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

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Abstract

This paper is motivated by the substantial fertility changes that are occurring throughout much of the world. Several structural and ideational explanations have been offered for these fertility changes. In this paper we focus on the influence of developmental idealism—an important set of beliefs endorsing development, fertility change, and the causal connections between development and fertility. 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 in 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 settings believe that fertility and development are correlated, that development is a causal force in changing fertility levels, that fertility declines enhance the standard of living, and 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). The role of marriage as a fundamental organizer of social life has declined (Axinn and Thornton 2000). This is evident in the dramatic weakening of the norms against nonmarital sex, unmarried cohabitation, and childbearing outside of marriage, along with the increased incidence of these behaviors (Lesthaeghe and Neels 2002; Lesthaeghe and Surkyn 2008; Thornton 1989; Thornton and Young-DeMarco 2001; van de Kaa 1987). In addition, the norms against divorce have been weakened, divorce laws have been liberalized, and the incidence of divorce has increased (Cherlin 1992; Phillips 1988; Thornton and Young-DeMarco 2001). The roles of women and men also have changed dramatically, 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). Similarly, attitudes toward gender roles have become more egalitarian, although the degree of egalitarianism can vary both with the specific aspect of male-female roles at issue and the family circumstances of the people involved (Thornton 1989; Thornton and Young-DeMarco 2001). Sexuality and childbearing have been transformed with the widespread availability and use of contraception, sterilization, and abortion. Fertility levels have declined dramatically, and the norms against voluntary childlessness among married couples have weakened substantially (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 last few decades of the

1800s. In addition, the increase in divorce was well underway during the 19th century, and the entire second half of the 20th century was one of dramatic changes in many dimensions of sexuality, marriage, and the roles of women and men.

Changes in non-Western countries have been equally dramatic, although often of a somewhat different nature because of long-standing cross-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 from extended to nuclear households, from collectivism or familism to individualism, and from parental control to youthful independence. Also important is the increased participation of women in public life. The changes also include movements from arranged marriages to love matches, from a young age at marriage to an older age at marriage, and from universal marriage to the potential for extensive non-marriage. Especially relevant for this paper is the dramatic movement from natural fertility to the control of childbearing and from large families to small families. In fact, 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. The fertility transition in Iran is a special case in point, where the total fertility rate fell from about 7 births per woman of reproductive age in 1980 to 1.9 in 2006 (Abbasi-Shavazi and McDonald 2006; Abbasi-Shavazi et al 2009). China also experienced a dramatic and rapid decline in fertility.

A wide 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; Sandberg 2002; van de Kaa 1996). Particularly influential have been the explanations that have focused on socioeconomic changes in society, including the restructuring of societies through

industrialization, urbanization, and increased education and consumption. Other common explanations include government policy intervention and changes in science and technology, with particular emphasis on the expansion of more rapid transportation and communication networks, more effective contraceptives, and medical and public health innovations that have decreased morbidity and mortality.

Despite the predominance of structural explanations of family change, critics have noted their insufficiencies in explaining family trends (Caldwell 1982; Chesnais 1992; Cleland and Wilson 1987; Lesthaeghe 1983; Mason 1997; Thornton 2005). These critiques have been especially relevant in the area of fertility decline. 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 the 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 many to call for the inclusion of ideational factors in the explanations of declines in fertility and changes in 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 family behavior 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 family behavior and ideals in non-western populations (Caldwell 1982; Freedman 1979, 1987; van de Kaa 1996). Family change has been shown to be related to trends in people's beliefs and commitments concerning religion, their beliefs and values concerning equality and freedom, and ideas about family life (Cherlin 1992; Jayakody et al 2008; Lesthaeghe 1983; Lesthaeghe and Neels 2002; Thornton 1985; Thornton and Young-DeMarco 2001). The importance of individual beliefs and values for subsequent family behavior has also been shown (Axinn et al 2008; Axinn and Thornton 1993; Barber 2001; Lesthaeghe 2002; Thornton, Axinn, and Xie 2007).

In this paper, we focus on a package of ideas that are understudied but are especially important for understanding family change, including fertility change, in much of the world. These are the ideas of developmental idealism, which 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 ideational force in affecting both public policy towards fertility and fertility control and in influencing 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 levels and the level of development, that development is a causal force in changing fertility levels, that fertility declines enhance the standard of living, and that fertility declines lead to improvements in intergenerational relations. We also ask about people's expectations concerning fertility trends in the future 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 rather than fertility at a somewhat higher level. We address each of these questions using new survey data collected in each of the six countries.

It is important to preface our paper with the explicit 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 we hypothesize that the worldviews and causal models held by individuals have important consequences for the fertility behavior of those individuals. However, the investigation of the extent to which worldviews and causal models actually influence subsequent behavior is beyond the scope of this paper, and such analysis will require the collection of additional data. Instead, our paper provides evidence concerning the extent to which individuals in widely 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 widespread linkage in the minds of ordinary citizens between fertility and development. That is, large fractions of people in these six countries 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. In addition, there is widespread endorsement of lower and declining fertility, along with expectations of declines in the future. These results are suggestive in indicating that the worldviews and causal models motivating this paper are widely available and 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 from the six settings, along with evidence from other sources.

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 moral and good. It grows out of the developmental paradigm which is a model of how the world works, particularly how historical change occurs.

We begin our discussion of these concepts with the *developmental paradigm,* 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 is built upon the ideas of a developmental hierarchy and universal history. This model suggests that all societies progress through the same natural, universal, and necessary stages of development (Burrow 1981; Harris 1968; Mandelbaum 1971; Nisbet 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 diaspora as the most developed, and identified other societies as occupying lower positions on the development scale. These scholars believed that they could use this cross-sectional information to describe developmental trajectories. They read history sideways from the cross-sectional data by inferring that at some time in the past the northwest European societies had been like currently less developed countries in other places, and they read the future sideways by assuming that at some point in the future the less developed nations would develop to become more like the currently advanced countries (Berkhofer 1978; Carniero 1973; Gordon 1994; Harris 1968; Manuel 1962; Sanderson 1990; Sheehan 1980; Thornton 2001, 2005).

It should be noted that 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 (Baker 1998; Mandelbaum 1971; Nisbet 1975/1969, 1980; Szreter 1993; Tilly 1978, 1984). Here, however, we stress that these thoughts are still powerful—even sometimes dominant--among

many elements of the scholarly and public policy communities. Our interest also centers on the extent to which such ideas have permeated 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). Being traditional or having little development became associated with the following family and demographic attributes: family organization of society; considerable 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: less family organization of society; individualism; less parental authority; more nuclear households; less universal and older marriage; the involvement of the couple in marriage arrangements; and controlled and low fertility. In a similar way, modernity or high levels of development became associated with industrial and urban society and high levels of education, wealth, and health while being traditional or having little development 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. Notably, the developmental paradigm suggests a dynamic rather than a static world. It also predicts a direction of change away from being 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 what the future might be like and how their current decisions fit into that expected future. This line of reasoning has been shown to be particularly relevant in the economic domain as people decide about jobs, consumption, savings, and retirement based both on their current circumstances and expectations about what the future will bring. For example, Curtin has demonstrated that the expectations that people have about prospective changes in their financial situations as well as in aggregate measures of inflation, unemployment, and interest rates have a strong influence on their subsequent spending and saving behavior and the economy as a whole (Curtin 2007). Similar reasoning applies to the arenas of family and demography, as people's expectations about future levels of childbearing can influence how they make decisions for themselves and the way they socialize their children for dealing with the future.

The developmental paradigm also provides a package of ideas—that we label *developmental idealism*—which itself guides and motivates social change. This package includes a set of ideas identifying 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 fundamental human rights. Specifically, this package of 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 family and demographic attributes associated with development and modernity, including late marriage, controlled fertility, and low rates of childbearing are good and attainable. In addition, developmental idealism tells people that modern family-demographic behavior facilitates the pathway to socioeconomic development, and that reciprocally, socioeconomic development helps produce a modern family-demographic system. Finally, developmental idealism indicates that individual people have the right to be free and equal

and to decide their own fates to the extent possible without the constraints of legal, cultural, and religious restrictions [1].

From our perspective, the intrinsic merit or value of these propositions is not our question. We are not concerned with whether so-called developed societies and modern families actually are good or bad, whether such families and societies actually are causally interrelated, or whether freedom and equality are indeed 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 adaption of various elements of the propositions of developmental idealism can lead to substantial changes in marriage, contraceptive use, and childbearing.

There have been many mechanisms for the dissemination of developmental idealism around the world. 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 factors in the spread of certain aspects of developmental idealism. Also important have been the United Nations and other international government and nongovernmental organizations which 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 around the world. Rather, it has competed with other, indigenous models of societal and familial change, and as such, has met with varying degrees of acceptance, rejection, and modification. Our argument is that to the extent that the propositions of developmental idealism have been disseminated and

[1] For more 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.

accepted, they have become powerful forces 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 to a society and facilitated 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 over the following decades, additional adherents to this negative view concerning population growth emerged (see, for example, Carr-Saunders 1936; Ross 1927; Swindlehurst 1916; Thompson 1930). This point of view, however, remaineda minority position—and was even harshly opposed in many countries--until the mid-20th century, when public health improvements in countries outside the West substantially lowered mortality and led to rapid rates of population growth. This trend led to the Malthusian concern that these countries would not have the economic capacity 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 social and economic development.

Building upon the Malthusian tradition that people could enhance their well-being through fertility and population control, scholars and policy makers – initially in Western Europe and North America – began to take the position that fertility control was necessary to maintain improvements in health and to achieve socioeconomic development in non-Western countries. This perspective led to the initiation of an international family planning movement, which 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 1990a, 1990b; 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, including some of the countries included in our research. However, in a relatively short period of time, numerous people in foundations, universities, and governments endorsed the family planning program, 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 the intellectual, moral, financial, and administrative support of governments, international institutions, academics, and foundations (Caldwell and Caldwell 1997, 1998; Donaldson 1990; Johnson 1994; Rogers 1973). The international family planning movement operated with significant zeal to foster contraceptive programs and the decline of fertility around the world. It created new contraceptives, provided and distributed contraceptive supplies, and trained personnel at many levels. The spread of the international family planning program was uneven as some countries were quite slow in adopting family planning campaigns, even actively opposing them, and others were relatively quick in abandoning their pro-natalist views and in adopting anti-natalist ones (Rogers 1973). However, by 1984, 93 percent of the people in the so-called developing world lived in countries with population limitation policies (Johnson 1994; Nortman 1985).

As one would expect, family planning programs around the world have varied in their organization, methods, and effectiveness in reducing fertility. One common approach has been to encourage couples to marry at older ages. Another has been to provide to couples interested in limiting their 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 in communities, and the dissemination of messages encouraging low fertility by field workers to individuals at the grass-roots level (e.g., Mita and Simmons 1995; Phillips et al., 1993). Among the messages distributed in these education efforts were that low fertility and development were interconnected, that reduced childbearing would facilitate socioeconomic development, and that contraception was both acceptable and desirable. In this way, family planning programs not only emerged from the developmental idea that small families were good, attainable, and helpful for socioeconomic development, but also served to disseminate these principles widely around the world.

Notably, the implementation of family planning programs and the messages of low fertility have not been uniform, linear, or consistent across time and geographical areas. Instead, there has been considerable geographical variance, and the positions of various governments have varied dramatically across time. We now turn to our investigation of public opinion in several countries concerning these matters, beginning with 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 around the world believe in the major tenets of developmental idealism as they relate to fertility. Although we are interested in such views worldwide, budget and logistical restrictions limited us to the study of people in settings within the following six countries: Argentina, China, Egypt, Iran, Nepal, and the U.S. Table 1 provides some basic information about each of these six countries, indicating their location, population size, predominant religion, per capita gross domestic product, and total fertility rate. As shown in Table 1, these six countries do not represent a global sample, but they are located in a wide diversity of regions and represent wide variance on

size, standard of living, and fertility levels. They, thus, allow us to investigate whether the tenets of developmental idealism are widely distributed.

Turning now to a brief overview of each country, we note that Argentina is a Latin American country with a Catholic heritage and a sparse population of about 40 million, with almost 90 percent living in urban areas. Historically Argentina has been a largely urbanized country with significantly low fertility rates, small families, and a relatively skilled labor force. A significant European immigration at the turn of the 20th century had a great influence in shaping culture and society, especially the growth and urbanization of the population. Presently it has one of the oldest age structures in Latin America (CEPAL 2007).

The total fertility rate in Argentina is around 2.3 with variations within regions from a low of 1.6 to a high of 3.5. Fertility began to decline at the turn of the 20th century, ahead of most Latin American countries and well before the accessibility of medical means of contraception, and without public efforts for fertility regulation (Pantelides 2006). The TFR dropped from 7.0 in 1895 to 5.3 in 1914 and to 3.2 in 1947. The decline in fertility occurred simultaneously with mortality declines in a society undergoing rapid urbanization and incipient industrialization. The spread of mass education and the lower fertility of women from some immigrant European groups have been singled out as the main factors to explain the overall fertility decline (Pantelides 2006). Free, mandatory, and secular public education was established by law in 1884, resulting in rapid increases in literacy rates and educational attainments for both men and women.

Although fertility levels during the last decades have remained relatively stable, there have been important changes in other family behaviors. Fewer people are getting married, and those that do are marrying at later ages, and disrupting their marriages more often. Also, more people are choosing to form their first unions through cohabitation and to have their children while cohabiting, with these behaviours becoming especially prevalent among the younger generations (Binstock 2007, 2008). Women have also altered their role within families by playing a more

significant role in the household economy, or by becoming the sole or main provider (Geldstein 1999).

Turning now to China, we observe a country that has experienced more than a century of dramatic social, political, and economic change. Following a war with Japan, a civil war, and a communist revolution, the People's Republic of China was founded in 1949. There were numerous social and economic changes during the first few decades of the People's Republic, and in 1978 the country initiated a new economic reform which ushered in three decades of rapid and sustained economic expansion (Chow 2007).

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 a policy 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 well-known one-child program, a policy that was directly related to Malthusian concerns as expressed in the report of the Club of Rome (Greenhalgh 2003, 2008; Guo and Chen 2007;). The Chinese family planning program has not only varied tremendously across time, but across the regions of China (Baochang et al 2007). The decline in fertility 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 exact level of fertility in China in the 1990s is uncertain, but the United Nations reports it at 1.8 (Table 1), and it may be 1.5 or lower (Guo and Chen 2007).

Besides a rapid decline in fertility, China has experienced other changes in family-related behaviors. For example, age at first marriage has substantially increased, from about 18.7 in 1950 to 23.1 in 1980 (Cheng 1993). The average size of Chinese families has dropped from 4.3 in 1953 to 3.4 in 2004 (National Bureau of Statistics 2005. Love marriages have gradually replaced arranged marriages (Whyte and Parish 1984; Xu and Whyte 1990), and the divorce rate has

increased from 0.9 per thousand in 1985 to 1.9 per thousand in 1998 (China Population and Development Research Center 2007).

We now focus on Egypt and note that between 1950 and 2005, the country's population more than tripled in size, from an estimated 21.8 million to almost 73.0 million (United Nations Secretariat, 2009), with a current population estimated at 83 million. During the last 25 or so years, the total fertility rate (TFR) in Egypt also declined from over 5.3 children per woman of reproductive age in 1979 to 3.1 children in 2005 (El-Zanaty and Way, 2006); these declines, however, were less dramatic than were those in other Middle Eastern countries during a similar period (Yount and Rashad 2008) and have been negligible since 1997 (TFR 3.3). As shown in Table 1, the Egyptian TFR in 2007 was 2.9. Observed declines in the TFR may have resulted in part from increases in both the median age at first marriage among women 25–49 years (from 18.5 in 1988 to 20.4 in 2005) and ever use of contraception among ever-married women of reproductive age (from 54.7% in 1988 to 79.6% in 2005) (ORC Macro, 2009). These changes hint at important micro-level changes in both family structures and relations.

In Egypt, the institutions that could propagate developmental ideals about family and society in most cases expanded concurrently with these demographic changes. While the state's expenditures on education actually declined from 5.5% of the national GDP in 1985 to 4.7% of the GDP by 1995 (see Yount and Rashad 2008), access to systems of communication and the media increased markedly during a similar period. Between 1990 and 2003, for example, the number of telephone lines per 1,000 population more than quadrupled (from 30 to 127), even greater proportionate increases in the rates of cellular subscribers were observed, and rates of internet use rose from essentially nil to more than 4% of the population (see Yount and Rashad 2008). The 'modernizing' role of contemporary media in the Middle East – including film, television and soap operas, and the press – has been debated (e.g., Napoli 1996). Available data on men's and women's workforce participation suggest that the share of male workers in the service (and largely

tourism) sector rose between 1990 and 2003, but that the share of women in the formal labor force rose only modestly during this period (from 27% to 30%) (see Yount and Rashad 2008). While, together, these figures depict change only during the last 20 or 30 years, they still suggest marked expansion of, diversification in, and accessibility to potential sources of developmental (and other) ideals.

Finally, some discussion of family law, personal status codes, and family planning policies is useful to understand the national ideational context within which the above demographic changes occurred. In Egypt, the legal age at marriage has been lower than in other Middle Eastern countries, polygamy and "temporary" marriages are permitted under specified conditions, *talaq* – or non-judicial divorce–is permitted under specific conditions, and a divorced mother may lose custody of her sons and daughters at specific ages (see Yount and Rashad 2008). 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, access to abortion is permitted only on the grounds of women's physical health or survival, rape or incest, or fetal impairment (see Yount 2006).[3]

Turning to Iran, the creation of its pre-revolutionary family planning program can be traced to the 1950s, when the first family planning clinic started its activities and services in 1958. The official family planning program, however, began in 1964. After the 1967 – 1976 decade of the family planning program, the third national census of 1976 revealed an average annual intercensal growth rate of 2.7%, which indicated only modest success of the program. The fertility rate hovered above six children per woman throughout the 1970s, and the economy, although enriched by the oil boom, remained centralized and stagnant. Following the 1979 Islamic revolution, the family planning program was discontinued, and contraception became less readily available.

[3] The Penal Code does not expressly allow abortions to be performed to save the life of the woman, but the general principles of criminal legislation allow abortions to be performed for this reason on condition of necessity. In addition, the condition of necessity is sometimes interpreted in Egypt as encompassing cases where the pregnancy may cause serious risks to the health of the pregnant woman as well as cases of fetal impairment.

Although no specific population policy was introduced after the revolution, the new government adopted a pronatalist ideology. The War with Iraq created a pronatalist atmosphere by which families were encouraged to have more children, and economic incentives were provided to families with children. The total fertility rate increased, and in some provinces, especially those with substantial ethnic minorities, the cross-sectional fertility rate rose in the first half of the 1980s to almost nine children per woman.

In contrast to these dramatic social reforms, economic reform was limited in the new republic. Stimulated by the war and perhaps by the Islamic approach to economic expansion, industry became even more state-centralized and isolated from world markets. In the early 1990s, public enterprises accounted for 72% of all employment, and the free market price of foreign exchange was twenty times higher than the official rate. The demands of the war left the majority of Iranians in economic decline and led to the entire depletion of accumulated reserves. The new government, on the other hand, invested heavily in public infrastructure, especially electricity and water supply. More importantly for this paper was the widespread creation of cheap and accessible public education and health services. The infant mortality rate declined from around 114 per 1000 live births in 1975 to 29 in 2000. Furthermore, despite the restrictions placed upon women in many areas of their lives, the egalitarian nature of the revolution extended full access to education and health services to women. Iranian girls and women spent more years in school and university than they did previously (Abdollahyan 2004; Shadi-Talab 2005). As a result, the levels of education of women of reproductive ages have increased substantially over the last four decades, and the education gap between rural and urban areas has narrowed.

The year 1986 constituted something of a watershed in the demographic history of Iran. The 1986 Census revealed that the 1976-86 annual intercensal population growth rate had been 3.9%. In the following years, a series of meetings were held that led eventually to the reinstatement of the national family planning program and its support by Iran's religious leaders including the

supreme leader, Ayatollah Khomeini (Hoodfar and Assadpour 2000; Aghajanian and Mehryar 1999; Mehryar 2005; Mirzaie 2005; Abbasi-Shavazi *et al.* 2002; Ladier-Fouladi 1997). Iran's family planning program has been successful by any international standards. Contraceptive prevalence almost doubled from around 36% of currently married women aged 15–49 in 1976 to around 74% in 2000. Total fertility declined from around 7 children per woman in 1980 to 2.1 in 2000 and further to 1.9 in 2006 and 1.8 in 2007 (Abbasi-Shavazi and McDonald 2006; Abbasi-Shavazi et al 2009; Table 1). This trend has been ubiquitous across all provinces of Iran, and the gap in the TFR across rural and urban areas narrowed substantially by 2006 to 2.1 and 1.7, respectively. The majority of provinces in Iran are now experiencing below-replacement fertility. Gilan province recorded the lowest fertility in 2006 of 1.2 births per woman of reproductive age, which parallels the level in parts of Europe and East Asia (Abbasi-Shavazi et al 2009).

Nepal is a Himalayan country with a population of 26 million (2008), and has one of the lowest income levels in the world. Over 85 percent of the population still lives in rural areas and more than half of the population is illiterate. Demographic changes have been slow for a long time with a Total Fertility Rate above 5.1 until the 1990s. However, there has been a rapid decline in the TFR since 1995 resulting in a TFR of 3.1 in 2006 and 2.9 in 2007 (Ministry of Health, New Era and ORC Macro 2007; Table 1). The fertility decline that began in the late 1990s is just one of several fundamental changes in family formation processes. For example, the mean age of first marriage rose from approximately 13 for those who married between 1936 and 1945 to approximately 20 for those married in 1995-2005. Likewise, the fraction of marriages that were completely arranged by parents and other older relatives fell from nearly 100 percent for the 1936-1945 marriage cohort to about 50 percent for those married between 1986 and 1995 (Ghimire et al. 2006). Furthermore, the Nepali society that practiced polygamy and emphasized universal and early marriage and childbearing, high fertility, and extended family living arrangements until just a few decades ago is now experiencing a steady rise in late and consensual marriage, marital

dissolution, later age at first birth, contraceptive use, and nuclear family living (Acharya 1998; Aryal 1991; Axinn & Yabiku 2001; Axinn & Barber & 2001 ; Choe, Tahpa, & Achmad, 2001; Choe, Thapa and Mishra 2004; Ghimire et al. 2006; Ghimire & Axinn 2006; Niraula 1994; McCarthy, 1982; Suwal 2001; Yabiku. 2004, 2005).

Although Nepal continues to rate low on income levels, the changes in families and family behavior have been accompanied by dramatic changes in socioeconomic aspects. For example, there has been a massive expansion of schools, health services, transportation services, markets, employment centers, cinema halls, communication facilities, and tourist industries that have resulted in more young people going to school, working outside the family, and interacting with multiple sources of mass media and different kinds of people (Axinn & Barber, 2001; Axinn & Yabiku, 2001; Brauner-Otto, Axinn & Ghimire 2007; Ghimire et al., 2006; Yabiku, 2004). The dramatic increase in the interaction of people with institutions outside of their family has tremendous influence on the way people think about their family and social life.

The United States has, over its more than two centuries, experienced dramatic social and economic change. Beginning in the second half of the 19th century, the country experienced industrialization, movement from rural to urban areas, increases in income and consumption, increases in education, and changes in technology. Today, the US has a service economy and is widely seen as a technological leader, an affluent society, and a powerful player in the world system. The long tradition of religious diversity has been enhanced in recent decades and religious authority, attendance at services, and identification with religion have all declined while tolerance for violations of community norms has increased (Caplow, Bahr, and Chadwick 1983; Glenn 1987; Roof 1999; Wuthnow 1998). The Enlightenment and its principles of freedom and equality have played a role in the history of the country from its founding, although often honored in the breach. These principles have for more than a century, and especially in recent decades, helped to fuel the movements for freedom and equality by race, gender, sexual orientation, and marital

status. Individualism has also become more widespread in recent decades, as have the principles of autonomy and independent thinking (Alwin, 1986, 1988).

The US experienced fertility decline from the middle of the 19th century until the 1930s, a substantial marriage and fertility boom after World War II, and then a decline in both marriage and fertility. There has been a dramatic increase in the availability of medical means of birth control, and since the 1970s abortion has been legal and widely available. For the last several decades, the total fertility rate has hovered around or just below the replacement level of 2.1 children per woman (Population Reference Bureau, 2007). Divorce in American has increased, although with fluctuations, for more than a century and is very high at the present time (Casper & Bianchi, 2002 Preston and McDonald 1979). The long-term requirement of marriage for sex and childbearing had largely disintegrated by the 1980s and today the great majority of women and men have sex before they enter their twenties and before they marry (Abma and Sonenstein, 2001; Abma, Chandra, Mosher, Peterson, & Piccinino, et al. 1997; Laumann et al., 1994). Unmarried cohabitation increased substantially during the last part of the 20th century, and in the 1990s the fraction of couples cohabiting before marriage was greater than one half (Bumpass and Lu, 2000). These trends were accompanied by substantial increases in non marital childbearing so that by the mid-1990s more than one in three children were born outside of marriage (Thornton et al., 2007).

Trends in family and demographic behavior have been accompanied by important changes in family beliefs and values. There have been declines of the centrality of marriage and parenthood as necessary for fulfillment and happiness, declines in negative attitudes toward divorce and remaining single and childless, and increased acceptance of premarital sex, unmarried cohabitation, and nonmarital childbearing (Axinn and Thornton, 2000; Thornton, 1989; Thornton and Young-DeMarco, 2001).

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. Thus, 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. As described elsewhere (Thornton et al forthcoming), 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—in-person and through conference calls--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[4]. From this preliminary experience in these countries and elsewhere, we constructed the final questionnaire to be used in Argentina, China, Egypt, Iran, and the United States. The final questionnaire for these five countries was divided into two parts: one with questions designed to be as comparable as possible across settings; and one with country-specific questions designed for the separate countries. The Nepal questionnaire was designed for somewhat different purposes and included some slight variations from the other questionnaires, which we note below. In each of the settings the questionnaires were pretested before final administration. As we detail below, our samples were drawn to represent a city, a region, several regions, or an entire country.

Fertility Questions Analyzed

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

We asked several questions in these surveys about fertility, development, and the future. One question concerns the extent to which respondents in the six settings perceive an association between fertility and development levels. We asked respondents to address this issue in the following way: "Now, please think about what life is like today in countries that are not developed and compare it to what life is like today in countries that are developed. Please tell us whether each of the following things, in general, is more common in countries that are not developed or more common in countries that are developed. The item of interest in this paper was "couples having many children"[5].

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 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"[6].

We next reversed the causal arrow between development and fertility by focusing on perceptions of the effects of a fertility reduction program on development. We asked respondents to evaluate this causal influence by addressing 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

[5] 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.
[6] 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".

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: economic well-being; media technology; health (opposite of infant mortality); education; and scientific medicine (opposite of local healers). Two items concerning intergenerational relations were also included in the list of items respondents were asked to evaluate as possible consequences of a fertility reduction program. These are: "love and understanding between parents and children" and "respect for elders"[7].

We also asked respondents their preferences of social and family arrangements 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[8].

Finally, we asked respondents in each of the six settings 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 (STUDY SITE COUNTRY) during the next twenty years". This question

[7] 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".

[8] 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 was second in the series and followed a question about "equality between women and men".

was immediately followed by the following question: "If (QUESTION TOPIC) does (increase/decrease/stay about the same) 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, and 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[9].

Country Surveys We fielded surveys in representative samples in different settings in the six countries of Argentina, China, Egypt, Iran, Nepal, and the United States. The fieldwork for the surveys was conducted between 2006 and 2009. Because of severe 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 here 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. The data collection in Argentina was conducted in March-April 2008 through face-to-face interviews with 1003 adult men and women living in urban agglomerates of 500,000 people or more. Approximately 60 percent of the country population resides in agglomerates of that size. The sample was drawn using a multi-stage procedure with urban agglomerates and clusters within agglomerates being randomly selected. 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.

[9] 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".

The data collection in China was conducted in Gansu Province in October-November of 2007. Gansu Province is located in West-central China, has relatively low income and has a large Muslim minority population in addition to the majority Han population. The sample was selected using a multi-stage procedure, with random selection at all levels. The sample was drawn to represent the adult residents of the population, and the sampled individuals were interviewed face-to-face.

The data collection in Egypt was undertaken in late 2007 and early 2008. 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. We sampled women between the ages of 18 and 54, along with the husbands of all married women. Respondents were interviewed in direct face-to-face interviews.

The survey in Iran was conducted in November and December 2007 with face-to-face interviews with adult women in the city of Yazd, a religious and conservative city of more than 400 thousand people located in the central part of Iran. Contrary to the great variety of Iran's population, Yazd has a relatively homogenous population in term of religious, ethnic and language backgrounds, most of whom are Persian and Shi'a. Yazd has a high level of industry and socioeconomic standing, but retains much of its historical religious and family culture. The sampling frame was drawn using a two-stage stratified cluster sampling technique by the Statistical Centre of Iran (SCI). Interviews were obtained with one married woman aged 15-54 years old in all sample households (548 respondents). For those sample households who had a never married woman aged 15-29, one of the never married women was interviewed (separately) as well (155 respondents) (Askari-Nodoushan and Abbasi-Shavazi et al 2009).

The Nepal sample was constructed to consist of a stratified random sample of neighborhoods in the Chitwan Valley in South-central Nepal. Everyone living in the sampled neighborhoods betweenthe age of 15 and 59 were interviewed for this study (In addition, nonresident spouses of people 15-34 and non-resident parents of unmarried people 15-34 were included in the study.). The data were collected in face-to-face interviews between January 2009 and June 2009. In addition, for the analysis concerning where "couples having many children" is more common we also include data from a pilot study of approximately 500 people conducted in 2003 in neighborhoods adjacent to the neighborhoods 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 (SCA), a nationally representative monthly telephone survey of American adults. Each monthly sample is a rotating panel design of approximately 500 respondents consisting of 300 adults selected from an independent cross-section of households, plus an additional 200 re-interviews originating from the cross-section interviewed six months earlier. The three data collections were conducted in April 2006, May 2007, and November 2007.

The results presented in the 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 than the results presented in the tables.

Basic socioeconomic and demographic information for the individuals participating in the surveys is provided in Table 2. These data document a wide diversity of attributes both within and across the study settings.

Results

We begin our discussion of our main substantive findings with the data summarized in Table 3 for each of the six settings. In order for ease of presentation, we have indicated in Table 3 the percentage of respondents 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 children, and that fertility will decrease in their country 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 3 gave the opposite response. However, in a few cases, especially in Argentina, substantial numbers of respondents gave answers indicating 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[10].

Comparing Developed and Not Developed Countries

We focus first on the first row of Table 3 and people's perceptions of the association between fertility and development levels. Consistent with the developmental idealism hypothesis, the vast majority of respondents in each of the settings believe that couples having many children is more common in not developed places than in developed places. In fact, the percentage of respondents with these views is 75 percent or higher in all six settings. In all settings except in 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 respondents in our surveys whether they believe that changes in development affect fertility. As shown in the second row of Table 3, the vast majority of respondents in the six settings perceive development as a causal force for fertility decline. Between 73 and 95 percent of the respondents see development as a fertility-reducing factor among low income, rural populations with poor health.

[10] The full distribution of responses is reported in Thornton et al (2009).

The belief that development reduces fertility is especially high in the study settings in China and Iran, where 95 and 90 percent of the respondents believe that development will reduce fertility. We note that this very high level of endorsement for the causal influence of development on fertility occurs in two countries with particularly vigorous family planning programs. We also observe that China and Iran have experienced two of the most rapid fertility declines in world history (see Aghajanian and Mehryar (1999); Abbasi-Shavazi , Hosseini-Chavoshi and McDonald (2007), Hosseini-Chavoshi et al. (2006) for discussion of Iran's fertility decline and Gubhaju [2007] for discussion of China's and Iran's decline). The Chinese fertility decline in the past several decades was accompanied by rapid economic growth, with the direction of the causation, if any, being unclear. Iran's increase in fertility during the early post-revolutionary period coincided with economic strains on the government's ability to provide basic services, and the sharp fertility decline in the 1980s and onward occurred simultaneously in urban and rural areas, which benefitted from expanded access to education and health services. We note, however, that any differences across settings should be interpreted with great caution because of the differences between samples and procedures in the various countries.

Perceived Effects of a Fertility Reduction Program 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 development. As discussed earlier, we asked respondents to evaluate the causal influence 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 concerning the effects of a fertility reduction program for these five items are displayed in the first five rows of Section C of Table 3.

Consistent with the expectations of the developmental idealism model, the vast majority of respondents 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 the standard of living and education, two of the central elements commonly associated with development. Between 83 and 99 percent of the respondents 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.

Turning now to health and medicine, the data in Table 3 indicate widespread belief in a fertility reduction program producing a decline in infant mortality and a shift from reliance on local healers to a reliance on medical doctors. This belief is particularly strong in the case of infant mortality, where 86 to 98 percent of respondents believe that a fertility decline would lead to a decline in child mortality. 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 in the various settings prevent us from making definitive comparisons across settings, we still 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 where we included the questions in the Chinese survey, a minimum of 96 percent expected that a fertility reduction program would move society in the direction of development.

Although the percentage of respondents in Argentina 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 people in other places 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 a Fertility Reduction Program on Intergenerational Relations

Two items concerning intergenerational relations were also included in the list of items respondents were asked to evaluate as possible consequences of a fertility reduction program. These are: "love and understanding between parents and children" and "respect for elders". Distributions for these two items are shown in the last two rows of Section C of Table 3.

Although the perceived consequences of a fertility reduction program on intergenerational relations is less positive than on the five items commonly associated with development documented in previous rows of Table 3, most respondents also 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 was not as high, but still between 51 and 86 percent expected such an increase with a fertility decline.

It thus appears that at least a majority of people in these settings believe that a fertility reduction program will not only improve things usually associated with socioeconomic development but also intergenerational relations. However, the strength of people's endorsement of the positive effects of a fertility reduction program on intergenerational relations appears to be weakest among our 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 programs 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 3 reports the answers to the series of questions where we forced respondents to choose between having one and having three children. It is important in interpreting these responses to recognize that in both historical and comparative perspectives for most of the history of the world, the number of children born was considerably higher than three. Thus, we are not asking respondents to choose between low and high fertility, but between very low and low fertility.

As shown in Table 3, having one child over having three children is endorsed by the majority of our respondents only 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 children 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, but in Egypt only about one sixth endorse one child over three. These findings for the Egyptian sample corroborate those on family-size preferences from the DHS (ORC Macro, 2009), which reveal national family-size preferences of around three children.

Expectations about Future Fertility Trends

The last row of Table 3 (Section E) reports data from questions asking respondents about the future of fertility in their own countries. These data suggest that, with the exception of Argentina, a substantial majority (72 percent or greater) of respondents believe that fertility will decline in their countries. Furthermore, for both China and Iran, the percentage expecting a future fertility decline is 91 percent or greater. This is a substantial expectation for future fertility decline in China and Iran, especially since these two countries currently have fertility levels below the replacement level of 2.1 children per woman. The data from our setting in China and Iran also contrast interestingly with the data from Argentina and Egypt where fertility levels are higher than in China and Iran, but where expectations for future declines are smaller. In Iran, the ideal of a

small family size has diffused widely, such that notable percentages of women who married in the 1980s in Gilan (22%) and West Azarbaijan (10%) provinces reported that one child would be ideal for a couple (Abbasi-Shavazi et al 2009).

However, 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.

Evaluation of Future Fertility Trends

In Table 4 we shift our emphasis from expectations about fertility change to evaluations of the goodness or badness of the expected change.

The top panel in Table 4 indicates for those respondents who expected a future decline in fertility, the distribution of their answers on whether a future decline would be good, bad, or it did not matter. Similarly, the bottom panel in Table 4 indicates for those respondents who expected an increase in fertility, the distribution of responses evaluating such a fertility increase. Because of the relatively small number of Chinese and Iranian respondents expecting a future increase in fertility, we do not show their evaluations of such an increase, and Nepalis were not asked to evaluate a future increase in fertility. Also because of the relatively small number who said that fertility would remain about the same in the future, we do not report their evaluations here.

Table 4 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 respondents in the United States who thought that fertility would decrease in the United States 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 a somewhat more positive attitude towards future fertility declines and somewhat less positive attitudes towards future 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 future fertility increase evaluated this trend as negative.

In the Iranian setting, positive endorsements of fertility declines are even greater than they are in Argentina. Just over two-thirds of the people 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. Because so few people in the Iranian sample expected a future fertility increase, we do not report their evaluations of such an increase.

In China, Egypt, and Nepal the positive endorsement of a fertility decline is even greater. In each of these three samples, 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. And, 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. These responses from the Egyptian sample may reflect in part social desirability bias, given strong pressures on the part of external agencies to reduce fertility in Egypt further. We discuss the issue of the possible influence of social desirability bias more generally in the concluding section.

Conclusions and Discussion

This paper was motivated by the belief that fertility declines in many places of the world may have been motivated, at least in part, by ideational forces. More specifically, we were interested in the idea that developmental idealism was a particularly powerful force in many places around the

world. Developmental idealism is a body of beliefs suggesting that modern societies are good and attainable, that modern families are good and attainable, that modern families and modern societies are cause and effect of each other, and that freedom and equality are fundamental human rights. Our belief is that these ideas of developmental idealism have been spread around the world and may have had extensive influence on family change. Inasmuch as controlled and low fertility are essential elements of what is generally meant as a modern family, we believe that the spread of developmental idealism has been particularly important in the fertility decline in many places of the world.

As we discussed in the first part of this paper, 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 women and men. Ideas of this sort 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 as they relate to fertility have spread to and are accepted by ordinary people around the world. Although our project is motivated by worldwide interests, we have focused our empirical work on this question to date in certain regions, provinces, or cities in Argentina, China, Egypt, Iran, Nepal, and the United States. The limitations of our samples to certain universes, of course, restrict our ability to generalize to the national populations in the various countries. In addition, we, of course, cannot generalize to countries beyond the six mentioned. Nevertheless, we do have data from six widely scattered and

diverse settings around the world, which provides some 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 people in everyday life in the six settings covered in this paper. The vast majority of people in our studies believe that low fertility is a feature of developed rather than not developed societies, believe that development is a causal force for reducing fertility, and believe that fertility reduction programs help to bring development. Majorities also believe that fertility reduction programs help to bring better intergenerational relations. Furthermore, with the exception of the respondents in Argentina, substantial majorities believe that the future will bring further fertility declines in their own countries. In addition, with the exception of the United States, substantial majorities of people expecting future declines in fertility believe that this trend is a good thing. Also, with the exception of the United States, among those who expected fertility to increase, the majority said that was a bad thing. Furthermore, in our Chinese and Nepali samples, the vast majority of respondents indicate that one child is preferable to three. In the other settings, however, the majority of respondents 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 countries or settings, one cross-cultural difference merits a bit of speculation. Of the various 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 for their own populations. It is possible to speculate that the existence of strong family planning programs may be related to the orientations that the populations have towards the future.

The existence of vigorous family planning programs, even campaigns, in several of our study populations raises the possibility of "social desirability" bias in the answers that respondents provided to survey interviewers. One of the dimensions of a strong family planning program in many countries is to spread the message that low and controlled fertility are good, that low fertility will bring development, and that fertility must decline for the good of the country and its inhabitants. It is possible that suchmessages have been widely spread by the family planning programs of at least some of our countries and that these messages are widely understood by ordinary people. Yet, while these messages may be widely understood by people, they may not be accepted and internalized by the same people. 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 or revealed to others. If this mechanism is widespread in our settings with strong family planning programs, it is possible that the expressions of strong support for the ideas of developmental idealism in our surveys represent, at least in part, efforts to please the interviewer rather than an endorsement of the ideas. Of course, social desirability is a threat to the answers to all survey questions and one that must be taken as a serious possibility.

Unfortunately, we are not in a position to 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 apparent support for the ideas of developmental idealism

comes entirely from respondents knowing the ideas and wanting to look good by expressing them to interviewers. Such a conclusion would, at a minimum, suggest that respondents know about the developmental idealism messages and that these messages are the socially desirable ones. This would indicate that the messages have been widely disseminated with a positive valence so that respondents know both about the messages and that agreeing with them is the socially desirable thing to do.

Although we cannot eliminate the possibility that some of the respondents in our surveys were giving answers that they believed were socially acceptable rather than what they actually believed, we believe that many of the respondents actually do believe the ideas that they reported 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 themselves. We believe that 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 influence discussions in those data gathering formats as well.

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

It is also worth mentioning the obvious point that our data do not provide any evidence of when the ideas of developmental idealism became widespread in our research settings. It is

possible that the ideas we have discussed arrived just before the surveys were conducted, 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). As discussed earlier in this paper, we also know that that there have been dissemination channels for many of these ideas in many places around the world for decades and centuries. Moreover, many of these ideas have been pushed vigorously among ordinary people 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 the settings of our research 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 widely across different settings because the timing and circumstances of the declines vary greatly. In China, Egypt, Iran, Nepal, and many other countries the fertility declines have occurred in the last several decades, many years after the declines in Argentina, the United States, and elsewhere. Furthermore, in China, Egypt, Iran, Nepal, and many other places at least parts of the fertility declines occurred in the presence of vigorous family planning programs that actively spread many of the messages of developmental idealism concerning low fertility and its connections to development. There were also mechanisms for the spread of these messages independent of the formal family planning programs. These considerations give credence to the belief that these messages of developmental idealism were factors in the fertility declines of recent decades.

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 nonmarriage 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). The reason is that before the marital fertility declines of the late 19th century in much of Northwest Europe and its overseas diasporas, high marital fertility was seen as an attribute of all countries, both those labeled in the developmental hierarchy as developed and those labeled as not developed. It was only after the decline of marital fertility in Northwest Europe and its overseas diasporas that low marital fertility was seen as an attribute of development. Under such circumstances, it is difficult to argue that these ideas about development and its relationship to fertility could have motivated that first wave of marital fertility declines.

However, there is one element of developmental idealism that is very relevant to the marital fertility declines in Northwest Europe, the United States, Argentina, and other places with early marital fertility declines—and that is the developmental idealism proposition that freedom and equality are fundamental human rights. 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 not only in these countries but elsewhere in the Western world.

It is likely that increasing freedom played a significant role in the decline of marital fertility in many places in the Western world. 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 in this fertility decline because it helped to weaken or even remove the previous restrictions of the Church against married couples interfering with conception. That is, secularization brought couples the freedom to limit their childbearing by preventing conception. Without this freedom, marital fertility would not have fallen. Thus, it is this dimension of developmental idealism that is relevant for understanding the decline of marital fertility in

Western settings in the last half of the 19th century and first part of the 20th century rather than the ideational linkages of marital fertility with development.

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

As social scientists, 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 many other possibilities, of which we list three interrelated and not mutually exclusive ones: that fertility declines were produced by other factors independent of either ideas or family planning programs; that it was the provision of family planning services and not changes in ideas and motivations that were consequential in reducing fertility; and that ideas are only secondary and causally impotent consequences of other causal factors.

Particularly relevant here 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 about such matters from their own observations rather than from the messages existing in the larger community. More specifically, for our purposes, respondents could see that in their own country, or in some other country, fertility fell while economic output increased and draw their own conclusions about the existence of causal relationships between the two. This could be true in all of the settings we have studied, but may be particularly relevant in China which experienced in a very brief period of time 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 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 what is going on in the larger community or to the messages coming from the outside about development and family size.

These considerations, of course, suggest that there are multiple possible causal pathways and mechanisms linking together ideas, experience, and behavior. However, the multiple possible causal pathways and mechanisms are not mutually exclusive or contradictory. Rather it is more likely that they fit together in complex patterns of mutually reinforcing and/or mutually unsupportive ways. For example, it is likely that the strong correlation of economic growth with fertility decline in China in recent decades reinforced rather than contradicted 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 believe that they can represent only part of the story. In addition, if it is 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. Resolution of such issues, of course, extends beyond the scope of this paper.

We close this paper with a note that the line of research represented in this paper concerning fertility and developmental idealism is only in its beginning. We have conducted research in only a few countries and recognize the need to collect similar data in other settings. We also recognize the need for more methodological work 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 observations, and other forces in bringing knowledge and acceptance or rejection of developmental idealism. We also need specific research programs examining the extent to which 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. 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 underestamating the actual highest level achivied (e.g., some atending high school has been registered as Complete Elementary).

Table 3. 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 chidren 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 undestanding 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 4: Respondent Evaluations of Fertlity 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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