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International Fertility Change: New Data and Insights from the Developmental Idealism Framework

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ABSTRACT

This paper is motivated by the rapid and substantial family and fertility changes that are occurring throughout much of the world. A wide range of structural and ideational explanations have been offered for these family and fertility changes. In this paper we focus on the influence of developmental idealism—an important set of beliefs endorsing development, family change, and the causal connections between development and family behavior. Developmental idealism is argued to be an important ideational force affecting both population policy and the family-related behavior of ordinary people around the world. Our purpose is to present new survey data from settings across six countries--Argentina, China, Egypt, Iran, Nepal, and the United States--about the extent to which the ideas of developmental idealism as they relate to fertility are believed in everyday life in widely diverse settings. We ask if individuals in these six settings believe that fertility and development are correlated, believe that development is a causal force in changing fertility levels, believe that fertility declines enhance the standard of living, and believe that fertility declines lead to improvements in intergenerational relations. We also ask about people's expectations concerning future fertility trends in their countries and whether or not they approve or disapprove of the trends they expect. Finally, we ask the extent to which individuals in these six countries prefer very low fertility (one child) rather than somewhat higher fertility (three children). The data from each of these six settings show a widespread linkage in the minds of ordinary citizens between levels of fertility and development. That is, large fractions of people in these six settings believe that fertility and development are correlated and that fertility and development mutually affect each other, with the idea that fertility declines help foster development being especially important. Endorsements of low and declining fertility vary across settings, as do expectations of future fertility trends.

INTRODUCTION

This paper is motivated by the understanding that rapid and substantial family and demographic change is occurring throughout the world, both in the West and in many non-Western countries. In many ways these family and demographic changes are transforming the ways in which individuals live and interact with relatives and friends (Jayakody et al. 2008).

Of central importance in the West have been the substantial changes in marriage and divorce (Axinn and Thornton 2000; Bumpass and Lu 2000; Phillips 1988; van de Kaa 1987; Waite et al. 2000). There has been a weakening of the norms against divorce, nonmarital sex, unmarried cohabitation, and childbearing outside of marriage, along with the increased incidence of these behaviors (Cherlin 1992; Lesthaeghe and Neels 2002; Lesthaeghe and Surkyn 2008; Phillips 1988; Thornton 1989; Thornton and Young-DeMarco 2001; van de Kaa 1987). Attitudes toward gender roles have become more egalitarian, and the roles of women and men have changed, with the increased participation of women in school, the labor force, and politics (Bianchi and Spain 1986; Bianchi, Robinson, and Milkie 2006; Casper and Bianchi 2002; Thornton and Young-DeMarco 2001). Control over childbearing has been transformed with the widespread availability and use of contraception, sterilization, and abortion. Fertility levels have declined, and the norms against voluntary childlessness among married couples have weakened (Morgan 1996; Thornton and Young-DeMarco 2001). Many of these trends in the Western world have been underway for at least two centuries, with a fertility decline underway in France by at least 1800 and in other Western countries by the end of the 1800s.

Changes in non-Western countries have also been dramatic, although often of a somewhat different nature because of long-standing cultural differences both among the countries of the non-West and between the West and non-West (see, for example, Ahearn 2001; Axinn and Barber 2001; Axinn and Yabiku 2001; Bongaarts and Watkins 1996; Burguière et al. 1986; Caldwell et al. 1988; Chesnais 1992; Fricke 1997; Fricke et al. 1991; Fricke et al. 1998; Ghimire et al. 2006; Thornton and Lin 1994). These changes include shifts toward nuclear households, individualism, and youthful independence. Also important is the increased participation of women in public life. The changes also include movements toward love matches and an older age at marriage. Especially relevant for this paper is the movement from natural fertility towards the control of childbearing and from large families towards small families. In several of these non-Western countries, such as China, Japan, and Korea, fertility is well below replacement, as it is in much of Central, Southern, and Eastern Europe.

A range of explanations have been offered for these family changes (Bumpass 1990; Cherlin 1992; Chesnais 1992; Cleland 2001; Coale and Watkins 1986; Goldin and Katz 2000; Goode 1970/1963; Lesthaeghe and Neels 2002; Mason 1997; Notestein 1983/ 1964; van de Kaa 1996). Particularly influential have been explanations focused on socioeconomic changes, including the restructuring of societies through industrialization, urbanization, and increased education and

consumption. Other common explanations include government policy interventions and changes in science and technology, particularly more rapid transportation and communication and more effective contraceptives.

Despite the predominance of structural explanations, critics have noted their insufficiencies in explaining fertility trends (Caldwell 1982; Chesnais 1992; Cleland and Wilson 1987; Lesthaeghe 1983; Mason 1997). Researchers have noted that there has been no specific or precise connection between fertility change and changes in socioeconomic circumstances, either in the West or in other parts of the world (Cleland 1985; Cleland and Hobcraft 1985; Cleland and Wilson 1987; Demeny 1968; Freedman 1979; Greenhalgh 1993; Woods 1987). Fertility declines have occurred under widely different socioeconomic circumstances, for example, with the decline in fertility in precociously industrializing England occurring at about the same time as with late-industrializing Hungary and much later than in late-industrializing France (Coale and Treadway 1986).

Such observations have led to calls for the inclusion of ideational factors in the explanations of changes in fertility and other family behaviors (Caldwell 1982; Chesnais 1992; Cleland and Wilson 1987; Jayakody, Thornton, and Axinn 2008; Lesthaeghe 1983; Lesthaeghe and Neels 2002; Lesthaeghe and Surkyn 2008; Mason 1997; Thornton 2005; Yount and Rashad 2008; van de Kaa 1987). The Princeton fertility project, for example, highlighted the importance of cultural factors as it observed that fertility declines in Europe often followed cultural and linguistic lines (Anderson 1986; Watkins 1986). It has been argued that declines in religiosity and increases in secularism are important elements of changing fertility in Europe (Lesthaeghe 1983; Lesthaeghe and Wilson 1986). The spread of western values and beliefs have also been offered as an explanation for changes in fertility behavior and ideals in non-western populations (Caldwell 1982; Freedman 1979, 1987; van de Kaa 1996).

In this paper, we focus on a package of ideas that are understudied but are especially important for understanding fertility change in much of the world. These are the ideas of developmental idealism that Thornton (2001, 2005) has identified as emerging from the Enlightenment of the 17th and 18th centuries with an emphasis on development and the interrelationship of development with family behavior. Thornton has argued that developmental idealism has been an important force in affecting both public policy towards fertility and fertility control and the beliefs and behavior of ordinary people around the world.

Our purpose in this paper is to present and analyze new data about the extent to which the ideas of developmental idealism as they relate to fertility are shared around the world. We ask whether these ideas are widespread in everyday life in Argentina, China, Egypt, Iran, Nepal, and the United States, six widely diverse countries. More specifically, we ask if individuals in these six settings believe that there is a correlation between fertility and development, that development is a causal force in changing fertility, and that fertility declines enhance the

standard of living and quality of intergenerational relations. We also ask about people's expectations concerning future fertility trends and whether or not they approve of the trends they expect. Finally, we ask the extent to which individuals in these six countries prefer very low fertility rather than fertility at a somewhat higher level. We address each of these questions using new survey data.

We preface our paper with the recognition that our goal is to describe the worldviews and causal models that individuals have concerning development and childbearing. This descriptive analysis is important because the worldviews and causal models held by individuals have important consequences for the fertility behavior of those individuals. However, investigation of the extent to which worldviews and beliefs about causation actually influence behavior is beyond the scope of this paper, and such analysis will require the collection of additional data. Instead, our paper provides evidence of the extent to which individuals in disparate places hold these worldviews and causal models, thereby, indicating the availability of such ideas for influencing fertility behavior.

To preview our results, the data from each of these six settings show a linkage in the minds of ordinary citizens between fertility and development. Large fractions of people in these six countries believe that fertility and development are correlated and that fertility and development mutually affect each other. There is also widespread endorsement of lower and declining fertility, along with expectations of declines in the future. These results indicate that the worldviews and causal models motivating this paper are widely disseminated. In the conclusion we discuss how these ideational factors may have influenced past fertility trends and may influence future fertility levels.

We begin our discussion by briefly tracing the origins of developmental idealism in the 18th and 19th centuries. We then discuss the role of developmental idealism in public policy concerning development and fertility. We then present the new survey data.

THE DEVELOPMENTAL PARADIGM AND DEVELOPMENTAL IDEALISM

Developmental idealism is an ideational model for dealing with the world. It provides guidance on what is moral, good, and how to attain the good. It grows out of the developmental paradigm which is a model of how social change occurs.

The *developmental paradigm* is a model of social change that has been influential in Western thinking from the Enlightenment of the 1600s and 1700s to the present. This developmental paradigm suggests that all societies progress through the same natural, universal, and necessary stages of development (Harris 1968; Mandelbaum 1971; Nisbet 1975/1969; Sanderson 1990; Smith 1973; Stocking 1968, 1987). The speed of advancement was believed to vary so that, at any one point in time, societies at different developmental levels could be observed. Western

scholars identified the societies of northwest Europe and the northwest European diasporas as the most developed, with other societies at lower positions. These scholars believed that they could use this cross-sectional information to describe developmental trajectories by inferring that at some time in the past the northwest European societies had been like currently less developed countries in other places and that at some point in the future the less developed nations would become more like the currently advanced countries (Carniero 1973; Gordon 1994; Harris 1968; Sanderson 1990; Sheehan 1980; Thornton 2001, 2005).

This hierarchical way of thinking about development and the idea of universal history has come under serious criticism in the scholarly community in recent decades (Mandelbaum 1971; Nisbet 1975/1969, 1980; Szreter 1993; Tilly 1978, 1984). Here, however, we stress that these ideas are still powerful among many elements of the scholarly and public policy communities and, we hypothesize, in the thinking of ordinary people.

Most importantly for our purposes, scholars observed that certain social, economic, family, and demographic characteristics were differentially distributed between Western countries and countries in other parts of the world. As a result, the social, economic, family and demographic attributes observed in the West became associated with development or modernity while the attributes observed elsewhere became associated with being traditional or the lack of development (Thornton 2005). Traditionality became associated with the following family and demographic attributes: family solidarity; extended households; universal marriage contracted at a young age; high levels of parental authority; arranged marriage; and natural and high fertility. By contrast, development or modernity became associated with the following attributes: individualism; less parental authority; more nuclear households; less universal and older marriage; self-choice marriage; and controlled and low fertility. In a similar way, modernity became associated with industrial and urban society and high levels of education, wealth, and health while traditionality became associated with agricultural and rural societies with low levels of education, wealth, and health. Furthermore, this developmental model interpreted the correlation between socioeconomic and family-demographic factors causally, concluding that modern socioeconomic systems helped produce modern family-demographic systems and that modern family-demographic systems helped produce modern socioeconomic systems.

In addition to this developmental paradigm providing ideas and theories for understanding and explaining the world, it provides ideas that guide people's decisions and behavior. The developmental paradigm suggests a dynamic rather than a static world, with change being away from traditional and towards modernity and lower fertility and ever-more control over childbearing. This dynamic view of the world is important because people live their lives in the present based, at least partially, on their expectations for the future. That is, as people make decisions about the present, they consider the future and how their current decisions fit into that expected future.

The developmental paradigm also provides a package of ideas—that we label *developmental idealism*—that guides and motivates social change. These ideas identify goals in life, a standard for evaluating human organizations, an explanatory framework identifying the causal influences between family and social and economic life, and statements about human rights. Developmental idealism indicates that modern industrial and urban society with high levels of education, wealth, and health is both good and attainable. It also suggests that certain family and personal attributes associated with modernity, including individualism, autonomy of young people, late marriage, controlled fertility, and low rates of childbearing are good. In addition, developmental idealism tells people that modern family and personal behavior facilitates socioeconomic development and that socioeconomic development helps produce a modern family-demographic system. Finally, developmental idealism indicates that people have the right to be free and equal and to decide their own fates without arbitrary constraints [1]. Note that the individualism, youth autonomy, freedom, and equality within the developmental idealism framework is similar to the values and orientations identified in the second demographic transition framework as important forces for family and demographic change (Lesthaeghe and Surkyn 2008).

The intrinsic merit of these propositions is not our question. We are not concerned with whether so-called developed societies and families actually are good or bad, whether such families and societies actually are causally interrelated, or whether freedom and equality are fundamental human rights. Instead, our concern is whether individuals and societies accept, reject, or modify these beliefs and values. Thus, the argument motivating this paper is that acceptance, rejection, and/or adaptation of developmental idealism can lead to changes in marriage, contraceptive use, and childbearing.

There have been many mechanisms for the international dissemination of developmental idealism. These include the distribution of scholarly treatises, European conquest and colonization, educational institutions, and the mass media. Several international social movements, including democratic movements, Marxism and socialism, the women's movement, and the human rights movement have also been important in the spread of developmental idealism. Also important have been the United Nations and other international government and nongovernmental organizations that have helped to create and spread a world culture explicitly endorsing most of the propositions of developmental idealism. Industrialization and the urbanization of populations also have facilitated the flow of ideas.[2]

Of course, developmental idealism has not been uniformly disseminated or universally accepted, but has competed with indigenous models of societal and familial life, with varying degrees of

[1] For a more detailed discussion of the linkage of developmental idealism with freedom and equality, see Thornton (2005, pages 144-146).

[2] Many scholars have argued that elements of developmental idealism, which here are proposed to have their roots in Western philosophy, have their roots in non-Western thought (see Yount and Rashad, 2008). Identifying the origins of these ideas in non-Western thought is argued to have fostered their popular acceptance in some settings.

acceptance, rejection, and modification. Our argument is that to the extent that developmental idealism has been disseminated and accepted, it has become a powerful force for facilitating later marriage, increased use of contraception, and smaller families. And to the extent that the propositions of developmental idealism are either not known or rejected, there will be more resistance to these family and demographic changes.

DEVELOPMENTAL IDEALISM AND PUBLIC POLICY ABOUT FERTILITY AND POPULATION

For hundreds of years before the Enlightenment of the 17th and 18th centuries, population growth was considered to be a good thing that brought well-being and national power. This perspective began to change during the Enlightenment, as writers such as David Hume (1825/1742) and Robert Malthus (1986/1798, 1986/1803) wrote that population growth brought misery and catastrophe. The writings of Malthus were particularly important and additional adherents to this negative view of population growth emerged (Carr-Saunders 1936; Ross 1927; Swindlehurst 1916; Thompson 1930). This perspective, however, remained a minority position—and was even harshly opposed by many--until the mid-20th century, when health improvements outside the West lowered mortality and led to rapid population growth. Many became concerned that these countries would not be able to absorb the additional people without leading to declines in living standards and a loss of the gains in health. Also worrisome to many in the mid-20th century was the expectation that population growth would restrict economic development.

This perspective led to the initiation of an international family planning movement that was powered by many motivations, but probably foremost by the belief that reduced fertility would lead to socioeconomic development and improvements in the quality of life (Barrett and Frank 1999; Donaldson 1990; Finkle and McIntosh 1994; Harkavy 1995; Hodgson 1983, 1988; Hodgson and Watkins 1997; Warwick 1994) This international family program began small, was often initially met with resistance, and enthusiasm for it waxed and waned in many places. However, in a relatively short period of time, numerous people in foundations, universities, and governments endorsed family planning programs, and the United Nations and its agencies adopted the policy that fertility control programs would help in the achievement of socioeconomic development. The need for fertility control became a particularly high priority in (often Western influenced) international policy circles (Critchlow 1999; Donaldson 1990; Keely 1994).

Family planning programs were launched around the world, with significant zeal to foster contraceptive programs and fertility decline. The movement created new contraceptives, provided and distributed contraceptive supplies, and trained personnel at many levels. Some countries were slow in adopting family planning campaigns, even actively opposing them, but others relatively quickly abandoned their pro-natalist views and adopted anti-natalist ones

(Rogers 1973). By 1984, 93 percent of the people in the so-called developing world lived in countries with population limitation policies (Johnson 1994; Nortman 1985).

Family planning programs have varied in their organization, methods, and effectiveness. One common approach has been to encourage couples to marry at older ages. Another has been to provide couples interested in limiting fertility the necessary means to do so. Many fertility control programs also initiated efforts to increase desires for small families and the use of contraceptives. Such programs included mass media campaigns, the targeting of messages and programs to particularly relevant groups, and the dissemination of messages encouraging low fertility by field workers at the grass-roots (Mita and Simmons 1995; Phillips et al., 1993). Among the messages distributed in these efforts were that low fertility and development were interconnected, that reduced childbearing would facilitate development, and that contraception was desirable. Thus, family planning programs not only emerged from the developmental idea that small families were good and helpful for development, but also disseminated these principles widely.

The implementation of family planning programs and the messages of low fertility have not been uniform, linear, or consistent across time and place. Instead, there has been considerable geographical variance, and the positions of governments have varied dramatically across time. We now turn to a brief overview of the relevant contexts in the countries we examine in this paper.

STUDY SETTINGS

As indicated earlier, the purpose of our study is to investigate the extent to which ordinary people believe in the tenets of developmental idealism related to fertility. Although we are interested in such views worldwide, budget and logistical restrictions limited us to the study of people in settings within six countries: Argentina, China, Egypt, Iran, Nepal, and the U.S. Table 1 provides basic information about these countries, indicating their location, population size, economic level, mortality, and fertility.

These six countries do not represent a global sample, but they are located in a wide diversity of regions, including East Asia, South-Central Asia, North Africa, and North and South America, with Argentina and the United States having majority populations composed of migrants from Europe and their descendants. They also represent wide variance on size, from 29 million in Nepal to more than a billion in China.

The six countries are also diverse in terms of religion. Egypt and Iran have majority Muslim populations, along with other religions. Buddhism, Taoism, and reverence towards ancestors have long been important in China, which also has significant populations of religious minorities, including Muslims. The majority religion in Nepal is Hindu, but with significant

numbers of Buddhists and other religions. Christianity has been the majority religion in Argentina and the United States, with Argentina being primarily Catholic and the US primarily Protestant.

The six countries in our study represent significant diversity in education and income. Each country has experienced long-term increases in school enrollment and literacy. The gross enrollment rate, which provides a rough estimate of the percentage of school-age people enrolled in school, has a low of 61 in Nepal and a high of 92 in the United States. Adult literacy is also generally high, ranging from 56 percent in Nepal to 99 percent in the United States. There is considerable variance in income levels. Nepal is a low-income country, China and Egypt have somewhat higher income levels, Iran and Argentina have yet higher incomes, and the United States is a high-income country. Particularly noteworthy is the rapid economic expansion in China following its economic reforms in 1978 (Chow 2007). Mortality levels in all six countries are quite low in historical terms, with life expectancy ranging from 67 in Nepal to 79 in the United States.

The institutions that could propagate developmental idealism have expanded greatly in recent decades in all six countries. In addition to education becoming widespread in each country, access to systems of communication and the media has increased markedly, as evidenced by increasing numbers of media outlets, telephone lines, and mobile phone subscribers.

Current fertility levels in each of the six countries are moderately low, especially when put in long-term historical context. Official United Nations estimates indicate that China and Iran have below replacement fertility, with total fertility rates of 1.8. The exact level of fertility in China, however, is uncertain, and it may be 1.5 or even lower (Guo and Chen 2007). Fertility is at near replacement levels in both Argentina and the United States, and total fertility rates are 2.9 in Egypt and Nepal.

Fertility levels in the range from 1.8 to 2.9 indicate that each of these six countries has experienced long-term declines in fertility, but the timing of these declines varied across the six countries. Of these countries, the US experienced the first long-term fertility decline, with that fall beginning from the middle of the 19th century and extending through the 1930s. Following the rise and fall of fertility after World War II, US fertility has hovered around or just below the replacement level of 2.1 children per woman (Population Reference Bureau, 2007). The fertility decline in Argentina began at the turn of the 20th century, dropping from a TFR of 7.0 in 1895 to 3.2 in 1947 (Pantelides 2006).

The fertility declines occurred much later in China, Egypt, Iran, and Nepal. The big decline in fertility in China only began in the 1970s, but has been dramatic, with the national TFR falling from 5.8 children in 1970 to below replacement fertility in the 1990s (Guo and Chen 2007; Lavely and Freedman 1990). The Egyptian fertility decline also occurred in recent decades, with the TFR declining from 5.3 in 1979 to 3.1 children in 2005 (El-Zanaty and Way, 2006). The fertility decline in Iran can be dated from the 1980s, with total fertility declining from around 7

children per woman in 1980 to 1.8 in 2007 (Abbasi-Shavazi and McDonald 2006; Abbasi-Shavazi et al 2009). Fertility changes have been even more recent for Nepal, with the TFR being above 5.1 until the 1990s, but declined rapidly after 1995 to a TFR of 2.9 in 2007 (Ministry of Health, New Era and ORC Macro 2007).

Just as the timing of fertility declines varied across the six countries, so did the nature and circumstances of the declines. The declines in Argentina and the United States occurred in the absence of most of the contraceptive devices currently available to couples, including the pill, injections, intra-uterine devices, and sterilization. Also, neither country experienced a government-sponsored program to lower fertility (Pantelides 2006). In fact, from the middle of the 18th through the beginning of the 19th century, birth control devices were outlawed in the United States. In addition, abortion was illegal in both Argentina and the US for decades.

In contrast to Argentina and the US, each of the other four countries has experienced vigorous government programs to lower fertility. Beginning in the 1970s, China instituted a vigorous family planning program "as a major component of the government modernization drive" (Guo and Chen 2007: 55). This program emphasized policies of delaying the initiation of childbearing, bearing fewer children, and having longer birth intervals. The family planning policy was intensified in 1979 when China initiated its one-child program, a policy that was directly related to Malthusian concerns about population growth (Greenhalgh 2003, 2008; Guo and Chen 2007).

At least since independence in 1953, the Egyptian government has provided direct support for the provision of access to contraceptive methods (Bier 2008; Yount 2006). However, the program in Egypt was implemented more slowly, with vigorous implementation coming later. As in China, a major motivation of the government program was to assist in the development of the country.

In Iran, the first family planning clinic started its activities and services in 1958 and the official family planning program began in 1964. This program was discontinued following the 1979 revolution. However, in the late 1980s the family planning program was reinstated with support by Iran's religious leaders, and this program was vigorously implemented throughout the country (Hoodfar and Assadpour 2000; Aghajanian and Mehryar 1999; Mehryar 2005; Mirzaie 2005; Abbasi-Shavazi *et al.* 2002; Ladier-Fouladi 1997).

Family planning programs in Nepal started about the same time as in Iran, The first family planning clinic was established in 1959 by a group of volunteers. Since the 1960s family planning has been a high priority in the national development agendas. As a result, with substantial support from aid agencies and international development organizations, both the Nepali government and the nongovernmental sector have continuously operated massive family planning programs. These programs have been highly successful in raising awareness about family planning, with more than 98 percent having some knowledge of contraceptive methods.

DATA COLLECTIONS

Questionnaire Construction

When we began our work, to our knowledge, there were no existing tools to measure people's beliefs and reactions to developmental idealism. Our challenge was to create and evaluate measures of people's knowledge of and views about developmental idealism that could be used in surveys in diverse settings. We drew together scholars from anthropology, demography, political science, psychology, and sociology, with expertise in a range of methodologies, including ethnography, focus groups, and survey research. Team members also had knowledge and experience in a diverse group of countries, including Argentina, Belgium, China, Egypt, Iran, Nepal, Saudi Arabia, the United States, and Vietnam.

From 2005 through 2009, our team members met regularly in meetings to discuss the concepts related to developmental idealism and how to measure them. Our initial empirical work included informal discussions, semi-structured interviews, focus group discussions and a pilot survey in Nepal, less structured individual interviews, focus group discussions and a pilot survey in Egypt, focus group discussions and a pilot survey in Argentina, and cognitive interviews in the United States[3]. Drawing from this experience in these countries and elsewhere, we constructed the final questionnaires to be used in Argentina, China, Egypt, Iran, and the United States. The Nepal questionnaire was designed for somewhat different purposes and included slight variations from the other questionnaires, which we note below. The questionnaires were pretested in each setting. As we detail below, our samples were drawn to represent a country, city, region, or several regions.

Fertility Questions Analyzed

We asked several questions about fertility, development, and the future. One question concerns the perceived association between fertility and development, which was addressed in the following way: "Now, please think about what life is like today in countries that are <u>not developed</u> and compare it to what life is like today in countries that are <u>developed.</u> Please tell us whether each of the following things, <u>in general</u>, is more common in countries that are <u>not developed</u> or more common in countries that are <u>developed</u>. The item of interest in this paper was "couples having many children"[4].

A second set of questions shifted the focus from association to causality and asked whether people perceived fertility as a consequence of development by posing the following situation: "Now, please think about what life is like in a country where the standard of living is low, most

[3] Partial results of these explorations are reported in Binstock and Thornton (2007), de Jong et al (2006), and Thornton et al (2008).

[4] This was the sixth item in the series and was preceded by: "married children living with their parents or in-laws"; "females marrying before the age of eighteen"; "family unity and loyalty"; "elderly parent living with their adult children"; and "arranged marriages". In Nepal the question asked to compare traditional versus developed places.

people live in rural areas, and access to healthcare is poor. Suppose that country introduces a program to help make the country more developed. I will read a list of things this development program might change. For each one, please tell me whether it will increase in that country or decrease in that country once the development program has been successfully implemented". The item of interest for this paper was "couples having many children"[5].

We next reversed the causal arrow between development and fertility by focusing on perceived effects of a fertility reduction program on development. We asked respondents to address the following issue: "Now, please think about what life is like today in a country where income is low, most people live in rural areas, access to healthcare is poor, and most couples give birth to at least six children. Suppose that country introduces a smaller-family-size program to encourage couples to give birth to no more than three children. I will read a list of things this smaller-family-size program might change. For each one, please tell me whether it will increase in that country or decrease in that country once the smaller-family-size program has been successfully implemented." The first five items are as follows: "overall standard of living"; "families having television in their homes"; "the fraction of children dying before their first birthday"; "being educated"; and "sick people visiting a local healer rather than visiting a medical doctor". Each of these items represents something generally seen as reflecting development or modernity. Two items concerning intergenerational relations were added to the items respondents evaluated as possible consequences of a fertility reduction program: "love and understanding between parents and children" and "respect for elders"[6].

We also asked respondents their fertility preferences with the following question: I would like you to think about the different kinds of social and family arrangements around the world today. I am going to ask you to compare a variety of social and family arrangements. Please tell me overall which one you think is better for most people around the world today". Our question about 'having one child or having three children" was the fourth question in the series[7].

Finally, we asked respondents to think about the future in their own countries. We did this with the following introduction and question: "Now please think about the next twenty years in (STUDY SITE COUNTRY). Do you think (QUESTION TOPIC) will increase or decrease in

[5] The fertility item was the eighth in the series and was preceded by: "married children living with their parents or in-laws"; "females marrying before the age of eighteen"; "equality between women and men"; "family unity and loyalty"; "marriages breaking up"; "arranged marriages"; and "babies born to unmarried mothers". In Nepal, we asked about the expected consequences of Nepal itself becoming richer rather than referring to a hypothetical low income rural country. In Nepal, the question about couples having many children was the second in the series and followed a question about the consequences of income growth on "equality between women and men".

[6] In Nepal we asked about the "future of wealth" rather than "standard of living" and about "respect for parents or in-laws" rather than "respect for elders".

[7] The previous three items were: "married children living with their parents or in-laws, or married children living separately"; "a society in which there is equality between women and men or a society in which there is not equality between women and men"; and "a society in which it is not acceptable for an unmarried twenty-five year old woman to have a baby, or a society in which it is acceptable." In Nepal, the fertility question was second in the series and followed a question about "equality between women and men".

(STUDY SITE COUNTRY) during the next twenty years". This question was immediately followed by the following question: "If (QUESTION TOPIC) does (increase/decrease) overall, will that be a good thing, a bad thing, or won't it matter". If the respondent said that (QUESTION TOPIC) was going to increase in her/his country, she/he was asked whether an increase would be a good or bad thing or if it wouldn't matter. If the respondent thought it was going to decrease, she/he was asked if a decrease would be a good or bad thing or if it wouldn't matter. A series of nine question topics were asked about, with "on average, the number of children a woman gives birth to" being the sixth question in the series[8].

Country Surveys

We fielded surveys between 2006 and 2009 in representative samples in different settings in Argentina, China, Egypt, Iran, Nepal, and the United States. Because of budget constraints and different methodological limitations in the different settings, we have used different sampling and interviewing strategies in the six countries. Thus, strict comparability of results across settings is not possible, but our goals are not to compare settings, but to see the general extent to which individuals from several settings endorse developmental idealism as it relates to childbearing.

Table 2 summarizes the basic attributes of the data collections used for this paper. As noted there, the sampling universe for Argentina is urban agglomerates of 500,000 people or more. Approximately 60 percent of the population resides in agglomerates of that size. The data collection in China was conducted in Gansu Province, an area in West-central China with relatively low income and a large Muslim minority population in addition to the majority Han population. The Egyptian sample was drawn from one district in Qaliubia Governorate to the North of Cairo and one district in Fayoum Governorate to the South of Cairo. These districts were selected because they broadly represent governorates in Upper (Southern) and Lower (Northern) Egypt, rural and urban areas, and various local ethnic and religious groups. The survey in Iran was conducted in Yazd, a religious and conservative city of more than 400 thousand people located in the central part of Iran. Yazd has a high level of industry and socioeconomic standing, but retains much of its historical religious and family culture (Askari-Nodoushan and Abbasi-Shavazi et al 2009). The Nepal survey was conducted in the Chitwan Valley in South-central Nepal. In addition to the main sample of respondents, the study included nonresident spouses of people 15-34 and non-resident parents of unmarried people 15-34. In addition, for one of our analyses we used data from a pilot study of approximately 500 people

[8] The preceding five items asked about were: "the fraction of couples living together before getting married"; the average age for a woman to first get married"; "the fraction of babies born to mothers who are not married"; "the fraction of married couples who live with their parents or in-laws"; and "the fraction of marriages ending in divorce". In Nepal, the fertility question was second in the series, with the first question asking about "adult children taking care of their parents and in-laws".

conducted in 2003 in neighborhoods adjacent to those in the main Chitwan Valley study. The data collection for the United States was conducted via three separate 15 minute supplements appended to the Survey of Consumer Attitudes, a nationally representative monthly telephone survey of American adults.

The samples for the various surveys were drawn using multi-stage sampling procedures, with random sampling at each stage. In Argentina, however, at the last stage households were chosen through a random walk to find whether an individual residing in the household fits a quota of gender and age previously locally established. The results presented in this paper are based on unweighted estimations for Egypt, Iran, and Nepal and on weighted estimations for Argentina, China, and the US. In these last three countries weights were constructed so that they adjust for the socioeconomic composition of the population in each country. For these three countries, the weighted and unweighted results are extremely similar, with the unweighted results not being substantially different from the results presented in the tables.

Basic socioeconomic and demographic information for the individuals participating in the surveys is provided in Table 3. These data document a wide diversity of attributes both within and across the study settings.

RESULTS

We begin our discussion of substantive findings with the data summarized in Table 4 for each of the six settings. For ease of presentation, we have indicated the percentage who answered that high fertility is more common in not developed countries, that development would decrease fertility, that family planning programs improve society, that one child is better than three, and that fertility will decrease during the next two decades. This dichotomization of the responses is appropriate in most cases because most respondents who did not give the response highlighted in Table 4 gave the opposite response. However, in a few cases, especially in Argentina, substantial numbers of respondents gave "in-between" responses of "no difference", "no change", or "no preference". When such in-between responses exceed 10 percent, we note that in the tables.

Comparing Developed and Not Developed Countries

The first row of Table 4 shows people's perceptions of the association between fertility and development. Consistent with the developmental idealism hypothesis, the vast majority of respondents in each setting believes that having many children is more common in not developed places than in developed places. In fact, the percentage of respondents with this view is 75 percent or higher in each setting. Except for Nepal and the United States, 88 percent or more believe that high fertility is more common in not developed places.

Perceived Effects of Development on Fertility

We now shift our focus from association to causality and the question asking whether respondents believe that changes in development affect fertility. As shown in the second row of Table 4, the vast majority perceive development as a force for fertility decline. Between 73 and 95 percent see development reducing fertility among low income, rural populations with poor health.

Perceived Effects of Fertility Reduction on Development

We next reverse the causal arrow between development and fertility by focusing on perceptions of the effects of a fertility reduction program on the five following items: "overall standard of living"; "families having television in their homes"; "the fraction of children dying before their first birthday"; "being educated"; and "sick people visiting a local healer rather than visiting a medical doctor". The distributions of respondent views are displayed in the first five rows of Section C of Table 4.

Consistent with the expectations of the developmental idealism model, the vast majority in all settings indicate that the overall standard of living, television in families' homes, and education will increase with the introduction of a fertility reduction program. Furthermore, these views are particularly predominant for standard of living and education, two of the central elements commonly associated with development. Between 83 and 99 percent believe that a fertility reduction program would increase these two outcomes. Except for China and Nepal, the fraction believing that a fertility reduction program would increase television is lower than the fraction believing that such a program would increase education and the standard of living.

Table 4 also indicates widespread belief in a fertility reduction program producing a decline in infant mortality and a shift from local healers to medical doctors. From 86 to 98 percent believe that a fertility decline would lead to a decline in child mortality, and between 76 and 93 percent believe that a fertility decline would shift the practice of healing from local healers to medical doctors.

Although differences in the surveys prevent us from making definitive comparisons across settings, we note that endorsement of the positive causal influence of fertility reduction programs is especially high in our setting in China. For each of the four items in the China survey, a minimum of 96 percent expected that fertility reduction would move society toward development.

Although the percentage of Argentinians who believe that family planning programs bring most aspects of development is similar to the percent in the other countries, Argentinians are less likely than others to say that family planning programs would bring more television (57 percent).

However, only 4 percent of Argentinians said that they believed that family planning programs would decrease television, while 38 percent said that family planning programs would have no impact on television (not shown in tables).

Perceived Effects of Fertility Reduction on Intergenerational Relations

Two items concerning intergenerational relations were included in the list of possible consequences of a fertility reduction program: "love and understanding between parents and children" and "respect for elders". As shown in the last two rows of Section C of Table 4, the perceived consequences of a fertility reduction program on intergenerational relations are less positive than on the five items commonly associated with development. However, most respondents perceive improvements in intergenerational relations resulting from such a program. Between 57 and 86 percent believe that a reduction in fertility will increase intergenerational love and understanding. Expected increases in respect for elders were not as high, but still between 51 and 86 percent expected such increases with fertility decline.

Endorsement of the positive effects of a fertility reduction program on intergenerational relations appears to be weakest among respondents in Argentina, with only slight majorities of Argentinians believing that love and understanding between parents and children and respect for elders will increase with fertility reduction in low income countries. However, only 4-6 percent of Argentinians said that a family planning program would decrease love and understanding or respect, while between 38 and 43 percent said such a program would have no effect (not shown in tables).

Choosing Between One and Three Children

Section D of Table 4 reports the answers to the questions asking respondents to choose between having one and having three children. It is important in interpreting these responses to recognize that for most of world history, the number of children born was considerably higher than three. Thus, we were not asking respondents to choose between low and high fertility, but between very low and low fertility.

As shown in Table 4, having one child over having three children is endorsed by the majority of respondents in only two countries and those are China and Nepal. Nearly four-fifths of Chinese respondents in Gansu Province and three-fifths of respondents in Chitwan, Nepal endorsed having one child rather than three. Interestingly, the next highest endorsement for one child over three is in the United States, but less than one-half say that one is better than three. In our Argentinian and Iranian samples, about one-third endorse one child over three, and in Egypt only about one sixth endorse one child over three.

Expectations about Future Fertility

The last row of Table 4 (Section E) reports data from questions asking about future. With the exception of Argentina, a substantial majority (72 percent or greater) believe that fertility will decline in their countries. For both China and Iran, the percentage expecting a fertility decline is 91 percent or greater. This is a substantial expectation for fertility decline in China and Iran, especially since these two countries currently have fertility below replacement level. The data from China and Iran also contrast with the data from Argentina and Egypt where fertility levels are higher than in China and Iran, but expectations for future declines are smaller.

In Argentina only 50 percent of the respondents said that they expect fertility to decline in the next twenty years. In addition, 29 percent said that they expected fertility to increase during the next two decades and 21 percent said that they expected fertility to stay about the same.

Evaluations of Expected Fertility Trends

In Table 5 we shift our emphasis from expectations about fertility change to evaluations of the desirability of the expected change. The top panel indicates for those respondents who expected a future decline in fertility, the distribution of their answers on whether a decline would be good, bad, or it did not matter. Similarly, the bottom panel indicates for those respondents who expected an increase in fertility, the distribution of responses evaluating such a fertility increase. Because of the small number of Chinese and Iranians expecting a fertility increase, we do not show their evaluations of such an increase, and Nepalis were not asked to evaluate a future increase in fertility.

Table 5 shows substantial variance in the evaluations of fertility change across the six settings. The sample from the United States is the most split in its opinions about future fertility increases or decreases. Less than one-half of the US respondents who thought that fertility would decrease evaluated such a change as positive. Among those who expected a future increase in fertility, the percentage saying that this would be a bad thing (32 percent) was nearly counter-balanced by the percentage saying this would be a good thing (24 percent), and another 45 percent said that it would not matter.

The data from Argentina indicate somewhat more positive attitudes towards future fertility declines and somewhat less positive attitudes towards fertility increases. Of those expecting future fertility declines, nearly 60 percent evaluated this trend as positive. Somewhat more than 60 percent of those who expected a fertility increase evaluated this trend negatively.

In the Iranian setting, positive endorsements of fertility declines are even greater than in Argentina. Just over two-thirds of Iranians who expected a fertility decline in the future said that they evaluated such an eventuality positively, and only one-fifth evaluated a future fertility

decline negatively. In China, Egypt, and Nepal the positive endorsement of fertility decline is even greater, as 79 percent or more of those who expected a fertility decline said that they thought this would be a good thing, and the percentage reached 88 percent or more in China and Egypt. Only 10 percent or fewer of those expecting a fertility decline thought that this would be a bad thing. The high endorsement of a fertility decline is particularly noteworthy in China where fertility is already very low. In Egypt, more than four-fifths of the minority who thought fertility would increase thought this would be a bad thing.

CONCLUSIONS AND DISCUSSION

This paper was motivated by the idea that fertility declines in many places may have been motivated, at least in part, by ideational forces. We were interested in the idea that developmental idealism was a powerful force in many places. Developmental idealism is a body of beliefs suggesting that modern societies are good and attainable, that modern families and fertility are good and attainable, that modern societies are cause and effect of modern families and fertility, and that freedom and equality are fundamental human rights. Our belief is that these ideas have been spread around the world and have been important in the fertility declines in many places.

This argument is certainly applicable to the formation and vigor of the international family planning program. The ideas that high levels of fertility challenged economic and social well-being and that reductions in fertility would enhance development goals were central elements of the worldwide family planning movement. The family planning movement also was motivated by the idea that freedom in the form of control over one's fertility was an important right that should be available to all. Such ideas both motivated the international family planning program and were spread by it and other dissemination mechanisms.

The main contribution of this paper, however, goes beyond family planning programs and asks the extent to which the ideas of developmental idealism related to fertility have spread to and are accepted internationally by ordinary people. Although our project is motivated by worldwide interests, we have focused this paper on Argentina, China, Egypt, Iran, Nepal, and the US, meaning that we cannot directly generalize beyond these six countries. In addition, in five of the countries we focused on certain regions, provinces, or cities, thereby, restricting our ability to generalize to the national populations in these countries. Nevertheless, we have data from six widely scattered and diverse settings that provide evidence about our original motivating theoretical propositions.

The data provide strong support that the ideas of developmental idealism as they relate to fertility have been widely disseminated to ordinary people in the six settings covered. The vast majority of people in our studies believe that low fertility is a feature of developed societies, that

development is a causal force for reducing fertility, and that lower fertility fosters development. Majorities also believe that fertility reduction helps bring better intergenerational relations. With the exception of Argentina, substantial majorities expect future fertility declines. In addition, with the exception of the United States, substantial majorities of people expecting fertility declines believe that this trend is good, and among those who expected fertility to increase, the majority said that was a bad thing. Furthermore, the vast majority of Chinese and Nepali respondents indicate that one child is preferable to three. In the other settings, however, the majority indicate that three is better than one, yet in the United States 43 percent say that one is better than three, in our Argentina and Iranian samples, about one-third endorse one child over three, and in our Egyptian sample, about one-sixth endorse one over three.

Although our largely regional samples and different sample compositions prevent making strict comparisons across settings, one cross-cultural difference merits speculation. Of the settings covered, Argentina is the one where the majority does not expect a fertility decline in the future (but with 50 percent expecting such a decline). Also, the United States is the only place where a majority of people do not respond with favor on the prospect of a future fertility decline. Interestingly, neither Argentina or the US have experienced a vigorous government program to lower fertility among their general populations, although the US government and other American organizations have been active in the international family planning movement. By contrast, China, Egypt, Iran, and Nepal have experienced vigorous family planning programs. It is possible to speculate that the existence of strong family planning programs may be related to the orientations that the populations have towards future fertility trends.

The existence of vigorous family planning campaigns in several of our study populations raises the possibility of "social desirability" bias in respondent answers. One dimension of family planning programs in many countries is a spread of messages that low and controlled fertility are good. It is possible that such messages have been widely spread and understood, yet may not be accepted and internalized. Furthermore, in response to survey questions, people who understand the messages but who do not believe them may still repeat them to interviewers to look good, to avoid critical feedback, or for fear that their responses may be heard by others. If this mechanism is widespread, it is possible that the expressions of strong support for the ideas of developmental idealism represent, in part, efforts to please the interviewer rather than endorsement of the ideas.

Unfortunately, we do not know whether the answers respondents gave to our questions represent only knowledge of certain ideas and a desire to look good to interviewers, both knowledge and belief in the ideas, or some combination of the two. However, the data from our surveys are important even if the strong expressed support for developmental idealism comes entirely from respondents knowing the ideas and wanting to look good to interviewers. Such a conclusion would, at a minimum, suggest that respondents know about the developmental idealism

messages and that these messages are socially desirable. This would indicate that the messages have been widely disseminated with a very positive valence so that respondents know both about the messages and that agreeing with them is socially desirable.

Although the possibility of social desirability effects in responses cannot be eliminated entirely, we believe that many respondents do believe the ideas they expressed to our interviewers. That is, the ideas are not only widely known, but are believed, at least at some level, by many of the respondents. This interpretation is supported by the qualitative interviews, focus groups, and informal discussions that we have had in many of our research settings, of course, recognizing that social desirability can also influence discussions in those data gathering formats.

Although the research presented in this paper was motivated by the idea that the spread of developmental idealism has been an important influence on international childbearing trends, the data we have presented cannot demonstrate causal influence. Our data are very recent and cannot be used to establish a causal influence of developmental idealism on past fertility declines. However, the data do indicate that the ideas of developmental idealism have been disseminated widely among people living in several diverse settings. The widespread presence of these ideas, at a minimum, means that they are currently available for influencing behavior.

It is also worth mentioning the obvious point that our data do not indicate when developmental idealism became widespread in our research settings. These ideas may have arrived immediately prior to the surveys, but we believe that is unlikely. It has been argued elsewhere that the ideas of developmental idealism have been widespread among the elites of the Western world for centuries and among the elites of many other parts of the world for decades, if not a century or more (Thornton 2005). We also know that there have been dissemination channels for many of these ideas in many places for decades and centuries. Moreover, many of these ideas have been promoted vigorously at the grassroots levels by organized movements such as national and international family planning movements. This makes us believe that the ideas expressed by the vast majority of respondents in our surveys have been increasing in both knowledge and acceptance for at least several decades. This suggests that the spread and acceptance of these ideas may have been an important factor in the fertility declines of these countries.

Of course, the ways in which developmental idealism may have influenced the fertility declines probably vary across different settings because the timing and circumstances of the declines vary. In China, Egypt, Iran, and Nepal the fertility declines have occurred in the last several decades, many years after the declines in Argentina and the United States. In China, Egypt, Iran, and Nepal at least parts of the fertility declines occurred in the presence of vigorous family planning programs that actively spread the messages of developmental idealism concerning low fertility and its connections to development, and there were also other mechanisms for the spread of these messages. These considerations give credence to the belief that these messages of developmental idealism were factors in the fertility declines of recent decades.

It could, of course, be argued that individuals make fertility decisions based only on their views about how another child will influence the well-being of themselves and their families and not on their views of the relationship between development and fertility at the national level. Although this perspective has merit, it does not detract from the importance of the data we have presented, because messages about fertility and well-being apply at both macro and micro levels. In addition, the views that people have of macro fertility-development relationships can easily be applied to the micro-level decisions they make.

The fertility declines in Argentina and the United States began in the last half of the 19th century or at the turn of the twentieth century. Low fertility levels produced by high ages at marriage and extensive non-marriage had been connected to high levels of development by Robert Malthus early in the 19th century, but low marital fertility had not yet been connected to development (Thornton 2005). Nevertheless, the connection of high development with low fertility through high age at marriage was later extended to connect high development to low fertility through low marital fertility.

It is also likely that the developmental idealism proposition that freedom and equality are fundamental human rights was highly relevant to the marital fertility declines in Northwest Europe, the United States, Argentina, and other places with early marital fertility declines. We know that freedom and equality were fundamental elements of the Enlightenment and both the French and American revolutions. We also know that these principles were spread widely in the Western world and likely played a significant role in the decline of marital fertility in many places in the West. Ron Lesthaeghe and colleagues have argued that secularization and the decline of the influence of the Church played an important role in marital fertility change in Belgium and other places (Lesthaeghe 2009; Lesthaeghe and Wilson 1986). Secularization was important because it helped weaken the restrictions of the Church against married couples interfering with conception.

Of course, coercion and the lack of freedom can work in multiple directions. Coercion can keep fertility high when it restricts the use of birth control devices. Coercion can also lower fertility when couples are forced to use birth control against their wills. Thus, the effects of coercion and freedom depend upon the context and direction of coercion and its relaxation.

We know that the presence of the ideas of developmental idealism with the declines of fertility does not prove that the ideas caused the behavior. There are other possibilities, of which we list three interrelated ones that are not mutually exclusive. One is that it was the provision of family planning services and not changes in ideas and motivations that were consequential in reducing fertility. Another is that fertility declines were produced primarily by other factors such as changing socioeconomic structures—or a different set of ideational forces--that were independent of either developmental idealism or family planning programs. The third is that ideas are only secondary and causally impotent consequences of other causal factors.

Also relevant is the possibility that the ideas of ordinary people about the relationships between development and fertility are not learned from the messages they receive from various sources but are produced by ordinary people drawing their own conclusions about such relationships from their observations of trends occurring around them. That is, individuals draw their conclusions from their own observations rather than from the messages existing in the larger community. More specifically, for our purposes, respondents might see in their own country or in another country that fertility fell while economic output increased and infer a causal relationship between the two. This could be true in all of our study settings, but may be particularly relevant in China which recently experienced both rapid economic growth and rapid fertility decline.

Another possibility is that people make their conclusions about the relationship between fertility and development based entirely on their own personal experiences and the experiences of their families. That is, people observe their own lives and the lives of their family members and conclude how fertility and well-being are interrelated for them without any reference to the larger community or to the messages coming from the outside about development and family size.

These considerations suggest that there are multiple possible causal mechanisms linking together ideas, experience, and behavior. However, the multiple possible causal mechanisms are not mutually exclusive or contradictory. Rather it is likely that they fit together in complex patterns of mutually reinforcing ways. For example, it is likely that the strong correlation of economic growth with fertility decline in China in recent decades reinforced the strong messages of the Chinese government about the connection between the two. It is also likely that the ability of ordinary Chinese people to see the temporal correlation between lower fertility and economic growth is greatly enhanced by the government messages proclaiming such a causal direction.

While we are cognizant of arguments suggesting that worldviews, beliefs, and values are the inert outcomes of other forces, we find such arguments unconvincing. Ideational factors may be influenced by other forces, but they are also forces for change themselves. In addition, if it were true that the ideas discussed in this paper are not important for fertility levels and trends, then hundreds of millions of dollars were wasted in recent decades in the efforts of family planning programs and others to disseminate such ideas with the goal of reducing fertility.

We close with a note that the line of research in this paper concerning fertility and developmental idealism is very new. We have conducted research in only a few countries and recognize the need to collect similar data in other settings. Particularly needed is the addition of countries with very low fertility, such as Japan and several countries in Europe, and countries where fertility is still rather high, such as in Subsaharan Africa. We also recognize the need for more methodological work, including cognitive interviewing, concerning the meaning of developmental idealism data. Also important are sophisticated data and analyses examining the

factors and processes producing acceptance, rejection, or modification of the ideas of developmental idealism. For example, what are the roles of education, the mass media, government programs, family and individual experience, and other forces in bringing knowledge and acceptance or rejection of developmental idealism. Also, are people's views of developmental idealism affected by such macro events as economic booms and busts. We also need specific research examining the extent such ideas influence actual levels and trends of fertility, as well as other family experiences and relationships.

Table 1. Basic Characteristics of Six Countries Surveyed

Country	Region*	Population (millions)*	GDP per capita** (US$)	Total Fertility Rate* (children per women)	Life Expectancy at birth* (years)	Adult Literacy Rate** (% aged 15 and above)	Gross Enrollment Rate** (%)
Argentina	South America	40	13,328	2.3	75	98	89
China	Eastern Asia	1,346	5,383	1.8	73	93	69
Egypt	Northern Africa	83	5,349	2.9	70	66	76
Iran	South-Central Asia	74	10,955	1.8	71	82	73
Nepal	South-Central Asia	29	1,049	2.9	67	56	61
USA	Northern America	315	45,592	2.1	79	99	92

* United Nations, Development of Economic and Social Affairs, Population Division (2009). *World Population 2008. Wallchart* (United Nations publication, Sales No. E.09.XIII.2).
** Human Development Reports. United Nations Development Programme, 2009. Web. 6 Nov 2009, data from 2007.

Table 2. Characteristics of Six Sample Surveys

Country	Study Location	Respondent Ages	Respondent Sex	Interview Mode	Study Dates	Sample Size
Argentina	Urban Agglomerates ≥ 500,000	Adults	Both	Face-to-face	March-April 2008	1003
China	Gansu Province	Adults	Both	Face-to-face	Oct-Nov 2007	633
Egypt	One District each in Fayoum and Qaliubia Provinces	Woman 18-24 and their husbands	Both	Face-to-face	Late 2007-early 2008	1500
Iran	Yazd City	Married: 15-54 Unmarried: 15-29	Women	Face-to-face	Nov-Dec 2007	703
Nepal	Chitwan Valley	15-59	Both	Face-to-face	Jan-June 2009	5235
United States	National	Adults	Both	Telephone	April 2006, May 2007, Nov 2007	1262

Table 3. Respondents' socioeconomic and demographic characteristics

Respondents' characteristics	Argentina	China*	Egypt	Iran	Nepal	US
Sex (% Female)	52.6	51.3	58.3	100.0	58.0	54.7
Age						
Mean	41.6	41.5	36.0	34.9	34.6	50.0
(Std. Dev.)	(16.7)	(14.1)	(11.6)	(12.4)	(13.6)	(17.7)
Marital status						
Single	31.5	8.7	11.3	22.0	na	15.8
Married or cohabiting	51.9	86.3	85.7	74.8	na	62.7
Separated/Divorced	10.4	0.9	1.1	0.1	na	13.3
Widowed	6.1	4.1	1.8	3.0	na	8.2
Education						
Never attended to school			26.4	3.1	na	
Below elementary	6.2	21.4	13.5	17.8	na	
Complete elementary	16.0	23.0	3.5	8.8	na	1.3
Incomplete high school	17.8	32.7	11.3	21.1	na	5.0
Complete high school	27.3	12.0	29.1	31.6	na	25.2
Superior	32.7	10.6	16.2	17.6	na	
Some College - No degree						24.2
College/Post Graduate Degree						44.3
Religion Affilation						
Buddhism	0.1	9.1		--	12.4	0.9
Catholic	74.9			--	83.7	24.1
Christian - Not further specified	0.3	1.4	1.5	--	1.6	5.9
Muslim		9.3	98.5	--		0.8
Protestant	8.4			--		53.8
Other	0.4	0.8		--	0.6	3.2
None/Atheist/Agnostic	15.2	79.5		--	1.7	11.2
Importance of Religion						
Very important	33.0	12.7	99.1	--	54.9	63.0
Somewhat important	47.5	13.1	0.8	--	42.2	23.5
Not important at all	19.6	74.2	0.1	--	2.9	13.5
Unweighted N	1,003	633	1,500	703	5,235	1,262

-- Question not asked
na, not available
* In China, education was registered as the highest level completed, therefore it may be underestimating the actual highest level achieved (e.g., some attending high school has been registered as Complete Elementary).

Table 4. Respondent Views of Developmental Idealism as Related to Fertility

Percentage Giving the Most Developmental Response	Argentina	China	Egypt	Iran	Nepal	US
A. Perceptions of fertility in developed and not developed countries						
Couples with many children are more common in *not developed* countries	88.3	89.7	94.5	95.1	74.7 **	78.1
B. Perceptions of the effects of development on fertility						
Development would *decrease* couples having many children	73.1 *	95.0	79.9	89.9	82.7	75.3
C. Perceptions of the effects of fertility reduction program on various things						
Increase the standard of living	83.7	98.6	92.4	94.5	94.0	83.9
Increase the fraction of families having TV at home	57.3 *	98.5	84.8	72.0	96.6	83.3
Decrease infant mortality	88.6	98.1	86.6	89.2	86.2	86.2
Increase the fraction of people being educated	82.8 *	96.4	93.0	94.5	98.3	91.0
Decrease de number of sick people consulting healers	76.1 *	--	91.5	--	93.4	76.8
Increase love and understanding between parents and children	57.4 *	86.3	85.6	82.9	--	78.8
Increase respect for elders	51.2 *	78.9	86.3	63.7 *	75.9	60.3 *
D. Evaluation of whether is better for most people to have one or three children						
It is better, for most people, to have *one child* than to have three children	31.6	79.0	16.3	36.0	60.9	43.0
E. Perceptions of fertility trends during the next twenty years						
Fertility will *decrease* in my country during the next twenty years	49.7 *	94.4	71.9	91.4	78.8	74.2

-- Question not asked

* Category ¨about the same/neither/same¨ was chosen by 10% or more of respondents.

** Based on the survey collected in 2003, and the question asked respondents to compare traditional versus developed places.

Table 5: Respondent Evaluations of Fertility Trends

Percentage Distribution of Responses	Argentina	China	Egypt	Iran	Nepal	US
Responses of People Expecting a Fertility Decrease						
It will be a good thing	56.7	92.2	88.5	68.7	79.3	46.9
It will not matter	26.2	0.9	1.9	11.4	12.0	35.1
It will be a bad thing	16.3	6.8	9.6	19.9	8.7	17.4
Responses of People Expecting a Fertility Increase						
It will be a good thing	13.9		15.1		--	23.5
It will not matter	24.4		3.9		--	44.8
It will be a bad thing	61.5		81.0		--	31.7

-- Question not asked

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