (New York: Public Affairs, 2011), 114.

¹⁶ The “rhythm method” or “fertility awareness method” is periodic abstinence from sexual intercourse in the days near ovulation, when a woman is most fertile and most likely to become pregnant.

¹⁷ Abhijit V. Banerjee and Esther Duflo, “Pak Sudarno's Big Family,” in *Poor Economics*, by Abhijit V. Banerjee and Esther Duflo (New York: Public Affairs, 2011), 114.

¹⁸ Susheela Singh, Akinrinola Bankole and Vanessa Woog, “Evaluating the Need for Sex Education in Developing Countries,” *Sex Education* 5(November 4, 2005): 307-331. <http://www.guttmacher.org/pubs/2005/11/14/SEv5n4Singh.pdf> (April 24, 2012).

¹⁹ Sydney Montana, Centre for the Study of AIDS, University of Pretoria, South Africa. Lecture (July 31, 2012).

²⁰ N. W. Gupta, “Associations of Mass Media Exposure with Family Planning Attitudes and Practices in Uganda,” *Studies in Family Planning* 34 no.1 (March 2003): p 19-31. <http://www.ncbi.nlm.nih.gov/pubmed/12772443>.

²¹ Charles Kenny, "The Trojan Paradox," *Foreign Policy*, February 12, 2012.
http://www.foreignpolicy.com/articles/2012/02/21/the_trojan_paradox (April 20, 2012); Singh et al., "Evaluating the Need," 307-331.

²² Caldwell and Caldwell, "Africa: the New Family Planning Frontier," 76-84.

²³ Ibid.

²⁴ Sydney Montana, Centre for the Study of AIDS, University of Pretoria, South Africa. Lecture (July 31, 2012).

²⁵ Banerjee and Duflo, "Pak Sudarno's Big Family," 115.

²⁶ Banerjee and Duflo, "Pak Sudarno's Big Family," 118.

²⁷ "Behavior Change Communication" (Center for Global Health Communication and Marketing 2012).
http://www.globalhealthcommunication.org/strategies/behavior_change_communication (April 26, 2012).

²⁸ Gupta, "Associations of Mass Media," 19-31.

²⁹ Ibid.

³⁰ Ibid.

³¹ John Bongaarts and Susan Cotts Watkins, "Social Interactions and Contemporary Fertility Transitions," *Population and Development Review* 22, no. 4 (1996): 639-682.

³² Data sets used: "GDP/capita (Current \$US)" (Data: The World Bank).
<http://data.worldbank.org/indicator/NY.GDP.PCAP.CD> (April 27, 2012); "Fertility rate, total (births per woman)" (Data: The World Bank).
<http://data.worldbank.org/indicator/SP.DYN.TFRT.IN> (April 27, 2012). *Categories "Sub-Saharan Africa (developing only)" and "High Income" provided by data set.

³³ Yunker, James A. "Estimating Optimal Expenditures on Family Planning in Developing Economies." *Population Research and Policy Review* 22, no. 2 (April 2003): 103-126.

³⁴ Crude birth rate is far less than the crude death rate, so total population growth is less than zero.

³⁵ Banerjee and Duflo, "Pak Sudarno's Big Family," 119.

³⁶ Porter, "Global Gag Rule in the Crosshairs."

³⁷ The remaining 83 percent are not sexually active, pregnant, post-partum, or wanting children

³⁸ Singh et al., "Costs and Benefits."

³⁹ Such as the birth control shot or implant, brand names in the US “Depo-Provera” and “Implanon”/“Nexplanon”

⁴⁰ Malcolm Potts and Martha Campbell, “The Myth of 9 Billion,” *Foreign Policy* (May 9, 2011).

⁴¹ Caldwell and Caldwell, “Africa: the New Family Planning,” 76-84.

⁴² Potts and Campbell, “The Myth of 9 Billion,” 119.

⁴³ James Yunker, “Estimating Optimal Expenditures on Family Planning in Developing Economies,” *Population Research and Policy Review* 22 (April 2, 2003):103-126.