Three Essays on Worldviews, Autonomy and the Family in Nepal

by

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To Jill, this dissertation is as much yours as it is mine.

chair, Arland Thornton. To me, his ability to discern my need for either encouragement or a "push" was his most essential attribute as my mentor. He has been nothing short of an advisor, colleague, friend, supervisor, confidant and fellow explorer. I count it as one of my greatest honors to be one of his students. Many aspects of this dissertation reflect his career in sociology and demography; I hope it is a fair and high-quality reflection of his vast, extraordinary work.

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ABSTRACT

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This dissertation consists of three papers on the interrelatedness of beliefs about family behavior, beliefs about societal development, and variation in family behaviors in a rapidly changing social context. The first two essays address the beliefs of ordinary people concerning the relationship between family change and societal modernization. The last essay examines the ways in which individual, parental, and local community beliefs about spouse choice influence later spouse choice participation.

My first two essays incorporate two prominent theories of social life—the modernization theory and W.I. Thomas' theorem that people's perceptions have real consequences—into an examination of the belief systems of people living in Nepal's Chitwan Valley. In the first essay I document the extent to which survey respondents expect certain family types (late marriage, polygamy, small families) to be in certain types of societies (developed, poor, educated), and the extent to which they believe family change and societal change are causally connected. Survey results from this rural population in Nepal suggest that the majority of people strongly believe that behaviors

related to fertility, marriage, and gender equality are causally related to societal development. Respondents provide similar answers whether a society changes via education, wealth, or development.

The second essay extends previous work by examining subgroup variation in belief in developmental models. Results based on the Nepal survey data demonstrate that the most disadvantaged and geographically isolated groups are the most likely to reject aspects of the developmental model. Respondents with higher levels of education and mass media consumption are more supportive of developmental models.

In the third essay I create a theoretical framework to explain how the individual, family and local community interrelate to determine spouse choice behavior. This framework pays particular attention to the role of education as an allocator of social status and influence. Analyses on a sample from Nepal show that the attitudes of both young adults and their fathers influence participation in spouse choice, and that young adults with higher levels of education are significantly more likely to get the level of participation they desire than do their counterparts with lower levels of education.

CHAPTER 1

Introduction

This dissertation consists of three essays that investigate the interactions among people's

beliefs, experiences, and behaviors in relation to family life. It provides additional

evidence on how beliefs influence behavior, and suggests that new hypotheses are needed

to reinterpret past theories of behavior.

The first two essays share a similar focus by addressing people's beliefs in models

of modernization for family and society. Theories of modernization or development have

existed for centuries as social scientists have tried to explain the causes and effects of

social change. These theories grew in number, complexity, and popularity beginning in

the 18th century and provided powerful models for the world's current and projected

configurations. More important, however, they supplied a framework suggesting how

certain social changes might be triggered by modifying individual behavior. While

evidence demonstrates that these models of social and family change have been used by

the ruling elite to justify policies and programs, much less is understood about how

everyday people view them. W.I. Thomas' broad theorem—that actions are affected by

subjective perceptions of situations—suggests that examining individuals' views on these

developmental theories may shed light on patterns of fertility and union formation

behavior observed around the world. Thus, understanding the causal relationships people

believe to be true may predict their attitudes, expectations and behavior.

My second and third chapters explore how people's perceptions influence their actions by documenting the extent to which citizens of Nepal, a country in the midst of dramatic social change, accept ideas of modernization and social development. Several conditions make Nepal an exceptional site for the study of knowledge and beliefs concerning developmental models. First, Nepal's historic isolation and the extreme exploitation of its population by the ruling elite, combined with the recent expansion of schools, health services, markets, bus services, cooperatives, and employment centers, have resulted in dramatic social change over recent decades. Second, established family behaviors in Nepal—behaviors addressed in developmental models—are undergoing rapid transformations. Third, new survey data are available from Nepal with measures of respondents' beliefs in the causal relationships between (a) multiple family characteristics and (b) societal change along multiple causal pathways. Having these data, in this location, at this time provides a particularly powerful laboratory for this research.

Chapter 2 addresses two important questions. First, to what extent are these developmental models endorsed by the Nepali people? Second, how do the people conceptualize different aspects of the developmental models? The multidimensional aspects of the data allow the use of both latent class analysis models to characterize respondents based on their belief in the different models of modernization, and a modified multitrait-multimethod (MTMM) analysis to test the extent to which respondents found correspondence among (a) family behaviors (e.g., late marriage, contraceptive use), (b) attributes of development (e.g., wealth and education), and (c) models of social change

My third chapter extends this work by examining subpopulation variation in the belief in different developmental models. Under the assumption that dramatic social change generates important group differences related to this belief, I outline two noncompeting hypotheses for Nepal. The first hypothesis assumes that belief in the developmental models is a function of having knowledge of or exposure to them. Simply put, people will not support what they do not know. Thus, I conjecture that greater exposure to nonfamily organizations that promote these models such as education, media and nonfamily work, is linked with more approval of developmental models. The second hypothesis assumes that belief in the developmental models is also a function of having the means to accomplish the goals and expectations encompassed in the models. People without these means will reject the models. That is, social exclusion leads to nonconformity. Therefore, I posit that social and geographic isolation are associated with less belief in developmental models that claim a causal connection between family change and societal change.

The fourth chapter transitions to a parallel topic within the beliefs and behavior research: autonomy. Foundational social scholars like Durkheim, Marx, Weber, Comte and many others examined how individuals and other entities such as the family, church, and community, express and enforce their will. Autonomy in family formation behavior is often determined by the relative strengths of the individual, the family, and the community wills. In Nepal, I assume that individual autonomy in spousal choice is largely a function of the strength of the family's and community's beliefs in the importance of arranged marriage.

Chapter 4 examines ideational influences on arranged marriage, incorporating individual-, family-, and neighborhood-level beliefs and related mechanisms that influence the young adult's marriage behavior, and specifically assesses the role of education in spouse selection autonomy. I investigate these issues using survey data collected at the individual, family, and neighborhood levels in Nepal's Chitwan Valley from 1996 to 2007, and by generating multilevel ordinal logistic regression and multilevel competing risk hazard models.

CHAPTER 2

The Influence of the Modernization Paradigm on People's Beliefs about Family and
Social Change

Abstract

This paper outlines the combination of two prominent theories of social
life: 1) modernization theory and 2) W.I. Thomas' theorem that people's
perceptions have real consequences. It then documents the extent to which
the complex idea of modernization and development has cemented itself in
the minds of ordinary people as a model of how the world works. I employ
latent class analysis and multi-trait multi-method measurement models and
use 2003 survey data from Nepal to examine these issues. I document the
extent to which people expect certain family types (late marriage,
polygamy, small families) to be in certain society types (developed, poor,
educated), and the extent to which people believe family change and
societal change are causally connected. I also examine the respondents'
conceptual relationships of development. Results suggest that the majority
of people strongly believe that development and family change are
causally related. Fertility, marriage and gender equality are understood by
respondents as a package of family behaviors causally related to
development. Respondents provide similar answers whether a society
changes via education, wealth or development. Finally, respondents
appear to distinguish between models of family change causing societal
development and societal development causing family change.

INTRODUCTION

Theories of modernization or development have existed for centuries, evidence of

social scientists' attempts to explain the causes and effects of social change. Unilinear

modernization and development theories grew in number, complexity and popularity

beginning in the 18th century and became mainstays of paradigms in sociology,

economics, demography, and anthropology until the early 20th century (Eisenstadt 1964;

Gusfield 1967; Thornton 2005). These theories, which often substituted geographically varying data for historically varying data, attempted to causally connect various aspects of life, from religion and family to education, labor, and economics (Moaddel 1994; Crenshaw 1995; Smits, Ultee and Lammers 2000; Inglehart and Baker 2000; York, Rosa, Dietz 2003). They provided powerful explanations for the world's current and projected configurations (Geertz 1973). More important, however, they supplied a framework suggesting how certain social changes might be triggered by modifying individual behavior. In other words, modernization theories provided possible ways for people to change the social world around them (Thornton 2005).

Of particular interest for scholars of these theories has been the existence of a causal connection between modern family life and modern societies (Malthus 1986; Thornton 2005). Some have suggested that the modernization of families (i.e., older ages at marriage, greater use of contraceptives, smaller numbers of children) causes societies become more modern (e.g., wealthier, more educated). Others have explored and theorized the reverse causal relationship. This crucial difference, and less profound differences as well, have led to a wide range of modernization theories related to the family (Boas 1940; Crenshaw 1995; Eisenstadt 1964; Gusfield 1967; Inglehart and Baker 2000; Latham 2000; Meyer et al. 1997; Nisbet 1980; Portes 1976; Smits, Ultee and Lammers 2000; Thornton 2001, 2005; York, Rosa, Dietz 2003).

Despite this extensive research and theorizing, and despite evidence that ruling elites have used developmental models to justify policies and programs (Harris 1968; Latham 2000; Mandelbaum 1971; Meyer et al. 1997; Nisbet 1969, 1980; Sanderson 1990; Thornton 2001, 2005), much less is understood about how ordinary people

understand these models of social and family change (Ahearn 2004; Amin 1989; Blaut 1993; Caldwell et al. 1988; Dahl and Rabo 1992; Pigg 1992; Wang 1999).

W.I. Thomas' theorem—that people's perceptions have real consequences (Thomas and Thomas 1928)—suggests that if ordinary people believe the theory that modern societies produce modern families – or the reverse – they may be directly influenced by changes in either of these domains. Thus, belief in causal relationships between individuals and societies may predict individual behavior in much the same way that values predict behavior (Bongaarts and Watkins 1996; Caldwell 1982, 2001; Casterline 2001; Freedman 1979, 1987; Goode 1970; Lesthaeghe 1980, 1983; Lesthaeghe and Wilson 1986; Lesthaeghe and van de Kaa 1986; Pritchett 1994; Rogers 2003; Thornton, Axinn and Xie 2007; van de Kaa 1987, 1996).

As is often the case when addressing emerging theories, existing data and methods must be modified or created to examine new hypotheses. In this case, new and highly salient data are available, collected from a sample in Nepal using a survey instrument expressly intended to measure people's beliefs in the causal relationships between family and societal change. This survey examined many aspects of family and social life, and probed respondents' views on numerous potential causal interconnections between these aspects. And, because the respondents reside in a remote rural setting experiencing tremendous societal and family changes, the study context is also ideal.

BACKGROUND and THEORY

Perceptions, Values and Actions

During the early 20th century, as scholars became less enamored with grand theories of social change, social scientists began to turn from studying the direct effects

of social structures on individuals to examining how individuals perceived their circumstances and how those perceptions modified their values and behaviors (Collins and Makowsky 1998). A foundational statement for this work was given by W.I. Thomas when he wrote: "It is not important whether or not the interpretation is correct—if men define situations as real, they are real in their consequences" (Thomas and Thomas 1928:572). The key point of the Thomas Theorem[1] is that an individual's beliefs or perceptions about a circumstance—regardless of their basis in actuality—will have an effect on the individual's related actions. Further, an individual's interpretation of a situation may gain meaning and be reinforced as a result of the actions associated with it, beyond any objective significance this interpretation may have.

Merton (1968) expands on this theorem by suggesting that an individual's interpretations of a situation may increase the likelihood of future outcomes associated with that belief. This "self-fulfilling prophecy" then reinforces the strength of the connection between the interpretation and the related outcome. A classic example is a bank run, where individuals' perceptions about a bank's insolvency – regardless of their accuracy – produce behavior (bank withdrawals) that increases the likelihood of outcomes related to the belief (bank insolvency). Clearly, the interpretation or "prediction" need not be correct to have an effect in the predicted direction. But given the reinforcement of the causal connection in a self-fulfilling prophesy between the interpretation (bank is going to fail) and the outcome (bank insolvency), it becomes difficult to sort out the effects of objective factors that might have influenced the outcome from the effects of situational interpretations.

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1 Although the Thomas Theorem is initially presented in a jointly authored work, as Merton (1995) shows, this concept, as it is defined here, is the notion of W.I. Thomas alone.

The theories of Thomas (1928) and Merton (1968) fit nicely with Geertz's conjecture that beliefs and ideas provide models for both understanding reality and dealing with the world (Geertz 1973; also see Fricke 1997, and D'Andrade 1984). Ideational frameworks help to describe and explain the world by giving meaning to certain behaviors and institutions and by identifying appropriate and productive methods for achieving desired goals. Substantial evidence indicates that ideational frameworks have influenced people's family behaviors in particular. For example, Goode (1970) identifies an increasing social preference for the conjugal family over the extended family as influential on changes in family structures. Lesthaeghe and his colleagues view increasing emphases on egalitarianism and individualism as important social forces for worldwide family changes (Lesthaeghe 1980, 1983; Lesthaeghe and Wilson 1986; Lesthaeghe and Surkyn 1988; Lesthaeghe and Neels 2002; Lesthaeghe and Neidert 2006; Lesthaeghe and Surkyn 2008; Lesthaeghe and van de Kaa 1986; van de Kaa 1987). Pritchett (1994) posits that declining family size preferences played a significant role in the decline in fertility around the world. Several scholars have explored the effects of Western ideals on family behavior around the world—notably, movement toward smaller families, older ages at marriage, more autonomy in spousal choice and marriage timing, and greater gender egalitarianism (Caldwell 1982; Freedman 1979, 1987; van de Kaa 2001; Inglehart 1997; Inglehart and Baker 2000; Easterlin 1980; Thornton and Lin 1994; Bista 1994).

Although the studies mentioned above have provided powerful evidence that ideational frameworks are important, and that they are dynamic across time and geography, the studies do not explore why or how some ideas displace others, causing

changes in individuals' perceptions, behavior, and outcomes. That is, what causes individuals to adopt new ideas (typically Western and or "modern") over former ("traditional") models, values, and perceptions—and concomitantly change their behavior to conform more closely to these new ideologies? Understanding people's perceptions of situations is fundamental to understanding their behavior.

Developmental Idealism

In a recent stream of theorizing, Thornton (2001, 2005) argues that a package of ideas he calls developmental idealism (DI) was disseminated widely around the world where it has been a major force for family and demographic change. The elements of developmental idealism can be defined broadly to include most of the ideational factors posited in the literature as being important influences on family and demographic behavior. DI directly incorporates into its elements the Western and modern values and beliefs that are used either directly or indirectly in most of the ideational literature explaining family and demographic change. It also adds something that is missing from the literature—a reason why the non-Western world would care about, and be influenced by, Western and/or modern ideas. That is, it supplies a reason for why people would redefine their situations and therefore act in accordance with new values and predictions. It also brings into the picture such ideational forces as the desire for a higher standard of living, desires for freedom and equality, an emphasis on individual agency rather than fatalism, individualism, skepticism about authority and institutions, the empowerment of women and the younger generation, and desires for small families, mature marriage, and acceptance of fertility control.

Theories of modernization or development dominated much of Western thinking from the Enlightenment of the 1600s and 1700s to the present (Thornton 2005). Initially, the theories asserted that all societies progress or evolve through the same natural, universal, and necessary stages of development (Inglehart 2001). The speed of advancement was believed to vary so that at any one point in time societies at different developmental levels could be observed. Thus, societal evolution, development or modernization was unilinear. Scholars applying these theories believed that the most advanced societies were in northwest Europe and among the northwest European Diaspora, while other societies occupied less advanced positions of development (Thornton 2001, 2005; Inglehart 2001). Many of these scholars used the particularly dubious method of substituting geographic variation for historical variation by assuming that in their past, developed nations had been like their less developed contemporaries, and that at some point in the future the less modern nations would become like their modern neighbors (for detailed discussions, see Chapters 2 and 3 of Thornton 2005).

Applying the modernization theories to cross-sectional data on family and economic systems, these scholars postulated that geographic family and societal differences were due to modernization (Thornton 2001, 2005). That is, despite the large variation of family types, both within and without Northwest Europe, scholars surmised that the family formation patterns of Northwest Europe (less family solidarity, later marriage, less parental authority, greater status of women, etc) were causally connected to higher levels of industry, urbanization, education, consumption, geographic mobility, secularism, democracy, religious pluralism, and other societal characteristics. Although there was some debate about the direction of the causal arrows between cultural/family

change and economic change, there was no doubt as to the correlation (Inglehart 2001).

In fact, they argued that sometime before they wrote in the 1700s and 1800s, there had

been a great family transition that had changed European families from being like the

world outside of northwest Europe which they labeled as traditional to being like the

families of northwest Europe that they labeled as developed or modern (Thornton 2001,

2005).

These theories saturated social science literature from the 1700s through the

middle 1900s, but in the second half of the 1900s, studies using Northwest European

historical records exposed that there was no great family transition from family types

outside of Northwest Europe to the family types in Northwest Europe (Laslett 1983;

Macfarlane 1978; Hajnal 1965; Wrigley and Schofield 1981). This new research

revealed that the family systems of northwest Europe observed in the 1700s and 1800s

had been in place for centuries, thus causing some scholars to doubt the idea that societies

progressed over time from the traditional family systems outside of northwest Europe to

the modern family systems of northwest Europe. It also cast doubt on the idea that

modern family systems were the products of modern socioeconomic systems (Boas 1940;

Eisenstadt 1964; Gusfield 1967; Portes 1976; Thornton 2005). These theories, were at

best seen as too restrictive—leading to multilinear models (Steward 1955; van Nort and

Karon 1955)—and vague (Gusfield 1967; Mills 1959; van Nort and Karon 1955), and at

worst, they were ethnocentric historical fallacies (Boas 1940). Nevertheless, many social

theories still employed today maintain a strong developmental component (Crenshaw

1995; Smits, Ultee and Lammers 2000; Inglehart and Baker 2000; York, Rosa, Dietz

2003).

Thornton (2001, 2005) argues that the development theories used by past social scholars created a set of propositions that have been a force for family change during the last two centuries. These models and their conclusions provided new rubrics for judging society, family life, and the rights of human beings. They predicted a direction for future family and social change, and described mechanisms people should employ to facilitate social, economic, and familial changes. More specifically, DI's four interrelated propositions state that: 1) a modern society that is industrialized, urbanized, highly educated, and with high levels of technology is good and to be sought after; 2) modern families, defined as having high levels of individualism, high status of women, mature marriage, marriage arranged by the couple, high youth-autonomy, small households, and controlled and low fertility are preferred family types; 3) modern society and modern family are causally connected, with a modern society being a cause and effect of a modern family system; and 4) individuals have the right to be free and equal. Thornton (2001, 2005) argues that DI was disseminated widely around the world—through a myriad of mechanisms such as scholarly publications, Christianity, political movements, US foreign policy programs, and the United Nations —and has been an exceptionally powerful force for family change during the 1800s and 1900s. He argues that it has been a particularly important force in many family changes during this period, including declines in childbearing and increases in age at marriage, the autonomy of young people, egalitarianism, divorce, independent living, sexual activity and cohabitation outside marriage, and growing emphasis on individual rights.

Although all four propositions of the theory are important, this paper argues that the third proposition, that family change and societal change are causally related is a

particularly critical element. Recall that in Thomas' Theorem (1928) when people define a situation—or in this case a model of change—as real, then they will act as though that model is real. Thus, even though, as more recent historical research has shown, the powerful models of development are not accurate, people will act as though they are. If people expect family change, from historical family types to "modern" family types (later marriage, fewer children, more egalitarian gender roles, less parental control, etc) to increase development, then they will be motivated to change their families to be more "modern." Similarly if people believe modernization makes families more developed, they will change their families to be in line with their more developed society.

Merton's (1968) self fulfilling prophecy is also applicable in this situation. For example, if a group of people are taught, and believe, that family change and development are causally related, some families may change their behavior (or the younger generation will change their behavior from the previous generation) because are anticipating the social transforms. These changes, over time, may not ever lead to substantial economic gains, but because there has been substantial family change, people may see the change to a more modern family as evidence that the developmental model was correct. This would therefore promote additional changes as more people are persuaded to believe the model is correct. In fact, some people may point to a lack of economic change and suggest that is a result of insufficient family change (i.e. traditional families hinder social and economic progress).

Due to the universal nature of the DI model, people often assume evidence from one place can be used as evidence in another location. When introducing the developmental model, those teaching it had (and still have) substantial evidence to show

that some places were, in fact, more "developed"—which was certainly a powerful indicator that the model of development was true. Using the same methods as scholars before, people provide evidence that the family changes they experienced seemingly caused their development. Thus it is reasonable to assume that at some point the self-fulfilled prophecy of one group leads to the self-fulfilling prophecy of another.

Particularly powerful for this study, an important concept in Nepali culture is fatalism. Bista (1994) has argued that development has been slow because people tend not to take the action necessary to cause change[2]. In fact, however, I argue that the reliance on fate may be a powerful influence for change once the developmental model is accepted as real. That is, if, as the developmental model indicates, all aspects of development are inevitable, people will begin to change their behavior (i.e. use contraceptives, allow their children to choose their own spouses, marry later) because that is their inevitable fate.

Before going on to discuss the evidence supporting DI, it is important to briefly integrate it into current theories of family and demographic change. Although many structural explanations appear to fall victim to the fallacy of the developmental paradigm, to suggest that only ideational factors are present would be incorrect (Caldwell 2001; van da Kaa 1996; and Lesthaeghe and Wilson 1986). For example, DI may encourage governments to invest more heavily in schools, health posts and fertility clinics. These additions to the social structure lead to physical changes that not only provide more contact with DI, but also real changes in health, time use, family activities, everyday concerns, costs and benefits of fertility, as well as evidence that the region is indeed

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2 Although Bista (1994) makes a strong argument, events beginning in 1996 and leading to the Maoist insurgency and 2008 ousting of the King indicate that Nepalis are more than capable of making dramatic social changes.

"progressing" (Caldwell 1982; Cain 1977; Cain 1983; Preston 1978; Inglehart 1997; Lesthaeghe 1980; Lesthaeghe and Wilson 1986). Certainly without some structural changes the ideas of DI would not be supported by personal experience, and might be discarded.

DI is also consistent with many cultural explanations of family change. Freedman (1979, 1987), Caldwell (1982, 2001), and van da Kaa (1996) all suggest the importance of Western ideas on global family change. However, as suggested previously, none provide a motivation for trading historically held values for those of the West. DI fills this gap by providing a model for a better future by adopting these primarily Western ideals. DI can also work within several other frameworks such as Greenhalgh's political economy approach (1990, 1995) as well as Bongaarts and Watkins' social interaction theory (1996) by providing the message (as well as the goal) in social interactions. Consequently, DI is also consistent with similar work on diffusion such as social transmission, learning, influence and socialization (Casterline 2001; Rogers 2003; Lesthaeghe and Wilson 1986). In fact, the simultaneity of the fertility decline across the globe is most easily described by a large influx of this powerful ideology across the globe at around the same time (Caldwell 2001).

DI integrates most of the ideational factors contained in the research literature concerning ideational forces on family behavior and change. DI can add enormously to endemic material aspirations by increasing the number of things to be attained, by declaring more things attainable, and by giving a western model for achieving those things. So, while material aspirations can and do exist outside of DI, they are enhanced and channeled in specific ways by the developmental model. The ideas of freedom and

equality did not originate with the developmental thinking of the 1600s and 1700s, but existed long before that and can exist independent of DI. However, the growing strength of the ideas of development from the 1700s onward provided further support for the principles of freedom and equality, and helped fuel the adoption of these principles in many places around the world. It also brings into the picture such ideational forces as the quest for the western and/or modern, the desire for a higher standard of living, an emphasis on individual agency, expressive individualism, skepticism about authority and institutions, the empowerment of women and the younger generation, and desires for small families, mature marriage, and fertility control.

Existing Evidence about the Dissemination of Developmental Models

Several studies have shown that developmental models have dominated social science thinking for most of the past quarter millennium (Harris 1968; Mandelbaum 1971; Nisbet 1969; Sanderson 1990; Thornton 2001, 2005). It is only in the last few decades that the developmental or modernization paradigm has been strongly challenged—and even discredited—and many of the conclusions of the generations of scholars shown to be myths. Thus, for hundreds of years these models were circulated without extensive challenge. It has also been documented that European travelers, colonial administrators, leaders of the feminist movement, and family planning advocates have relied heavily on developmental arguments (Thornton 2001, 2005). In addition, the role of developmental models has been important in the documents of the United Nations, numerous governments, including those of China and the United States, and international nongovernmental organizations (Latham 2000; Meyer et al. 1997; Nisbet 1980; UNDP 2001, 2002; United Nations 1948, 1962, 1979).

There are also limited data from ordinary people consistent with the idea that developmental thinking is both widespread and influential. Observers in Africa, India, China, Nepal, and New Guinea have reported examples of ordinary people using a developmental or hierarchical framework in evaluating various attributes and behavior (Ahearn 2004; Amin 1989; Blaut 1993; Caldwell et al. 1988; Dahl and Rabo 1992; Pigg 1992; Wang 1999). For example, Pigg (1992) and Ahearn (2004) use ethnographic data to show that in some rural areas of Nepal, people use developmental thinking to compare urban and rural life and to think about marriage and other aspects of family life. While these studies have documented that people associate some family types with some society types, primarily focusing on urban and rural differences within the country, they have not explored people's understanding of the causal relationships between society type and family. As well, they have typically explored a limited range of society and family types.

More recent work by Thornton and colleagues has explored this area in greater detail (Thornton 2001, 2005; Thornton, Ghimire and Mitchell 2005; de Jong, Ghimire, Thornton and Pierce 2006; Binstock and Thornton 2005; Thornton and Philipov 2009). For example, Thornton, Ghimire and Mitchell (2005) find strong evidence that a sample of people in Nepal understood the developmental paradigm well enough to provide development scores that correlated highly (both at the aggregate and individual levels) with the UN Human Development scores for a diverse list of countries. Using the same sample in Nepal, de Jong, Ghimire, Thornton and Pierce (2006), show that Nepalis value modern family characteristics such as later marriage, child choice marriages, fewer children and even an increased tolerance toward divorce. Nevertheless, this research does

not provide an examination of people's beliefs in the *causal* relationships between societal and family change.

RESEARCH AIMS

A rudimentary hypothesis based on this previous work is that people believe in models of modernization that causally connect societal attributes and family characteristics. This paper is the first to conceptualize and measure individuals' beliefs in developmental models—specifically the causal relationship between family change and development. An application of both Thomas' and Merton's theories suggest that measuring individual's beliefs about these models is requisite to better understanding peoples' later actions. Therefore, the purpose of this paper is to provide evidence concerning people's beliefs in these models of social change. My analyses concentrate on answering two questions. First, to what extent are these models of social change endorsed? Second, what are the conceptual relationships between these models of change? To address these questions, this study examines data from a 2003 study of people in the Chitwan Valley of Nepal that was specifically designed to measure their beliefs concerning models of family and societal change.

This paper provides two indicators of who endorses these developmental models. First, by estimating overall endorsement of the models using frequencies, we learn the scope of DI's penetration into the beliefs of a sample of people in Nepal. Second, because of the multidimensional nature of the data, I use latent class analysis of individual's survey responses to estimate overall belief in the modernization models, as well as how the different pieces of DI are understood and believed. As I discuss in greater detail

below, different parameterizations supply important confirmations and validations of the latent class findings.

This paper also addresses the conceptualizations of social and family change. For example, scholars have long debated the causal direction of the relationship between family and societal change (Thornton 2001, 2005). Thus, one aim of this paper is to determine if people distinguish between models suggesting development causes family change, models that family change causes societal change, and models where the two are just associated. Similarly, there are also debates as to what types of social change are aspects of development. Judging by the UN Human Development score components, two of the most important are wealth and education (UNDP 2003). Therefore another aim is to examine the perceived relationships between different types of social change. Finally, another issue is what family behaviors are related to development. For example, the literature suggests that fertility, marriage, and gender equality are all related to development (UN 1962, 1979; UNDP 2003; Thornton 2005). My own experience in Nepal, as well as my collaboration with Nepal experts, suggests that these behaviors are portrayed in media and schools as a package of behaviors that both cause and are affected by development. Consequently, another element of this paper speaks to how respondents distinguish between different family behaviors within the development models. As a final point, it is important to note that although it is my purpose to examine the extent to which others endorse DI, this should not be taken as evidence that I endorse the propositions of DI myself. Rather, I recognize the motivational power behind these models, and hope to eventually evaluate the possible influence they may have on human behavior.

DATA and METHODS

Setting

There are several considerations that make Nepal an especially appropriate location for the study of knowledge and beliefs concerning developmental models. Nepal was kept in isolation from the rest of the world until the 1950s (Adhikari 1998). The historical isolation, extreme exploitation by the ruling elite, the Hinduization of the non-Hindu population, and the rugged Himalayan topography with few roads and communication resources have had an enduring influence on many aspects of Nepali life. Nepal currently ranks as one of the poorest countries in the world. Over 85 percent of the population still lives in rural areas with no all-weather roads, poor public education, few health services and limited communication technology. More than half of the population is still illiterate. In addition, several attributes of the family that are labeled by DI as traditional have historically characterized Nepal and are still common. These include extended households, early age at marriage, arranged marriage, parental control over children, and low status of women.

The data for this research were collected in Chitwan Valley, which lies in the south central part of Nepal. In 1955, the Nepalese government opened this valley for settlement; prior to this it was covered with dense tropical forest. Chitwan soon became a social melting pot, receiving migrants from all over the country. The valley has become connected to the rest of the country by all-weather roads, making it a business hub for the country. Furthermore, there has been a massive expansion of schools, health services, markets, bus services, cooperatives, and employment centers in Chitwan (Axinn & Yabiku, 2001). Previous work in Chitwan shows that there has been a sharp increase in

school enrollment, visits to health clinics, family planning, employment outside of the home, development programs, and exposure to different sources of mass media and new ideas in recent birth cohorts (Axinn & Barber, 2001; Axinn & Yabiku, 2001; Barber et al. 2001; Beutel and Axinn 2002; Ghimire et al., 2006). Despite this general increase, however, much of this research has also demonstrated that access to these institutions, programs, and information is still highly heterogeneous due to both spatial and cultural barriers. Thus, this setting is particularly helpful by affording access to a broad range of people whose different cultural settings and differential contact with the aforementioned institutions, programs, and information can produce a possibly wide range of beliefs in developmental models.

Sample Design

The survey was conducted in 2003, with 537 people aged 17 and above living in the Western Chitwan Valley. These people were chosen using the following strategy. First, based on the distance from the primary urban center within the Chitwan Valley, the study area was divided into five distinct strata. Second, a sample of 2-4 neighborhoods, consisting of 4-25 households from each stratum, was selected. Finally, once a neighborhood was selected, all the individuals age 17 and above residing in those neighborhoods were interviewed. This sampling procedure resulted in slightly more than 100 individuals being selected from each of the five strata. These people were interviewed in face-to-face interviews in the Nepali language using paper and pencil format. Three respondents who could not be interviewed in Nepali were excluded from this analysis. The field period lasted for six weeks and resulted in a 97 percent response rate.

Measurement

Although individuals' ideas, values and attitudes have long been hypothesized to influence their preferences and behaviors (Caldwell 1982; Inglehart 1997; Lesthaeghe 1980), studies of ideational influences on individual behavior still struggle with important theoretical and methodological challenges. On the theoretical side, conceptualizing complex concepts, such as modernity, individualism, and nucleation has been a major challenge. Often, theories of ideational influence take complex constructs from western thought and apply them to nonwestern cultural settings that may or may not have similar cultural constructs. And even when the constructs are similar across societies, there remains extensive variation in individuals' understanding.

To address this complexity researchers used the insights gained from 12 in-depth interviews and 10 focus groups (conducted by trained Nepali interviews), and combined them with their conceptual understanding of developmental models to construct individual questionnaire items. A key strategy guiding the construction of questions was to break the complex propositions of DI into their component parts using concepts and language that were understandable by ordinary Nepalis. Thus, most questions were not about abstract concepts, but instead focused on family matters that were very familiar to Nepalis such as marriage, living arrangements, parent-child relations, childbearing, and contraception. Similarly, parallel questions focused on socioeconomic structures used familiar concepts such as education and wealth.

Models of Modernization

In this paper I focus on 9 sections of questions investigating knowledge and belief in developmental models and their application in concrete situations. Together these

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sections asked 60 questions to systematically document peoples' beliefs in the correlation and causal relationship between family change and social change. Knowing that respondents may not all view development the same, researchers also took care to ask about three different aspects of modernization (education, getting richer, and development). As well, researchers asked about three different models of change or modernization (family type is *correlated* with society type, social change *causes* family change and family change *causes* societal changes). Of the 60 questions, four family domains (marriage timing, gender equality, spouse choice and contraceptive use) were asked in all nine sections. In order to streamline the paper, I focus on these 4 family domains which cover a relatively broad range of topics including fertility, autonomy, equality, marriage and intergenerational relationships, thus supplying an analytic subset of (3x3x4) 36 questions.[3] Appendix A provides the exact wording, distributions and coding of each of these measures.

More specifically, three of the sections in the survey presented one of four family characteristics (e.g. marrying at older ages, spouse choice, etc) and then asked if this characteristic is more common in different places or types of societies. There were three location comparisons possible in the three sections: 1) rich versus poor places; 2) developed versus traditional places; and 3) educated versus uneducated places. The respondents could specify that a characteristic was more common in one location (e.g. a rich place) or in the other location (e.g. a poor place). Respondents could also volunteer that the family trait was "equally common in both" or that they "don't know," but only after a follow-up probe asking the respondent to give their best guess or estimate.

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3 A previous version of this paper, Mitchell (2008), discusses the 13 family domains by using all 60 questions. The results from that paper suggest that the 13 common family domains provide substantively similar results to those presented here.

Together, researchers intended these three sections to measure if survey respondents expected specific family types to be associated with different places, that is, did they see an association between family type and society type. Thus, this could be seen as a test of developmental thinking—without any specific causal model for family and societal changes.

Similarly, three other sections presented the same family characteristics as above and then asked if making the country more developed, richer, or more educated would make people marry earlier or later, have more or fewer children, etc. Also responses of "no change" or "don't know" were accepted if the respondents voiced them after a follow up probe asking them to give their best guess or estimate. These three sections specifically measure if the survey respondents understand or believe that societal change (becoming richer, more developed or more educated) would cause family changes. This measure helps examine if respondents believe that family change is a result of development.

Finally, the last three sections reverse the causal relationship between family change and modernization. These sections ask if changing various family characteristics (people marrying later, having larger families, etc) would make the Nepal richer, a better place[4], or more educated. As with the previous sets of sections, people were allowed to provide the options of "no change" and "don't know" as a response after probing. These three sections of questions provide an estimate of the individual's belief that specific family change leads to a more modern society.

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4 Based on the in-depth interviews and focus groups the idea of a better place and developed place are very similar in Nepali.

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To analyze the questions, they were coded so that 1 meant the answer was in line with developmental thinking and everything else—including answers of "don't know," "the same," "no change," and missing—was coded as 0 (see Appendix A for all the question-specific coding). It is important to note that there was typically only one to three percent of the sample that provided responses other than the two provided options. Also, only 1 person refused to provide an answer or gave uncodeable response and this only occurred on one of the 36 questions.

RESULTS

--Table 2.1 about here--

Table 2.1 reports the percent agreeing with the developmental idealism model. At the bottom of each column is the average percent agreeing with developmental idealism for the entire section of questions, and below that is the average for the three sections for in each causal direction. If we assume that respondents randomly guessed between the two main answers (e.g. More Common/Less Common, Richer/Poorer, etc), then percentages would center around 50%. Similarly, if everyone was in-line with DI, and there was no measurement error, the percentages would be close to 100%, and if peoples' beliefs were contrary to DI, the percentages would be close to 0%.

Family & Society Characteristic Association

This set of 12 questions contains three subsets, all of which are intended to reflect the respondent's belief in the joint distribution of specific family characteristics and society characteristics. Respondents were asked to choose if certain family characteristics (see Appendix A) were more likely to be found in: a Rich or Poor country, a Traditional or Developed country, and an Uneducated or Educated country. Because DI states that

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people marrying at older ages, women getting treated with more respect, young people choosing their own spouse, and married couples using contraception would be more common in wealthier, more educated and more developed countries, higher percentages indicates greater overall belief in DI.

Although there is some variation, most people provide developmental idealistic responses that modern families and modern societies are correlated. The set of questions asking about wealth and family types shows an average of 75% agreement with the developmental model. A higher average agreement of 88% can be found in the four questions correlating education and family domains. Finally, the section asking about the correlation of development and family domain also has high support with 80%. All of the questions are significantly above the random guessing level of 50%, but none of them are within statistical significance of 100%.

The overall percentage for the entire set of questions is relatively high, 81%, which is just more than midway between what we would expect if everyone believed in the developmental model (and had no measurement error) and if everyone was randomly selecting answers. Having all 12 items significantly higher than 50% suggests that, on average people tend to believe that a modern society is highly correlated with several family characteristics.

Society Change Causes Family Change

The next set of questions measures the belief that a society's development causes the societies families to modernize. That is, as a society becomes richer, or more educated, or more developed, people would be expected to marry at older ages, have smaller families, give women more respect, and choose their own spouse.

Overall there is confirmation that people believe that development causes family change. With a high average agreement of 82% for all 12 questions, most respondents provide the modern answer. In particular, respondents report a high agreement with the idea that modernization or development leads to women getting treated with more respect.

Family Change Causes Society Change

The third set of 12 questions reverses the causal direction of the set of questions just discussed by asking if families changed in specific ways would that make Nepal richer or poorer, a better or worse place, and more or less educated. Thus, a higher number means more agreement with the idea that people marrying at older ages, women getting treated with more respect, people choosing their own spouse, and married couples using contraception will make Nepal more modern.

Overall the responses to these questions support the conclusion that people believe that family change can cause societal-level change in wealth, education and development. Based on 12 questions, on average, respondents were 84% in agreement that family change is expected to make a change in Nepal's development. All three columns had similar overall agreement levels, and each of the family types also appeared to have similar agreement levels, with the exception of spouse choice which was slightly lower than the other family types. Thus although people generally believe that family change causes societal change, there is less agreement that letting young people choose their own spouse will cause societies to modernize.

Relating these results back to the theory motivating this paper, if people really do expect changing their families will make their country more developed, and they believe

that development is good, they would be expected to act on that belief. Note that this is true even if the model or causal relationship they believe to be true is false. Similarly, if people believe that development produces broad changes in family life, they may be more lenient to changes (or even encourage them). If those changes would not have occurred otherwise, then they have also just fulfilled their own prophecy.

Response Groups

To assimilate and confirm these results, I conduct a latent class analysis (LCA) using the 36 binary indicators just discussed. LCA aids in the characterization of a multidimensional set of observed variables (McCutcheon 1987, 2002). That is, in lieu of assuming the 36 questions provide multiple dimensions of intensity of belief (i.e. believing that education causes family change, getting married later causes development, etc), we can use the questions to find typologies of responses, or response profiles. For example, two very obvious groups would be those who provide answers suggesting a belief in Developmental Idealism and those whose answers imply disbelief in DI. Several other groups may exist, such as: those who believe in one causal direction over another, believing some family types may be affected while other family characteristics remain unchanged, etc. By examining the classes of responses we can better understand the extent of the belief in the various aspects of DI. Thus, by combining multiple indicators in the LCA we can gain a better comprehension of how consistent respondents are in the beliefs of models of modernization.

Number of Response Groups

--Table 2.2 about here--

Maximum-likelihood estimates for the parameters for each latent class model are estimated using iterative procedures, in this case the EM algorithm (Dayton 1998; Muthén and Muthén 2006). To determine the number of classes (or groups) of different response patterns present in the data, Table 2.2 provides several indicators of model fit for models with 1 to 5 latent classes. Notice that for each additional class, 37 parameters are estimated (36 item parameters and one class parameter). Despite being maximum-likelihood estimates, most research suggests that the often used model likelihood (i.e. standard likelihood ratio test of fit) is not a good indicator of overall model fit[5] (Nylund, Asparouhov, Muthén 2007). The other measures of fit are the AIC, BIC and the Lo-Mendell-Rubin (LMR). The LMR is a specialized likelihood ratio test of model fit that compares the estimated model (# of classes k) with a model of k-1 class. The reported p-value represents a test of the hypothesis that a model with one less class fits the data as well as the current model (Lo, Mendell and Rubin 2001). Considering the large number of indicators and the possible complexity and inequality of the class sizes, determining the best fitting model requires information from all the measures of fit (Dayton 1998; Lo, Mendell and Rubin 2001; Nylund, Asparouhov, Muthén 2007). The final measure in Table 2.2, entropy, is not a measure of fit but rather a summary measure of how well individuals fit into the classes. Values range from 0 to 1, with 1 indicating respondents are placed perfectly in their class.

We begin examining Table 2.2 by looking at the results of the 2 class LCA. Both the AIC and BIC show substantial improvement over the single class model and the LMR shows that the single class fits significantly worse. This is not surprising since a single

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5 Nevertheless, a change in the likelihood of over 52.192 would indicate a significant improvement of the fit (at the .05 level of significance) for 37 parameters. Based on that criterion none of these models would be a good fit, in fact not even 7 classes would properly fit the data.

class model assumes no correlation among the variables. The 3 class model shows improvement in fit over the 2 class model, and although the LMR is close to non-significance, it still implies the 3 class model is the better model. The four (and five) class models show little improvement in the AIC over the 3 class model and actually show a worsening of fit for the BIC. Also, the four class model LMR suggests that the 3 class model is within statistical significance of having similar fit. Thus, based on all three major measures of fit, it appears the 3 class model is the best fitting overall model. As well, the four class model provides little new substantive incites over the 3 class model. Finally, the entropy value of 0.89 for the 3 class model is high and implies very stable classes. That is, the response patterns in the data are statistically distinct.

--Table 2.3 and Figure 1 about here--

As mentioned earlier, LCA's have two different model parameters: item parameters and class probability parameters (Dayton 1998; McCutcheon 1987, 2002). Item parameters are conditional probabilities, or in this case, the probability that a person in the class provides the answer in line with DI. Because the indicators are binary, these parameters also correspond to the proportion of the class that provided the DI answer. The class probability parameters report the sample proportion, or size, of each class. Table 2.3 reports the class and item parameters for the three class model and Figure 1 displays the item parameters graphically.

Table 2.3 and Figure 1 are linked by the item codes, which follow a simple 3 letter scheme. The first letter indicates the type of model used in the item: A-assocation, F-family change causes development, and D-development causes the family to change. The second letter represents the aspect of modernization used in the question: R-rich/poor

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countries, becoming richer or wealthier, E-educated/uneducated, becoming more

educated, and D-developed/traditional, developing. The third letter then represents the

type of family behavior the item uses: M-older age of marriage, W-women getting more

respect, S-children choosing their own spouse, and C-married couples using

contraception. The items are grouped first by model type, then development component

and then ordered by family attribute. Also, there is a horizontal line at probability=0.5 to

indicate the expected response pattern if the answers were random.

The class parameters at the top of Table 2.3 show that three strong, unequally

sized response groups (or classes) emerge from these data. The largest group, labeled

class 1, consists of just over half of the sample. Class 2 consists of over 1/3 of the sample

and class 3 represents just over 9% of the sample[6]. Based on a respondent's (typically)

unique[7] response pattern to the 36 items, three individual posterior probabilities are

estimated for each of the three groups (McCutcheon 1987, 2002; Dayton 1998). The

individual is assigned to the class with the highest posterior probability. An indication of

the strength of these classes is that the average individual class probabilities were all

between 0.94-0.96. For example, for the half of the sample assigned to group one, the

average probability of the respondent being in group 1 is 0.96. Thus, generally, the

probability of being in a class other than the assigned class was extremely low for the

entire sample. In fact, about 5% of respondents have *less than* a 70% chance of being in

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6 The slight differences between the class proportions reported in Table 3 and Figure 1 are due to Figure 1's reporting proportions being based on the *estimated* model, while Table 3's class proportions are the actual proportions after sorting individuals into the different classes based on their posterior probabilities. The closeness of the two sets of proportions reaffirms the strength of the classes.
7 Of the over 68 billion (2^{36}) possible response profiles the respondents provided 424 distinct response profiles. This implies that people generally had unique response profiles. Based on these profiles, 13 people, 2.4% of the sample, provided responses that may indicate they were only providing responses that indicated "more" (i.e. more common, more educated, richer, etc). Determining whether this is an indication of acquiescence or if it is their true belief is impossible in this study. The response profiles also show that no respondent just provided the first response throughout all 36 questions.

their assigned class and over half of them have essentially no chance being assigned to a different class (i.e. posterior probability≈1).

Response Group Profiles

Turning now to the within class item probabilities, Figure 1 indicates that people in class 1 consistently provide answers in line with developmental idealism. The item probabilities in class 1 range from 0.77-1.00. Considering the items were not always presented so that the DI response was first, and one question was worded negatively, this implies an incredible amount of support for DI from this group. In fact, the average item probability for this group is an amazingly high 0.93. That is, for the approximately 57% of the sample that is in class 1, over 93% of the class gave the DI response on any given question. Because their positive responses indicate agreement with the statements, one might consider people in class 1 to be the *strong believers* in developmental idealism. Based on Thomas (1928) and Merton (1968), we might expect this group to be the most likely to act on these strongly held beliefs.

The respondents in the second group, for the most part, provide item probabilities that follow a strikingly similar pattern to the respondents in group 1, but tend to be about 20 percentage points lower in their probabilities, ranging from 0.53 to 0.87 with an average agreement with DI of about 0.74. These results imply that the 34% of the sample people found in class 2 still typically support DI, but they are less supportive of DI than class 1. It may be that some relationships between family change and development are more confusing or more nuanced in ways not identified by this model or by the 36 questions. Thus, a label for this class may be moderate supporters of DI. Here our theory is less clear as to the consequences. For some people the beliefs may be strong enough to

act for some behaviors, but not others. Or maybe this group recognizes the ambiguity in these models and therefore has a difficult time completely committing to DI.

The final group of respondents, class 3, characterizes only 9% of the sample, but provides a group that, to a limited degree, appears to disagree with DI. Class 3 members do not follow a similar response pattern to people in groups 1 and 2. In fact, the great variation in the responses makes it difficult to describe. Nevertheless, by focusing on larger sections of items, some patterns emerge. First, the association questions (the first 12 items) tend to have item probabilities around 0.56. This indicates very low support, or possibly even random answers to these questions. Similarly, the next 12 items measure the model that family change causes development, and show an average item probability of 0.47. However, the last set of 12 items, which measure the belief that development brings family change, indicate a moderate disbelief in DI with an average probability of 0.31. This suggests that although people in class 3 may be torn or confused on the items measuring the association and family change causing development models, they isagree that modernization brings family change[8]. Thus, these 50 people represent a small minority of respondents who not only appear not to support DI, but in the case of the model of development bringing family change, they actually disagree with DI.

As a general comment on all three groups, the 12 questions about development causing family change (the last 12 items in Figure 1) show less item variation than the previous 24 questions. This is remarkable because 4 of the questions were asked early in the survey, 4 in the middle and 4 near the end. Due in part to the lack of variation within class, the three class distinction is strongest in this group. The substantive interpretation

8 It could also be argued that class 3 appears equally unsupportive of the idea that family change will increase education, but for the sake of generalization, I leave that discussion for another time.

of this pattern may be that the message as to how development changes family is more concrete and consistent, and thus believing, or not believing, in it is also more consistent.

Another interesting note for groups one and two is that although there is high support for DI, both groups report lower agreement with questions concerning spouse choice. Figure 1 displays this well. By following the dashed and solid lines (groups 1 and 2 respectively), for each set of four items, the first two and fourth items are high, and the third item is often significantly lower. In fact, the average item probability for the spouse choice questions for groups 1 and 2 (respectively) are 0.90 and 0.66, while the average for the other 3 family types are 0.95 and 0.77. This pattern is particularly strong for the family causing development questions, which suggests respondents are less certain that letting young people choose their own spouse will lead to development, wealth and education. This may be justified by the fact that parents often arrange the marriage in hopes of arranging a happier and better life for the child (and family). Thus, for some, an arranged marriage is intended to produce a more "developed" family life in the future.

As well, the relationships between development and increasing age at marriage, using contraception and giving women more respect have all been well discussed in Nepal for a significant period, and only recently have ordinary people began to consider modernization's relationship with spouse choice (Mitchell 2009). Despite the dramatic changes in spouse choice in Nepal—20 years ago the vast majority of marriages were arranged by parents and now only about 1/3 are completely arranged by parents—most marriages are still highly controlled by the parents, and few young people completely choose their spouse for themselves (Ghimire et al. 2006; Mitchell 2009). Interestingly, within Nepal the people often considered the most "modern" are the high caste Hindus,

who also have the highest rates of arranged marriages (Ghimire et al 2006; Mitchell 2009). Thus, for some people, seeing the most "modern" group having more arranged marriages may imply that developed places have arranged marriages. Another implication of this response pattern is that is shows that respondents are providing thoughtful and consistent answers, and not simply acquiescing.

Confirmatory Latent Class Analysis

An alternative parameterization of the latent class analysis conducted above allows for a more structured and confirmatory analysis of the data. By focusing on the three models of development I use the 36 questions to place respondents into a matrix of groups based on three questions: 1) do they believe family change and development are associated 2) do they believe family change causes development and 3) do they believe development causes family change. That is, I use the individual's responses to the 12 questions asking about if family change will lead to greater development, wealth and education to signal if they believe that model (and so on for the other two sets of 12 survey items). Following this strategy for each of the three questions then I have a total of 8 (2^3) possible profiles. This allows to me to examine more completely respondents with alternative theories of development compared to the DI model.

The results of this analysis (not shown)[9] reassert the finding above that the vast majority of people in this sample report believing that development and family change are associated and that they are both causes and effects of each other. Of the 8 groups over 85% of the respondents are in the response profile reporting yes to all three modernization models (i.e. association, family causing development and development

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9 Although the entropy for this 8 class model is very high (0.985) the larger number of classes and imposed structure of the responses provides a worse fit compared the 3 class models above.

causing family). Although, as evidenced from the previous analyses, these models of modernization are not without some individual variation in terms of what family domains are and are not related to development, taken as a whole most people agree with all three models.

Two other categories of responses also have sizeable numbers of individuals. Approximately 5% of the sample reported believing that development and family change were associated and that family change caused development but that development did *not* cause family change. This group appears to be a trimmed version of the class 3 discussed in the previous LCA. Again, this is a group that appears to support one causal pathway, but disputes the other. Similarly, the next largest group (about 4%) reports believing the association between development and family change, but only agrees that causation runs from development to family change. The remaining 6% are fairly evenly divided between the remaining 5 response groups, with only 1.6% reporting not believing in any of the three models.

Overall, this confirmatory LCA suggests that the third latent class described in the first analysis may be a mixture of a number of alternative profiles (compared to those who appear to support all three models of development and family life). That is, it appears that between 10-15% of the sample believe that at least one of the three models is not true. Combining across groups we can see that about 95.1% of the sample report the development and family change are associated. Around 93.3% believe that family change leads to development and 90.6% report believing that development leads to family change.

Conceptual Relationships

In addition to using the 36 items to sort respondents into different groups based on their belief in DI, another purpose of this paper uses the items to provide insight into the relationships between the measurement concepts. Unlike the previous analyses that utilized the multidimential aspects of the data to determine how strongly people believed in DI, this analysis emphasizes the components of the different models. That is, do respondents' beliefs about education's role in family change correlate with their beliefs about wealth's role in family change, etc. Returning to the motivating theory, that people's perceptions of causal patterns may influence behavior, this analysis focuses on if people's perceptions are similar for different models of modernization, social attributes and family characteristics. Thus it is an attempt to learn if are all societal changes the same, are all family attributes equal and all models of change understood in the same way.

This examination of the conceptual properties of the models is possible only because the survey purposefully collected data to cover four different family domains, and three modernization types for each of the three models of change (association and both causal directions). The relationships *within* each of the measurement concepts (family characteristic, model and type of development), correspond to respondents conceptualizations of development and its relationship to family change. For example, do education, development and wealth provide similar conceptualizations of societal change when family characteristic and model of change are taken into account? Similarly, do respondents distinguish between the three models of change, or are the different family items treated similarly.

To examine the relationships between the conceptual measures, I rely on classic measurement theory, which assumes that an indicator's variance is a combination of systematic variance and random variance—which is often relabeled as measurement error (Groves 1989; Alwin 2007). Systematic variance, on the other hand, is the variance of interest, and is assumed to be a result of variance in the beliefs of the sample. Recall that three topics were addressed in each item: 1) the model of change, 2) the type of modernization and 3) the family characteristic of interest. Thus, the systematic variance in each item could be divided into those three components. So for each item I estimate a model that portions the variance into its random measurement error, and its three types of systematic variance.

Although some of the answers to the questions concerning conceptualizations may appear to be discernable from the previous analyses, in fact, they are not apparent because of the unique design of the data. Due to the measurement of properties of each item, not taking into account each source of variation may provide evidence of false relationships—much like not controlling for important covariates in a regression may provide evidence of a relationship that is, in reality, spurious. Namely, without simultaneously modeling all three sources of systematic measurement variance, the relationship within the different sources of variance may be incorrect. For example, if we only used the different family characteristics to partition the variance of the data, the correlations between the four family characteristics may be due, in part, to correlations within the different models of change or types of modernization.

--Figure 2--

By dividing the item variance into multiple components, this model approximates the Multitrait-multimethod (MTMM) measurement design (Campbell and Fiske 1959). Typically, this design explicitly attempts to measure three sources of variance in an indicator: the variance of interest (the concept), random error variance, and systematic variance not from the concept of interest (nonrandom error). For many studies this systematic error not due to the topic of interest is often called a method effect. Most MTMM studies then attempt to estimate traits (the concept of interest) removing the effects of the method (e.g. asking on a 5-point scale, 11 point scale, etc) and random error (Alwin 2007). The MTMM design has been very fruitful in teasing out method effects in large scale surveys, as well as helping to determine the reliability and validity of indicators (Andrews 1984; Biemer et al 2004; Saris and Andrews 2004; Alwin 2007)[10].

This study stands in contrast to the vast majority of MTMM designs that typically have one set of traits and a set of methods, because this study has 3 sets of traits and, hence, the standard MTMM method does not apply, and must be modified to fit these unique data. Nevertheless, using the same definitions as in the MTMM design I allow for all four types of variance for each item. In addition to the random error (e_{ijk}), each observed measure (Y_{ijk}) in this study is a combination of three sources of systematic variation: variation due to the ith developmental model (M_i), variation due to the jth modernization type (D_j), and variation due to the kth family characteristic (F_k). Which can be formulated into the following equation:

$$y_{ijk} = b_{ijk}M_i + g_{ijk}D_j + l_{ijk}F_k + e_{ijk}, \text{ for all } i,j,k, \qquad \text{(Eq. 1)}$$

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10 Although not of substantive interest here, the validities and reliabilities based on the 3 trait MTMM design are reported in Mitchell (2008). In general, the results suggest that most of the items appear to be highly reliably and valid (based on the MTMM definitions of reliability and validity).

Where for all i,j,k, cov(M_i,D_j)=0, cov(M_i,F_k)=0, cov(D_j,F_k)=0 cov(M_i,e_{ijk})=0,

cov(D_j,e_{ijk})=0, cov(F_k,e_{ijk})=0, and cov(T_{ijk},e_{ijk})=0[11].

Coordinating Equation 1 and Figure 2 requires some additional clarification. First, the 36 original variables are represented by the 36 rectangles in the middle of Figure 2. Second, the 3 types of models of change (association, family change causing development and development causing family change) are the row of latent variables (ellipses) just above the indicators. Therefore, the effects (*b*) of model on the observed indicators correspond to the solid lines pointing to the top of the indicators. Second, the types of modernization (development, wealth and education) are located in the top row of ellipses. Their effects (*g*) are indicated by the dashed lines pointing to the top of the 36 observed variables. Third, the four family characteristics (marriage timing, respect for women, spouse choice and contraceptive use) are represented by the four ellipses under the indicators and their effects (*l*) are solid lines pointing to the bottom of the observed variables. Due to lack of space in Figure 2, the random error components for each item are not displayed; nevertheless, the random errors are estimated, and are assumed to be uncorrelated with everything else.

To the author's knowledge, this is the first time the MTMM model has been modified to study three traits and no method. Some similar work, called multitrait-multimethod-multitime (MTMMMT) has been used to look at MTMM over time, but again, the time was treated as a method effect and not as substantively interesting (Saris and Andrews 2004). A clear reason for the lack of research on this is because the data design requirements are very stringent (Alwin 2007). This, of course, requires asking several very similar questions, which can be burdensome to respondents.

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11 Modification indices suggest these assumptions are correct.

Also, due to the binary response options in the survey, the observed variables violate the assumption of the classic measurement model because they are not continuous and normally distributed (Bollen 1989). To compensate for the nonnormality of the data, I use the weighted least squares means and variance adjusted (WLSMV) estimator in Mplus 5.0 (Muthén 1984; Muthén, du Toit and Spisic 1997; Muthén and Muthén 2006). WLSMV uses the diagonal of the weight matrix in the estimation compared to the more standard weighted least squares estimator (WLS) that uses the full weight matrix. Muthén, du Toit and Spisic (1997) found the WLSMV estimator to be superior to the WLS estimator for categorical variables in measurement models.

--Table 2.4--

Table 2.4 reports the results of the modified MTMM. For this paper, the focus of the modified MTMM model is that it allows the domains with each set to correlate with each other. So, the different latent measure of type of development can correlate with each other, as can the different measures of models of change, but they cannot correlate across domains (i.e. education cannot correlate with FCD). Table 2.4 provides three correlation matrices on the left side of the table.

The first matrix on the left, with correlation estimates between the different models of change, suggests the people are distinguishing between models of association, causation between family change and societal change. All three correlations are low and near 0 (from 0.265 to -.037) implying that when all other factors are considered, these three models about the relationship between family and social change are not predictive of each other. This may seem surprising considering the consistently high values of agreement found in Tables 2.1 and 2.3. However, as will be seen below, these

correlations are due to the type of development and the family characteristic used. In fact, the test to the far right of the first matrix suggests that the hypothesis that these correlations are all 0 cannot be rejected at the standard 0.05 level with these data (chi-square 6, 3 df). Because the correlations are so low, the model fails to converge after multiple thousands of iterations when attempting to test the hypothesis that the 3 models are perfectly correlated. Most likely this is because the data do not support perfect correlation between the three models of change.

The second correlation matrix suggests that the perceived types of development may be highly correlated. Although the estimates of the correlations are only moderate in size (0.51, 0.53 and 0.61), the hypothesis that the correlates could be set to 1 can only be rejected at the .015 level of significance. Thus, it is reasonable to suggest that the correlations could be much higher. This might suggest that the latent measures are almost equivalent, although a statistical test shows that they are not quite perfectly correlated with each other. In some ways this is not surprising since there is evidence that there exists a worldwide view that development consists, in part, of wealth and education (UNDP 2003). In fact, previous research shows that, on average, these same respondents provide country level measures of development that match those of the UN (Thornton, Ghimire and Mitchell 2005). Accordingly, these results suggest that these measures have a high level of convergent validity— that the measures are related to measures they should be theoretically associated with or measure very similar concepts (Bollen 1989). As well, the second test shows a model assuming no association is highly unlikely.

The third and final matrix of correlations shows that the latent measures of the four family characteristics are highly correlated. Ranging from 0.69 to 0.91, these high

correlations suggest that knowing people's views on one of the four characteristics provides a strong prediction of their views on the other three. However, it is important to note that statistical tests reject both the model of perfect association and the model of no association. Also, from the earlier LCA results, it is not surprising to note that correlations between the spouse choice latent measure and the other three family characteristics are the lowest of the six correlations. Again, it appears as though spouse choice, at least for some people, does not match as well with other family characteristics in terms of its fit in DI, implying that some Nepalis may view spouse choice as outside the standard developmental models of family change.

Relating this back to the motivating question of how respondents conceptualize developmental models, it may help to recall that for generations, scholars have debated the direction of causation between family change and development as well as what family behaviors were important and what societal changes constituted development. This MTMM analysis offers three important substantive contributions. First, ordinary people in Nepal seem to distinguish between models where societal change causes family change and models where the causal direction is reversed, with family change causing social change. Second, the family behaviors of older age of marriage, lower fertility and gender equality (and to a lesser extent spouse choice) are taught as a package, with development believed to be positively related to all of them. Third, evidence suggests that respondents view increasing wealth and education as very similar to development, or maybe even as specific components of development.

CONCLUSIONS

This paper combines two powerful and foundational theories of society: modernization theory and Thomas' Theorem on the consequences of perceptions. The first is a theory of how societies change, and in particular how family life is both a cause and an effect of that social change. Substantial evidence shows that these developmental models have been conveyed widely around the world, despite research over the past 50 years showing their inaccuracies (Boas 1940; Eisenstadt 1964; Gusfield 1967; Portes 1976; Thornton 2005; Steward 1955; van Nort and Karon 1955; Mills 1959; Crenshaw 1995; Smits, Ultee and Lammers 2000; Inglehart and Baker 2000; York, Rosa, Dietz 2003; Nisbet 1980; Latham 2000; Meyer et al. 1997; United Nations 1948, 1962, 1979; UNDP 2001, 2002). However, as of yet, few people have explored how ordinary individuals have understood and accepted these models (Pigg 1992; Ahearn 2004), and only until recently has any of this work been using surveys (Binstock and Thornton 2007; Yount and Rashad 2008).

The second theory comes from W. I. Thomas' theorem that if a situation is perceived as real it is real in its effects on that person (Thomas and Thomas 1928; Merton 1968). The implication of this theorem is that if people believe these developmental models to be real and correct, even if they have been shown elsewhere to be otherwise, they will have real consequences on their outcomes. Hence, people who believe that making families more modern leads to a more developed (and thus more educated and wealthier) nation may marry later, have fewer children, use contraceptives, or in other words try to become a modern family, with the expectation of societal modernization. In the least they may tolerate changes that they would not have tolerated if they did not believe it would make them more developed. Similarly, if people believe development

causes family change they may expect that their families will change and thus through socialization may pass on those expectations, which in turn promotes the expected family change thus producing a self-filling prophecy (Merton 1968). In sum, understanding how much people believe in these developmental models may be highly predictive of later family attitudes and behavior.

Using survey data from Nepal, I find high levels of support for the hypothesis that people know and believe in these models. First, respondents associate specific family characteristics with certain society characteristics. For example, families that tend to be modern (i.e. later marriage, smaller families, own spouse selection, high contraceptive use, etc) are expected to be found in countries and societies that are rich, developed and educated; that is, respondents think developmentally (Thornton, Ghimire, Mitchell 2005). Second, most respondents endorse the idea that a modern society causes a modern family, and that a modern family causes a modern society. This supports the idea that people are aware of developmental models or paradigms and that they believe these models are descriptions of how the world really works. The implication being that people with higher beliefs in the models may be more likely to have more tolerant attitudes toward changes that they expect will make them more modern, and they may also be more likely to participate in those behaviors or encourage their families to participate. These results are significant because if people believe that either the modern family and modern society are good and obtainable—Thornton's first two propositions (Thornton 2001, 2005)—the third proposition provides a model for how to change society as well as how one's family will change as society changes. For example, it means that in order to have a wealthier and more educated society individuals may begin having smaller families, waiting longer

to marry, etc. This then provides powerful motivations to break from one's culture and adopt new lifestyles.

However, I also find that a small subset of the sample (between 10-15%), appear not to believe in these developmental models. In particular, one group appears to reject the idea that education, wealth or development leads to changes in marriage, gender equality and contraceptive use, while another, smaller group, appears to reject the reverse causal direction. These people who appear to be rejecting some aspects of the Developmental Idealism (DI) proposition that the modern family system and modern society are both causes and effects of each other provide an interesting comparison group to the rest of the sample. Questions of how these groups are different from the main sample, if their answers come from a rejection of DI or if they simply have not been exposed to it, and finally if their behaviors are different because of this alternative perception of the world, are all questions that should be addressed.

The results also suggest that respondents distinguish between the different causal directions of the developmental models. Had respondents only been using their knowledge of which societies contained certain family behavior, we might have expected them to supply answers for the two causal directions that were very similar to the association questions. Considering the debate among scholars, policy makers and leading elites as to which causal model is correct, it is interesting to note that there may be some variance in ordinary peoples' beliefs as to whether family change causes development, or development causes family change.

An additional result of this study is that delaying marriage, having fewer children and greater equality between men and women, all appear to have extremely similar,

positive relationships with conceptualizations of development. This implies that these family outcomes have been well discussed, and are most likely taught as a package of family outcomes changed by development, or family changes that must be made to become developed. To a lesser extent, spouse choice is similar to the aforementioned package of family behaviors. However, spouse choice in Nepal is still undergoing fairly recent and rapid change (Ghimire et al 2006; Mitchell 2009). Thus, although the evidence is clear that perceived greater control over your own spouse selection is believed to be positively related to development, it has not been addressed for as long, or as intensely, as fertility, gender equality and marriage timing.

A final finding is that respondents see development, getting richer, and getting more educated as the very similar. Throughout the questionnaire respondents were asked to distinguish between educational changes, wealth changes and general development, and their responses indicate that most respondents distinguish very little between the three. In general, I found that when similar family characteristics and models of change are used, education, development and wealth all appear to work in the same way. This may suggest that instead of separate concepts, all three are part of an underlying latent construct. In fact, the qualitative work conducted prior to the survey found that respondents tend to use a broad definition of development that included economic, education and even general well-being components to answer questions about societal change. This should not be surprising since even the U.N. Human Development Index considers development to be comprised of the three separate concepts of education, income and health (UNDP 2003).

Despite the strength of the findings there are limitations to this study. First, although the Chitwan Valley is an interesting and relevant place to conduct this research, these results are probably not generalizable to the entire world. That is, due to the specific factors that have created this study site, people may more clearly understand the development models, at least as defined here. However, this limitation can be viewed as a motivation to determine if these ideas may be understood and accepted in many other locations, and that further investigation of a broad range of societies is warranted.

Another important limitation is that although there is evidence that people believe and accept these development models, the thrust of the theory is that believing in these models will affect later attitudes, values and behavior. Accordingly, future research on examining the effects of these beliefs, or in other words examining the predictive power of these measures, is necessary. As well, future research should also address the issue that respondents may understand these models, and thus know what answers to provide, but in reality do not believe the world follows the developmental model—and thus we would expect no effect of the report on later behavior. Nevertheless, in response to the common "they are just saying what you want to hear" limitation, some qualitative evidence does support the idea that these reports do not just reflect knowledge, but belief as well. Nevertheless, I highly encourage further investigation if these beliefs have specific behavioral effects later in life.

A final limitation of this study is that although I attempt to account for much of the unique measurement properties of these data by using LCA and the modified MTMM design, there are several additional effects that may contribute to systematic error. As Andrews (1984) shows, response categories, offering don't knows, battery length, and

question ordering are all important method effects. However, for this survey none of these methods were varied. Therefore more work should be done to examine other important method effects on these new indicators.

In conclusion, this research has shown that people do appear to believe in these development models that have been promoted around the world for centuries. Based on Thomas theorem (Thomas and Thomas 1928), and Thornton's Developmental Idealism (Thornton 2001, 2005), then we would expect these beliefs to have implications on people's lives. Understanding how diverse their beliefs are, what they predict, and what they are predicted by is an important new area of research.

Figure 1. Response Profiles for 3 Latent Classes

* Refer to Table 2.3 for Item definitions.
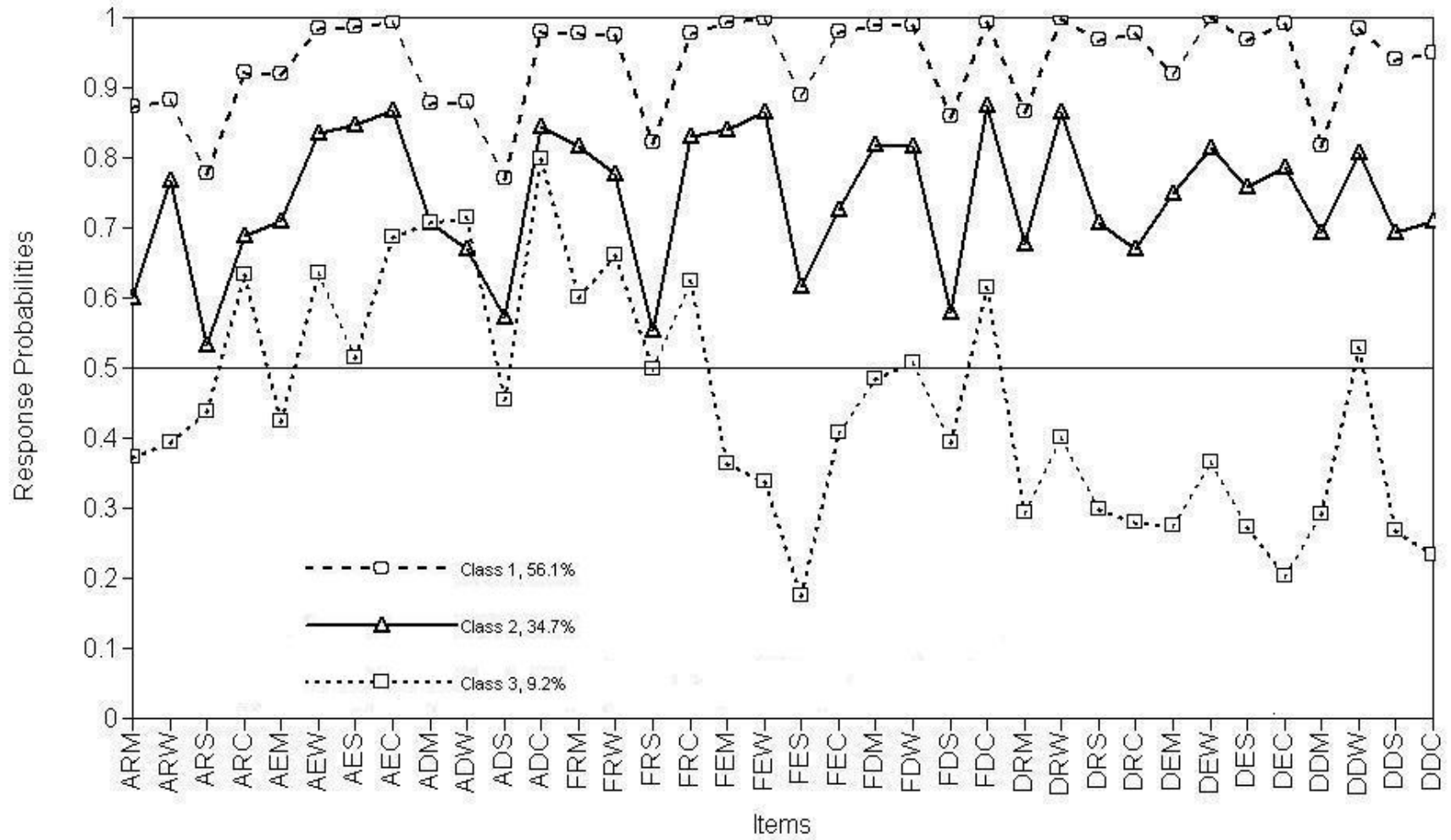
Figure 2. Measurement Model for 36 Items with Type of Development, Model of Change and Family Characteristic
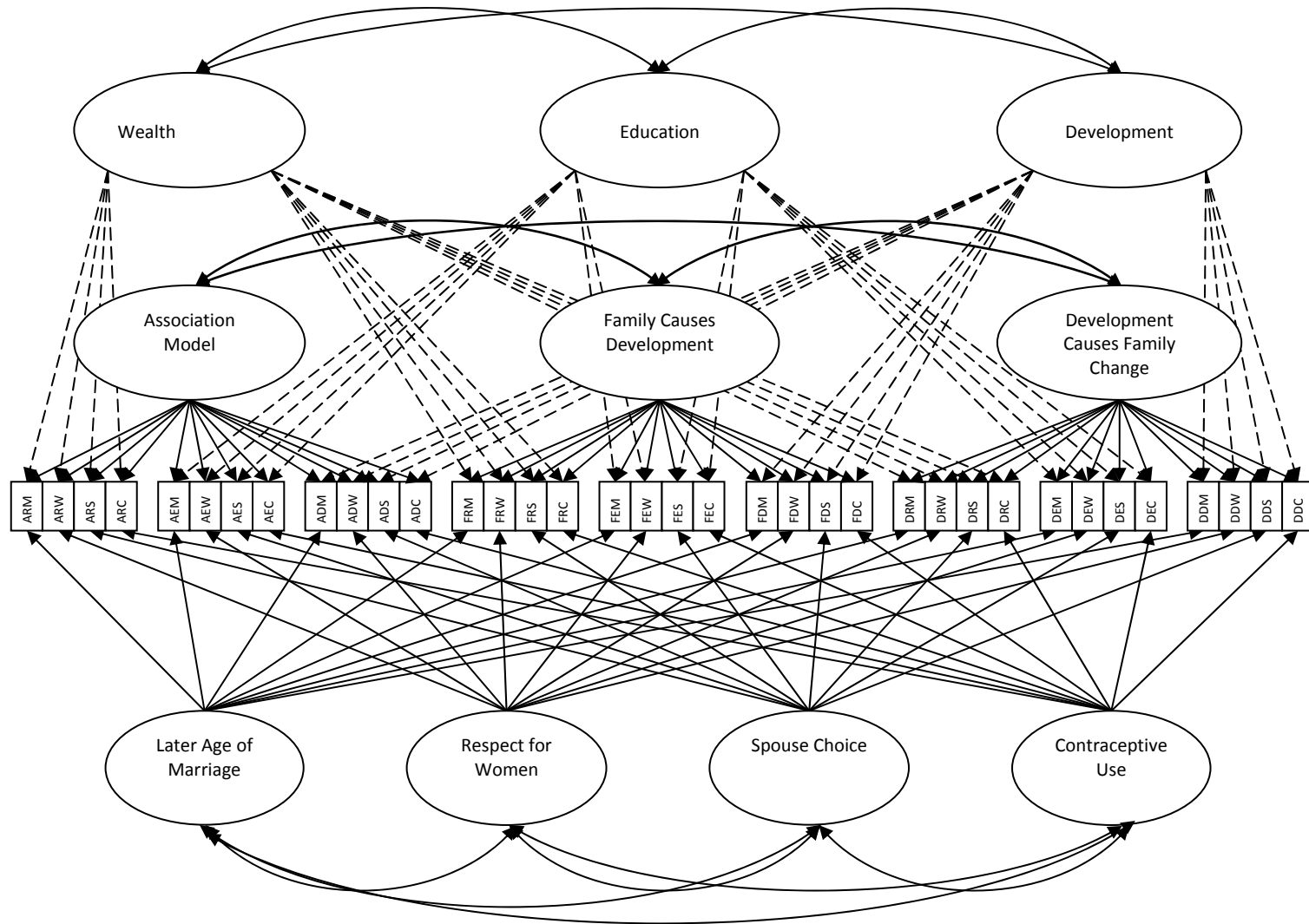
Table 2.1. Percent of Respondents Providing Developmentally Idealistic Response

Family Domains	Association			Development Causing Family			Family Causing Development		
	Wealth	Education	Development	Wealth	Education	Development	Wealth	Education	Development
People marry at older ages	73	80	80	75	80	73	89	88	88
Women treated with more respect	80	90	79	90	88	88	88	89	89
Spouse Choice	66	89	67	82	83	79	70	73	72
Married couples use contraception	81	92	92	81	85	80	89	84	92
Average percentage	75	88	80	82	84	80	84	84	85
		81			82			84	

* A developmentally idealistic response is one that is in line with the developmental model.

Table 2.2. Model Fit for Models with 1 to 5 Latent Classes Based on 36 Developmental
Idealism Questions

	Number of Latent Classes				
	1	2	3	4	5
Parameters	36	73	110	147	184
log likelihood	-8687.081	-7656.586	-7467.069	-7366.067	-7276.714
AIC	17446.161	15459.171	15154.139	15026.134	14921.428
BIC	17600.457	15772.049	15625.599	15656.176	15710.051
LO-MENDELL-RUBIN		0	0.0223	0.0762	0.4866
Entropy		0.914	0.887	0.868	0.871

Table 2.3. Class and Item Parameters for a 3 Class Latent Class Analysis

Class Parameters		Class 1	Class 2	Class 3	
	Class Proportion	0.572	0.335	0.093	
	Class Count	307	180	50	
	Average Class Probability	0.957	0.945	0.940	
Item Parameters					
	Association				Figure One Code
Rich	Older age of Marriage	0.873	0.599	0.371	ARM
	Respect for Women	0.882	0.767	0.392	ARW
	Spouse Choice	0.777	0.533	0.437	ARS
	Contraceptive Use	0.921	0.688	0.633	ARC
Education	Older age of Marriage	0.919	0.709	0.424	AEM
	Respect for Women	0.983	0.834	0.636	AEW
	Spouse Choice	0.993	0.846	0.515	AES
	Contraceptive Use	0.993	0.868	0.686	AEC
Development	Older age of Marriage	0.877	0.707	0.707	ADM
	Respect for Women	0.879	0.670	0.713	ADW
	Spouse Choice	0.769	0.573	0.454	ADS
	Contraceptive Use	0.979	0.845	0.797	ADC
	Family Change Causing Development				
Rich	Older age of Marriage	0.976	0.817	0.599	FRM
	Respect for Women	0.974	0.777	0.661	FRW
	Spouse Choice	0.821	0.553	0.498	FRS
	Contraceptive Use	0.977	0.831	0.624	FRC
Education	Older age of Marriage	0.994	0.840	0.393	FEM
	Respect for Women	0.997	0.864	0.338	FEW
	Spouse Choice	0.888	0.616	0.174	FES
	Contraceptive Use	0.978	0.725	0.406	FEC
Development	Older age of Marriage	0.988	0.818	0.483	FDM
	Respect for Women	0.988	0.817	0.507	FDW
	Spouse Choice	0.859	0.579	0.393	FDS
	Contraceptive Use	0.992	0.874	0.613	FDC
	Development Causing Family Change				
Rich	Older age of Marriage	0.864	0.677	0.293	DRM
	Respect for Women	0.997	0.864	0.400	DRW
	Spouse Choice	0.967	0.707	0.298	DRS
	Contraceptive Use	0.977	0.670	0.279	DRC
Education	Older age of Marriage	0.919	0.749	0.274	DEM
	Respect for Women	1.000	0.813	0.366	DEW
	Spouse Choice	0.967	0.757	0.271	DES
	Contraceptive Use	0.990	0.787	0.202	DEC
Development	Older age of Marriage	0.817	0.694	0.290	DDM
	Respect for Women	0.984	0.808	0.527	DDW
	Spouse Choice	0.939	0.692	0.268	DDS
	Contraceptive Use	0.950	0.710	0.233	DDC

Table 2.4. Correlation Matrices and Tests of Correlations for 3 DI Concepts

Correlation Matrices				**Test if correlations=1**			**Test if correlations=0**		
Models of Change				Chi-square	df	p-value	Chi-square	df	p-value
	Family Change Causing Development	Development Causing Family Change							
Association	0.145	0.265							
Family Change Causing Development		-0.037		*Unable to converge*			5.99	3	0.112
Type of Modernization									
	Education	Development							
Money	0.505	0.526							
Education		0.627		10.51	3	0.015	138.66	3	0.000
Family Characteristic									
	Respect for Women	Spouse Choice	Contraception						
Age of Marriage	0.911	0.812	0.801						
Respect for Women		0.687	0.837						
Spouse Choice			0.761	21.62	6	0.001	309.58	6	0.000

Model Fit

Comparative Fit Index	0.96
Tucker-Lewis Index	0.98
Root Mean Square Error of Approximation	0.03

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CHAPTER 3

The Relationship of Social Exclusion and Nonfamily Experiences with Beliefs in
Developmental Models of Family Change

Abstract

Believing in models relating family change and societal change has been
theorized to have substantial effects on behavior (Mitchell 2009; Thornton
2001, 2005). This paper utilizes a unique data collection effort specifically
aimed at measuring people's complex conceptions of the causal
relationship between family change and "modernization." Based on their
responses to 36 survey items, I employ latent class analyses to categorize
respondents into one of 8 classes of belief in developmental models. Using
measures based on hypotheses of the effects of social exclusion and
nonfamily experiences, this paper demonstrates that beliefs in
developmental models significantly vary by several subpopulations.
Beliefs in the models are significantly different between castes/ethnicities,
with the most disadvantaged groups being the most likely to reject aspects
of the developmental model. Also, more geographically isolated groups
reject developmental models more often. Respondents with higher levels
of education and mass media consumption are more supportive of
developmental models.

Introduction

Scholars have focused a great deal on examining the way people understand and

interpret the world around them (Collins and Makowsky 1998; D'Andrade 1984; Fricke

1997, Geertz 1973). A key reason for this is that by knowing how people perceive the

world we can gain a better understanding for why people act in particular ways,

especially when their actions appear to be contrary to their best interests (Merton 1968;

Thomas and Thomas 1928). Following this line of thinking, recent work by Arland

Thornton and colleagues has investigated people's belief in modernization theories, under the label of developmental idealism (DI), with the explicit intention of understanding its relationship with people's behavior (Binstock and Thornton 2007; de Jong, Ghimire, Thornton and Pierce 2006; Mitchell 2009; Thornton 2001, 2005; Thornton, Ghimire and Mitchell 2005; Thornton and Philipov 2009). A basic premise of DI is that by understanding the models of social, economic and political change people believe, scholars can better comprehend and explain their behavior.

To date, research on DI has shown that both leading elites and multiple groups of ordinary people understand and accept several components of DI. In particular, people think developmentally (or hierarchally) about countries, and believe that both a modern society (e.g. places with higher education, greater wealth, more technology, etc) and a modern family (e.g. families with older ages of marriage, greater use of contraceptives, fewer children, equality for women, etc) are good (Binstock and Thornton 2007; de Jong, Ghimire, Thornton and Pierce 2006; Thornton, Ghimire and Mitchell 2005). As well, there is evidence that people believe modern families and modern societies are both causes and effects of one another (Mitchell 2009). It is this belief in the causal effects between family change and societal change that is key because it suggests that if people believe this model to be true, they will act according to its guidelines, regardless of whether it is actually true or not (Merton 1968; Mitchell 2009; Thomas and Thomas 1928).

This paper responds to an exigent gap in our knowledge of DI. Previous work focusing on the beliefs of individuals about the causal relationships between societal and family change has not examined how this belief differs by important subgroups (Mitchell

2009). That is, we do not know how these models are understood by socially important groups defined by gender, age, education and race/ethnicity. Understanding how different people believe in these models is a first step in the larger project of understanding how these beliefs may affect behavior. In fact, this is the first examination of characteristics related to people's belief in these modernization models.

To make this increase in our knowledge, I take advantage of a unique data collection in the Chitwan Valley of Nepal. This valley and Nepal in general, has recently undergone dramatic social and economic changes. As I l describe further below, these changes have created key disparities in access to the institutions and individuals most likely to promulgate the modernization paradigm. Previous work with this sample has shown significant variation in the amount of belief in these models, pointing to possibly important differences in beliefs by subpopulations as well (Mitchell 2009). Further, I rely on a unique survey of 537 people in Chitwan that measured respondent's beliefs in the causal relationships between family and societal change. This survey questioned respondents using multiple societal and family characteristics and related them in multiple causal pathways.

Theory and Background

In a recent stream of theorizing, Thornton (2001, 2005) argues that a package of ideas he calls developmental idealism (DI) was disseminated widely around the world where it has been a major force for family and demographic change. The elements of developmental idealism can be defined broadly to include most of the ideational factors posited in the literature as being important influences on family and demographic behavior. DI directly incorporates into its elements the Western and modern values and

beliefs that are used either directly or indirectly in most of the ideational literature explaining family and demographic change. It also adds something that is missing from the literature—a reason why the non-Western world would care about, and be influenced by, Western and/or modern ideas. That is, it supplies a reason for why people would redefine their situations and therefore act in accordance with new values and predictions. It also brings into the picture such ideational forces as the desire for a higher standard of living, desires for freedom and equality, an emphasis on individual agency rather than fatalism, individualism, skepticism about authority and institutions, the empowerment of women and the younger generation, and desires for small families, mature marriage, and acceptance of fertility control.

In this section I briefly highlight the basic ideas underlying societal developmental models and explain how they provide an important framework for understanding and dealing with the world, including family structure and relationships. It is important to note that I do not necessarily approve of the ideas behind DI, but rather argue that they are a powerful set of models that when defined as real and important, may have significant effects on decisions that may lead to important family (and non-family) behaviors.

Thornton (2001, 2005) argues that the modernization and development theories used by past social scholars created a set of propositions that have been a force for family change during the last two centuries. These developmental models and their conclusions provided new rubrics for judging society, family life, and the rights of human beings. They showed a new predicted direction for future family and social change and the mechanisms that people should employ to facilitate progress, and in this way became the

engine for many social, economic, and familial changes. More specifically, this set of four interrelated propositions, which he calls DI, states that: 1) a modern society that is industrialized, urbanized, highly educated, and with high levels of technology is good and to be sought after; 2) modern families, defined as having high levels of individualism, high status of women, mature marriage, marriage arranged by the couple, high youth-autonomy, small households, and controlled and low fertility are preferred family types; 3) modern society and modern family are causally connected, with a modern society being a cause and effect of a modern family system; and 4) individuals have the right to be free and equal. Thornton (2001, 2005) argues that DI was disseminated widely around the world—through a myriad of mechanisms such as scholarly publications, Christianity, political movements, US foreign policy programs, and the United Nations —and has been an exceptionally powerful force for family change during the 1800s and 1900s. He argues that it has been a particularly important force in many family changes during this period, including declines in childbearing and increases in age at marriage, the autonomy of young people, egalitarianism, divorce, independent living, sexual activity and cohabitation outside marriage, and growing emphasis on individual rights.

Although all four propositions of the theory are important, this paper argues that the third proposition, that family change and societal change are causally related is a particularly critical element. Based on W.I. Thomas' Theorem (Thomas and Thomas 1928), that when people define a situation as real they act as though it is—regardless of if it is or not, it follows that if people believe in a specific causal model between family change and development, they will behave in accordance with that model. Thus, even though, as more recent historical research has shown, the powerful models of

development are not accurate, people will act as though they are (Laslett 1983; Macfarlane 1978; Hajnal 1965; Wrigley and Schofield 1981). If people expect family change, from historical family types to "modern" family types (later marriage, fewer children, more egalitarian gender roles, less parental control, etc), to increase development, then they will change their families to be more modern. Similarly if people believe modernization makes families more developed, they will change their families to be in line with their more developed society.

Existing Evidence about Beliefs in Developmental Models

Several studies have shown that developmental models have dominated social science thinking for most of the past quarter millennium (Harris 1968; Mandelbaum 1971; Nisbet 1969; Sanderson 1990; Thornton 2001, 2005). It is only in the last few decades that the developmental or modernization paradigm has been strongly challenged—and even discredited—and many of the conclusions of the generations of scholars shown to be myths. Thus, for hundreds of years these models were circulated without extensive challenge. It has also been documented that European travelers, colonial administrators, leaders of the feminist movement, and family planning advocates have relied heavily on developmental arguments (Thornton 2001, 2005). In addition, the role of developmental models has been important in the documents of the United Nations, numerous governments, including those of China and the United States, and international nongovernmental organizations (Latham 2000; Meyer et al. 1997; Nisbet 1980; UNDP 2001, 2002; United Nations 1948, 1962, 1979).

There is also limited evidence from ordinary people that is consistent with the idea that developmental thinking is both widespread and influential. Observers in Africa,

India, China, Nepal, and New Guinea have reported examples of ordinary people using a developmental or hierarchical framework in evaluating various attributes and behavior (Ahearn 2004; Amin 1989; Blaut 1993; Caldwell et al. 1988; Dahl and Rabo 1992; Pigg 1992; Wang 1999). For example, in Nepal, Pigg (1992) and Ahearn (2004) use ethnographic data to show that in some rural areas of Nepal, people use developmental thinking to compare urban and rural life and to think about marriage and other aspects of family life. While these studies have documented that people associate some family types with some society types, primarily focusing on urban and rural differences within the country, they have not explored people's understanding of the causal relationships between society type and family. As well, they have typically explored a limited range of society and family types.

More recent work by Thornton and colleagues have explored this area in greater detail (Thornton 2001, 2005; Thornton, Ghimire and Mitchell 2005; de Jong, Ghimire, Thornton and Pierce 2006; Binstock and Thornton 2007; Thornton and Philipov 2009). For example, Thornton, Ghimire and Mitchell (2005) find strong evidence that a sample of people in Nepal understood the developmental paradigm well enough to provide development scores that correlated highly (both at the aggregate and individual levels) with the UN Human Development scores for a diverse list of countries. Using the same sample in Nepal, de Jong, Ghimire, Thornton and Pierce (2006), show that Nepalis value modern family characteristics such as later marriage, child choice marriages, fewer children and even an increased tolerance toward divorce. Nevertheless, this research does not provide an examination of people's beliefs in the *causal* relationships between societal and family change.

In work that specifically addresses the issue of causation, Mitchell (2009) shows that people are able to distinguish between the different causal models (i.e. family change causing development versus development causing family change). As well, he documents that individuals do not easily distinguish between descriptors of societal development such as wealth, education and development. This study also showed that there is variation in beliefs within a Nepali sample. That although 85-90% of the sample supported the concept of development and family change being causally connected, some people rejected that belief. In fact, the motivating force behind this paper is to distinguish which subgroups (if any) are more likely to support the causal models and which are more likely to reject it.

Explanations for subgroup variation

There are several possible explanations for subgroup variation in the belief in developmental models. For my purposes, I am particularly interested in theory of group variation that arises from the normlessness often generated by rapid social change—like that of Nepal's recent past (Durkheim 1984; Park, Burgess and McKenzie 1925). I contend that Robert Merton's (1938) theory on the rejection of norms appropriately fits this situation. Merton (1938) postulated that it is the combination of the knowledge of cultural goals and models, *and* the availability of resources to obtain those goals that leads to an acceptance of the socially prominent model of norms, expectations and behavior. He argued that although a constant message of culture norms, or models of the world, may be provided to society, without the ability to comply with those models, people will often reject the goals, the means, or both. For Merton, conformity comes only when the models and means are jointly available. Thus for groups lacking either the

means—often through social exclusion—or the goals and models—normally through a lack of contact with the ideas—will seem to have a different set of norms, values and models of the way the world works.

Based on this theory, then, the study location must have three components. First the study location must have recent social change. Second, the location must have striking social exclusion. And third, the location must have substantial variation in exposure to the model or set of norms (in this case DI). In the paragraphs below I detail how the study location of Nepal fits all three requisite aspects of the theory to provide a vivid test site for examining subgroup variation in belief of DI.

Social change

Nepal was kept in isolation from the rest of the world until the 1950s (Adhikari 1998). The historical isolation, extreme exploitation by the ruling elite, the Hinduization of the non-Hindu population, and the rugged Himalayan topography with few roads and communication resources have had an enduring influence on many aspects of Nepali life. Nepal currently ranks as one of the poorest countries in the world. Over 85 percent of the population still lives in rural areas with no all-weather roads, poor public education, few health services and limited communication technology. More than half of the population is still illiterate. In addition, several attributes of the family that are labeled by DI as traditional have historically characterized Nepal and are still common. These include extended households, early age at marriage, arranged marriage, parental control over children, and low status of women.

The data for this research were collected in Chitwan Valley, which lies in the south central part of Nepal. In 1955, the Nepalese government opened this valley for

settlement; prior to this it was covered with dense tropical forest. Chitwan soon became a social melting pot, receiving migrants from all over the country. The valley has become connected to the rest of the country by all-weather roads, making it a business hub for the country. Furthermore, there has been a massive expansion of schools, health services, markets, bus services, cooperatives, and employment centers in Chitwan (Axinn & Yabiku, 2001). Previous work in Chitwan shows that there has been a sharp increase in school enrollment, visits to health clinics, family planning, employment outside of the home, development programs, and exposure to different sources of mass media and new ideas in recent birth cohorts (Axinn & Barber, 2001; Axinn & Yabiku, 2001; Barber et al. 2001; Beutel and Axinn 2002; Ghimire et al., 2006). Despite this general increase, however, much of this research has also demonstrated that access to these institutions, programs, and information is still highly heterogeneous due to both spatial and cultural barriers. Thus, this setting is particularly helpful by affording access to a broad range of people whose different cultural settings and differential contact with the aforementioned institutions, programs, and information can produce a possibly wide range of beliefs in developmental models. Despite historical philosophies that were unambiguously in opposition to developmental models, developmental idealism is now pervasive within Nepal (Ahearn 2004; Bista 1972, 1991). The model of norms, expectations and behavior provided by DI is a prominent, if not the main, paradigm by which people are expected to operate (Ahearn 2004; Mitchell 2009; Pigg 1992; Thornton 2001, 2005; Thornton, Ghimire and Mitchell 2005; de Jong, Ghimire, Thornton and Pierce 2006).

Social change, particularly rapid social change like that experienced by Nepal, has important implications on behavior. Namely, individuals' preferences, expectations, and

choices are influenced by prior experiences, and thus, even in universal exposure to social change, reactions will differ due to an individual's past (Brofenbrenner, 1979; Elder, 1977, 1978). Thus in any study assuming social change as a possible cause of current conditions, it is important to recognize that the differences may be simply due to people's past experiences. Studies that allow for the measurement of the timing of these experiences are particularly helpful in providing a careful examination of the data through the life-course perspective. For example, due to the remarkable increases in education, transportation and health-care infrastructure in the Chitwan valley over the last few decades, the opportunities and resources of a 20 year-old today and one even 20 years ago are tremendously different and significant (Axinn and Yabiku 2001). In particular, DI is assumed to be a strongly socialized message that may reach almost everyone now, but 20 years ago may have only been accessible to the educated, urban elite. As well, more recent birth cohorts had fewer competing paradigms to DI. Thus, we would expect birth year (i.e. birth cohort) to be a strong indicator of acceptance of DI, with more recent birth years being more accepting, due to earlier exposure to DI.

> *H1: People of different birth cohorts will experience different levels of rejection*
> *of the development models*

Social exclusion

Like most other societies, Nepal has subpopulations that have been excluded from the requisite resources needed to accomplish societal or personal goals (Silver 1995; Power and Wilson 200; Pradhan 2009). In this case, social exclusion often entails societies pushing the most vulnerable, complicated, and trouble-some populations furthest away from the mainstream (Power and Wilson 2000). This can entail a literal

pushing to the furthest, most rural areas, or it can be a less physical, but still real, isolation by placing social barriers to their entry into the mainstream.

Regardless of the mechanism, these groups lack the ability to fully comply with the expectations of society even if they accept the goals and norms of society (Merton 1938). In turn, this can lead a rejection of all or part of the society's ideal model of life, thus producing variation in beliefs and often variations in behavior as well. For this paper, I hypothesize that socially isolated groups are more likely to reject the model of developmental idealism either wholesale, or in part.

H2: Socially excluded groups are more likely to reject developmental idealism.

For this paper, I emphasize three classifications of social exclusion or isolation: gender, caste and geography. Gender relations in Chitwan, as in most of Nepal, are characterized by strong patriarchal hierarchies, prevalent gender bias and powerful gender-specific norms, resulting in dramatically different social, health and demographic outcomes for men and women (Ahearn 2004; Bennett; Leone, Matthews and Zuanna 2007; Macfarlane 1986). Compared to men, women typically have lower status, and thus often do not have the access to the same resources as their male counterparts (Acharya 1981; Caldwell 1983; Dyson and Moore 1983; Ghimire et al. 2006). This is especially true for access to family resources (Leone, Matthews and Zuanna 2007). Therefore, I expect women to be more likely to reject DI.

Another important measure of social exclusion is caste (Bennett 1983; Bista 1972; Goldstein 1986; Hofer 1979; Levine 1987; Pradhan 2009; Stash 2001). Since the mid-19th century the current caste system has been a primary determinant of location within the Nepali social hierarchy (Bista 1972; Hofer 1979). Due to the efforts of both Hinduization

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and Nepalization, the caste groups still show significant differences in behavior, in part as a result of differential access to political, economic, and social resources (Pradhan 2009; Stash 2001). In fact, in Nepal, the Leader of State was considered a Hindu god until 1991, making all aspects of Hindu life (including caste structure, exclusion and isolation) a matter of law and government (Bista 1972, 1991).

Although caste is extremely complex, a common classification is into five major groups: high-caste Hindu, low-caste Hindu, Newar, Hill Tibeto-Burmese, and Terai Tibeto-Burmese (Axinn and Yabiku 2001; Ghimire et al. 2006). The first two groups both have similar origins from India and both practice the Hindu religion, but the former has had much greater access to political, economic and social resources. Newars are unique in that they practice elements of both Buddhism and Hinduism. Despite being native to the Kathmandu Valley, due to their extensive involvement in the business sector of Nepal, they can be found all over Nepal. The Hill Tibeto-Burmese group is primarily from Tibet and typically practice Buddhism. Finally, the Terai Tibeto-Burmese groups are the native inhabitants of the Chitwan Valley, and were pushed to the edge of the valley to make room for the large immigration of "Hill" people (especially High Caste Hindus and Hill-Tibeto Burmese). In particular, the Tharu ethnic group makes up about 75% of the Terai Tibeto-Burmese group in Chitwan. This native group or *janajati* is one of the most disadvantaged groups in Nepal. Among the five groups, people within the Low-caste Hindu and and Terai Tibeto-Burmese groups are expected to have the lowest support of DI.

Finally, due to poor transportation infrastructure, geographic distance is a nontrivial barrier to resources such as schools, jobs, government offices, health clinics

and markets (Axinn and Yabiku 2001; Brauner-Otto, Axinn and Ghimire 2007; Yabiku 2006). Generally, moving closer to the city increases both the variety and quantity of the resources. Thus, the further someone is away from the city, the more likely we would expect them to reject the prominent DI model, because they are unable to access the requisite resources to obtain the goals and expectations of the DI model. For example, given two people with equal knowledge of DI, the person living closer to health centers, where they can obtain birth control, or industry, where they can locate jobs, or schools, were they can acquire training, will be more likely to support DI because they have greater means of achieving DI's goals.

Of course an important alternative explanation for the correlation between geographic isolation and disbelief in DI is that those with very different beliefs about the world purposefully isolate themselves from the main population. Thus, it would be the ideas that caused the social exclusion, and not the other way around. This alternative explanation is much less of an issue with caste or gender differences because the characteristics used to define those groups are not within the control of the individual. Finally, an additional complication is that the resources used to obtain the goals of DI, probably promote DI as well, thus conflating access to the means to obtain the goals and access to learning about the goals. Thus, to properly examine the influence of geographic distance we also need to examine access to the knowledge of the model; the following paragraphs do just that.

Ideational exposure

The second aspect of Merton's (1938) theory requires that people have knowledge of the society's goals, or in this case, models of development. One powerful explanatory

framework for access to ideas is the modes of social organization framework proposed by

Thornton and Fricke (Thornton and Fricke 1987; Thornton et al 1994). The modes of

organization framework emphasizes the social organizations that manage and influence

individual's values, behavior and interpersonal relationships. The primary focus of this

framework is the extent to which activities, resources, relationships, beliefs and control

are organized within family or kinship units in lieu of nonfamily institutions such as

schools, nonfamily work, mass media, and governmental agencies. Although not

constrained by urban/rural divides, this framework has proved particularly fruitful in rural

settings, where family modes of organization are typically very prominent (Ghimire et al.

2006; Thornton and Lin 1994). Thus, I expect that access to, and experience with,

nonfamily institutions provides an important alternative to the family organization of life,

and therefore should positively influence the acceptance of the developmental models.

Conversely, I expect those who have had more family experiences, such as expanding

family networks and responsibilities through marriage or childbearing, will be more

likely to reject the developmental models.

> *H3a: People with more nonfamily experiences will be less likely to reject development idealism.*

> *H3b: People with more family experiences will more likely to reject development idealism.*

As with geographic isolation, it is reasonable that these beliefs may operate to

promote nonfamily experience. Specifically, believing in the developmental models of DI

may encourage people to seek out nonfamily experiences such as education and

nonfamily work. Thus, any correlation discovered here may be a result of the belief (or rejection) of DI promoting (or hindering) participation in nonfamily experiences.

Nonfamily experiences

A respondent's educational experience has been a primary measure of nonfamily experiences (Caldwell 1982; Ghimire et al. 2006; Thornton, Chang and Lin 1994; Yabiku 2006). Often the ideas introduced in schools promote values of individualism, equality and autonomy (Caldwell 1982; Caldwell, Reddy and Caldwell 1988; Mirowsky and Ross 2007; Ramírez, Suárez and Meyer 1997; Thornton 2001; Thornton 2005). Based on my own experience both talking with Nepalis and seeing some school textbooks, it is clear the developmental models are a primary focus of the education in at least some schools. In line with the hypothesis above, those with higher levels of education are expected to be less likely to reject DI.

Similarly, nonfamily work is also an important measure of nonfamily experiences because it provides an additional opportunity for exposure to new ideas (Ghimire et al. 2006; Thornton, Chang and Lin 1994), and in particular, developmental idealism (Thornton 2001, 2005). In nonfamily work, by definition, not all coworkers are from the same family. This provides greater diversity of ideas, knowledge and experience. As well, nonfamily work often requires regular travel from home to work which also normally exposes the individual to a greater breadth of ideas than provided at home. Thus, we would expect those individuals with nonfamily work to have greater acceptance of DI due to the greater exposure to DI.

Mass media in Nepal, including radio, television and movies, generally put forward Western values and views, typically associated with development models (Axinn

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and Barber 2001; Janowitz 1981) (Thornton 2001, 2005). Thus, a direct mechanism of exposure to the ideas of DI is the frequency of contact with mass media. Based on Hypothesis 3a, then, we would expect people with higher frequency of mass media consumption will be more likely to support DI.

Family experiences

Although there are many family experiences, I emphasize three that are particularly useful in this study: being married, number of children ever born, being in a polygamous marriage. Marriage is the most important organizing influence in Nepali life as it aligns hierarchies and establishes kinship and intergenerational relationships (Ahearn 2004; Ghimire et al. 2006; Yabiku 2006). If marriage promotes greater ties to the family—as well as greater responsibilities to kin—then we would expect married people to be more likely to reject DI. Another strong influence on family organization in Nepal is fertility (Axinn and Barber 2001). If greater numbers of children tend to pull people toward family modes of organization, then people with more children would be expected to reject DI more often. As well, fertility is particularly important because DI has strong preferences for small families (Thornton 2001, 2005). In parallel, DI has very strong negative views about polygamy (Thornton 2005). Polygamous families are now less common in Nepal, but being a part of one seems to instill greater family organization. Thus, we would expect people in polygamous marriages to reject DI more often.

DATA and METHODS

Sample Design

In 2003, researchers chose the Western Chitwan Valley for this study. They created 5 strata based on the distance to the valley's urban center, Narayanghat. Then

they sampled 2-4 neighborhoods, consisting of 4-25 households from each stratum. Finally, once a neighborhood was selected, all the individuals age 17 and above residing in those neighborhoods were interviewed. This sampling procedure resulted in slightly more than 100 individuals being selected from each of the five strata. These people were interviewed in face-to-face interviews in the Nepali language using paper and pencil format. Three respondents who could not be interviewed in Nepali were excluded from this analysis. The field period lasted for six weeks and resulted in a 97 percent response rate.

Measurement

Models of Modernization

In this paper I focus on 9 sections of questions investigating knowledge and belief in developmental models and their application in concrete situations. Together these 9 sections systematically document peoples' beliefs in the correlation and causal relationship between family change and social change. Knowing that respondents may not all view development the same, researchers also took care to ask about three different aspects of modernization (education, getting richer, and development). As well, researchers asked about three different models of change or modernization (family type is *correlated* with society type, social change *causes* family change and family change *causes* societal changes). Four family domains (marriage timing, gender equality, spouse choice and contraceptive use) were asked in all nine sections[12]. Thus, there is an analytic subset of (3x3x4) 36 questions. Appendix A provides the exact wording, distributions and coding of each of these measures.

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12 Mitchell (2008) shows that these four family domains are an excellent representation of 13 family domains less thoroughly covered in the survey.

More specifically, three of the sections in the survey presented one of four family characteristics (e.g. marrying at older ages, spouse choice, etc) and then asked if this characteristic is more common in different places or types of societies. There were three location comparisons possible in the three sections: 1) rich versus poor places; 2) developed versus traditional places; and 3) educated versus uneducated places. The respondents could specify that a characteristic was more common in one location (e.g. a rich place) or in the other location (e.g. a poor place). Respondents could also volunteer that the family trait was "equally common in both" or that they "don't know," but only after a follow-up probe asking the respondent to give their best guess or estimate. Together, researchers intended these three sections to measure if survey respondents expected specific family types to be associated with different places, that is, did they see an association between family type and society type. Thus, this could be seen as a test of developmental thinking—without any specific causal model for family and societal changes.

Similarly, three other sections presented the same family characteristics as above and then asked if making the country more developed, richer, or more educated would make people marry earlier or later, have more or fewer children, etc. Also responses of "no change" or "don't know" were accepted if the respondents voiced them after a follow up probe asking them to give their best guess or estimate. These three sections specifically measure if the survey respondents understand or believe that societal change (becoming richer, more developed or more educated) would cause family changes. This measure helps examine if respondents believe that family change is a result of development.

Finally, the last three sections reverse the causal relationship between family change and modernization. These sections ask if changing various family characteristics (people marrying later, having larger families, etc) would make the Nepal richer, a better place[13], or more educated. As with the previous sets of sections, people were allowed to provide the options of "no change" and "don't know" as a response after probing. These three sections of questions provide an estimate of the individual's belief that specific family change leads to a more modern society.

To analyze the questions, they were coded so that 1 meant the answer was in line with developmental thinking and everything else—including answers of "don't know," "the same," "no change," and missing—was coded as 0 (see Appendix A for all the question-specific coding). It is important to note that there was typically only one to three percent of the sample that provided responses other than the two provided options. Also, only 1 person refused to provide an answer or gave uncodeable response and this only occurred on one of the 36 questions.

--Table 3.1 about here--

Independent Variables

The independent variables are derived directly from the motivating theory that family and non-family experiences, social exclusion and birth cohort influence the belief in the different models of development as suggested by developmental idealism. Table 3.1 provides the descriptive statistics for each of these measures. For example, to examine the importance of social change, I use four equal sized birth cohort groups with the most recent birth cohort (1980-1985) acting as the comparison group.

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13 Based on in-depth interviews and focus groups the idea of a better place and developed place are very similar in Nepali.

In line with the discussion above, I have three measures of social exclusion. Gender and caste are both self-reported during the survey. Specifically for caste, I use the five category measure of caste previously described, with High-caste Hindus as the comparison group. To measure variation in geographic exclusion or isolation I use the approximate distance in miles from the respondent's neighborhood to the main city of Narayanghat, in the Northeast corner of the study area.

I operationalize nonfamily experiences with three measures. First, I use a measure of completed years of schooling, where the average number of years of school for the sample is about 5.1 years. Second, I measure nonfamily work experience using three exclusive categories as reported by the respondent: never worked for pay (71%), have worked for pay, but not doing so now (16%) and am now working for pay (13%). Finally, third, I measure mass media consumption, including radio, television and movies. Based on self reports of average media consumption over the last 12 months, I code exposure to radio, movie and television: listening to the radio (0=never/rarely 1=daily/weekly), attending the movies (number of movies up to 7), and watching television (0=never/rarely, 1=weekly/monthly).

I also have three measures of family experiences: ever married, number of children, and ever been in a polygamous marriage. First, I use the self-reported measure of if the respondent has ever been married. Second, I measure the number of children born to the respondent as measured by the question "All together how many births have you had?" Third, I measure polygamy by combining responses to two questions: one for men, "In this study, we are talking with a variety of people. Some marry than once. Did you ever have more than one wife at the same time?" and one for women, "In this study,

we are talking with a variety of people. Have you ever had a co-wife?" 17% of

respondents reported yes to one of the questions above, thus indicating they were in some

form of a polygamous union.

Analytic Strategy

As a first step in predicting belief in developmental models, I conduct a latent

class analysis (LCA) using the 36 binary indicators just discussed. LCA aids in the

characterization of a multidimensional set of observed binary variables (McCutcheon

1987, 2002). That is, in lieu of assuming the 36 questions provide multiple dimensions of

intensity of belief (i.e. believing that education causes family change, getting married

later causes development, etc), I can use the questions to find typologies of responses, or

response profiles. For example, two very obvious groups would be those who provide

answers suggesting a belief in developmental idealism and those whose answers imply

disbelief in DI. Several other groups may exist, such as: those who believe in one causal

direction over another, believing some family types may be affected while other family

characteristics remain unchanged, etc. By examining the classes of responses we can

better understand the extent of the belief in the various aspects of DI. Thus, by combining

multiple indicators in the LCA we can gain a better comprehension of how consistent

respondents are in the beliefs of models of modernization. Using this approach also helps

eliminate the noise due to measurement error on any one indicator by having multiple

questions (Alwin 2007).

This analysis builds off of previous work showing that respondents do distinguish

between the three models of modernization (modern family and modern society are

associated, family change causes development, and development causes family change)

(Mitchell 2009). This previous work also shows that although the majority of people supported all three models of modernization, some respondents appear to reject, or at least not fully support, all three models. With this knowledge, I have designed a confirmatory LCA where I structure the possible response profiles or groups. Thus, whereas a standard LCA uses model fit to determine the best number of classes, I am using the respondents' answers to determine which one of the predetermined response classes is the best fit for the respondent.[14]

--Table 3.2 about here--

By focusing on the three models of development I use the 36 questions to place respondents into a matrix of groups based on three questions: 1) do they believe family change and development are associated 2) do they believe family change causes development and 3) do they believe development causes family change. That is, I use the individual's responses to the 12 questions asking about if family change will lead to greater development, wealth and education to signal if they believe that model (and so on for the other two sets of 12 survey items). Following this strategy for each of the three questions then I have a total of 8 (2^3) possible profiles (see Table 3.2). This allows to me to examine respondents with alternative theories of development compared to the DI model.

As shown in Table 3.2, the results of this analysis reassert Mitchell's (2009) finding that the vast majority of people in this sample report believing that development

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14 There are several other options for measuring the belief in developmental models using these 36 items, with two obvious choices being confirmatory factor analysis and linear regression on the summed scores. Both of these methods were tested and resulted in the exact same substantive results. However, considering the strong violations of normality and continuousness of the dependent variable for both of these models, the LCA is the most trustworthy method (Alwin 2007, McCutcheon 1987, 2002; Muthén, du Toit and Spisic 1997; Powers and Xie 2000)

and family change are associated and that they are both causes and effects of each

other[15]. Of the 8 groups over 85% of the respondents are in the response profile reporting

"yes" to all three modernization models (Class 1). Although these models of

modernization are not without some individual variation in terms of what family domains

are and are not related to development, taken as a whole most people agree with all three

models.

Two other categories of responses also have sizeable numbers of individuals.

Approximately 5% of the sample reported believing that development and family change

were associated and that family change caused development but that development did *not*

cause family change (Class 7). Similarly, the next largest group (about 4%) reports

believing the association between development and family change, but only agrees that

causation runs from development to family change (Class 8). 1.5% of respondents

reported not believing in any of the three models (Class 2). The other 4 classes contain a

range of 0-2% of respondents.

Do to the small samples, using these 8 groups of responses to examine the extent

to which different subgroups approve or reject the different developmental models is

statistically flawed. Attempting to distinguish subgroup variation in beliefs in the 8

different models would be very difficult to detect with groups only having single digit

cell sizes. However, it is useful to examine who supplies an alternative model to the

developmental idealism model that modern family and modern society are correlated and

reciprocally causally related. Thus, by collapsing classes 2-8 into one group I can

distinguish those who reject some aspect of the development idealism model. This

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15 Although the entropy for this 8 class model is very high (0.985), suggesting most respondents had very
low probabilities of being in a class other than the one they were assigned, the larger number of classes and
imposed structure of the responses provides a worse fit compared the Mitchell's (2009) 3 class model.

categorization results in a sufficiently large group of people who, based on 36 questions, reject some aspect of the developmental model.

--Table 3.3 about here--

Table 3.3 provides the estimated odds of rejecting any part of the DI developmental model. Of the 537 respondents, 78 (15%) reported rejecting at least one of the three models, or in other words, they suggested an alternative model to the full DI model of modernization. The four logistic regression models in Table 3.3 examine the four blocks of measures that coordinate with the different hypothesis presented above.

Although the first three blocks of measures are tested individually (logistic regression models 1-3), cohort is included in all models. This is done to reflect the importance of the social change and the life-course in all of the models. Remember that H1 stated that cohort would be significantly associated with belief in DI, with younger cohorts being more likely to accept DI. However, examining the effects in model 4 shows that although there may be some differences in beliefs of the DI models, those differences are apparently not large enough to notice in these models. As well, I tested a parallel coding (age) including a linear effect, and a curvilinear effect, neither of which showed any significant result or substantive pattern. The dramatic change in both education (increase) and fertility (decrease) across cohorts explains nearly all of the bivariate effect of birth cohort. This suggests that the changes we see across birth cohorts (or age since this is a cross-sectional study) are due to changes in access to education and to the reduction of fertility—both of which decreased the amount of control the family had over the individual.

Model 1 presents the coefficients for variables associated with social exclusion. Recall that H2 hypothesized that socially excluded groups are more likely to reject developmental idealism, and that our measures of gender, caste and distance to the major city Narayanghat were all intended to measure socially excluded groups. Looking at model 1, the results suggest that all of the groups we would have expected to be more likely to reject some aspect of the model seem positively inclined to do so. In particular, caste is a powerful indicator of rejecting some part of the DI model. Specifically the Low-caste Hindus and the Terai Tibeto-Burmese[16], the two most disadvantaged of the five caste groups, are significantly more likely to reject the DI model of modernization. These results remain even after controlling for family and non-family experiences. Also, being female and living further away from Narayanghat both have the expected positive direction on rejecting DI in model 1. However, neither is significant after controlling other variables in model 4 (primarily due to the strong effects of education and its high correlation with gender and distance to the city). These results suggest that some subgroups may be experiencing social exclusion and thus rejecting some aspects of the modernization model as outlined by DI.

Model 2 presents the results of the measures of nonfamily experience. Remember that H3a postulated that more contact with nonfamily experiences would reduce the likelihood of rejecting the developmental model. More explicitly, that higher education, nonfamily work and media consumption would reduce some of the risk of rejecting the DI model of modernization. The results in models 2 and 4 support the notion that higher levels of education and media consumption (particularly T.V.) result in greater support

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16 Looking at Table 3.3 reveals that due to small cell sizes (particularly within caste groups) the coefficients are exceptionally large. Nevertheless, while I do not place a great deal of weight on the precision of the estimates, I am comfortable interpreting their direction if the effects are significant.

for all three components of the DI model. The effect of education is particularly important in that for every 1 year of school there is an expected reduction in the odds of rejecting the model by around 20%. To help interpretation, a quick transformation of the coefficient shows that a difference of 6 years makes those with fewer years of schooling 3.5 times more likely to reject the DI model. Thus, the evidence confirms H3a, that higher levels of nonfamily experience increases acceptance of DI.

Model 3 presents the coefficients of the measures of family experiences, which as stated in H3b, we expect to have a positive relationship with rejecting DI. The effects in Model 3 are all positive as expected, but only the number of children has a significant effect (each child increasing the odds of rejecting by 19%). However, by model 4 none of the effects are significantly different from no effect (i.e. 1). Again this is due to the inclusion of education, which has a negative association on the number of children born. Thus, as for H3b, the evidence does not confirm that family experiences lead to less support of the DI model of modernization.

Conclusion

The purpose of this paper is to address our current gap in knowledge about important subgroup differences in beliefs in developmental idealism. More specifically, it focuses on how different subpopulations believe in the causal connections of modernization and family change. That is, to what extent do different groups of people believe a modern family and a modern society to be associated and causally related? This knowledge is important because a major factor in examining people's behaviors is knowing what causal models of the world they believe are true (Mitchell 2009; Thomas and Thomas 1928; Thornton 2001, 2005).

To fill this gap I rely on unique data from Nepal, a location of dramatic social change which has resulted in large patterns of heterogeneous access to resources. Using a survey of 537 people in the Chitwan valley specifically designed to measure belief in the developmental models, I employ confirmatory latent class analyses to group respondents according to their beliefs in the developmental models. Then, based on the theory that rejection of social norms, goals and models of living are a result of either: 1) the lack of means to those goals (i.e. social exclusion) or 2) a lack of knowledge of the norms, goals and models, I outline several important subgroups of interest for this analysis.

In general, findings support the idea that socially isolated groups are more likely to reject the widely held views that modern families and modern societies are causally connected. For example, caste and ethnicity has a sizable relationship with belief in DI. The results suggest that not being a High Caste Hindu is associated with rejecting DI. This is not surprising since the High Caste Hindu groups have a long history of being in power, being the ruling elite and have the most contact with foreigners. The one exception to this rule is the Newar group, who have filled much the role of merchants and entrepreneurs, and they have had many similar opportunities as the High Caste Hindus. As a result, it fits that they are similar to the High Caste Hindus in terms of belief in DI models of modernization. On the other hand, compared to High Caste Hindus, Low Caste Hindus, and to an even greater extent the Terai Tibeto-Burmese, have significantly higher odds of rejecting at least one of the three DI developmental models.

To help understand this result, it is important to know that when the Chitwan Valley was settled just over 50 years ago, the only indigenous people were the Terai Tibeto-Burmese. For the most part, their lifestyle was dramatically altered both by the

large increase in population, and also because of the deforestation of the jungle to create farmland. In addition to the substantial change in lifestyle, they also received fewer resources (particularly land) than the migrants from the hills (i.e. the other groups). There is also evidence to suggest that this group has experienced relatively fewer improvements in health and standard of living, and that they are substantially less likely to participate in development programs (Pradhan 2009). And similarly, due to the "untouchable" label given to the Low-caste Hindus they have similarly lacked access to most resources, thus making it difficult to for them to leave their socially isolated positions in society (Bista 1972; Hofer 1979). Nevertheless it should also be noted that it is impossible, with these data, to determine whether their experiences have led them to disbelieve in DI, or if their own beliefs and values have led them to avoid locations where DI would be prevalent (i.e. schools, government agriculture programs, women groups, owning a TV or radio, etc).

Education, even if limited, is associated with believing D.I. Of course, the causation behind this association could run both ways. Those strongly believing in DI may be more inclined to go to school (or to send their children to school). As well, schools are also places where the messages associated with DI are taught (e.g. learning that delaying marriage and limiting fertility will lead to prosperity, or that with wealth comes more freedom and equality, etc) (Thornton 2005). Nevertheless it is clear that education is an important correlate of belief in Developmental Idealism in Nepal. Likewise, greater media use, in particular television, is associated with a greater belief in D.I. This is not surprising as mass media are a primary method of diffusion of ideas from the leading elite to the masses, and the leading elite have strongly held views supporting

D.I. (Barber and Axinn 2004; Thornton 2005). All of this supports the hypothesis that greater contact with nonfamily institutions leads to greater acceptance of the DI.

Thus, in summary, those groups that have been social excluded from society, even after controlling for access to the knowledge of the models, are more likely to reject DI. This may be due to their frustration with their inability to comply with DI's goals and expectations due to lack of means (i.e. less access to economic, political, health and social resources). Or, even if people have the means, having access to the knowledge of DI, possibly through education or mass media, also has an important influence on accepting or rejecting DI.

This study, as has been mentioned throughout this paper, is a cross-sectional study, and while the measures are uniquely designed to measure beliefs in developmental models, the data cannot determine the direction of the casual paths between the group characteristics and DI. Accordingly, while social exclusion and nonfamily experiences may lead to different beliefs, it is reasonable that these beliefs may have lead to being socially excluded and/or not having nonfamily experiences. To complicate matters more, both causal directions may be operating. Future research should address this gap by collecting data that allow for the examination of both causal directions, namely prospective longitudinal data on beliefs, experiences and behaviors.

Table 3.1. Descriptive Statistics of Measures Used in Analyses

Measure	Coding	N	Mean	Std. Deviation	Minimum	Maximum
Social Exclusion						
Gender	0=male, 1=female	537	0.55	.50	0	1
Ethnicity		537				
High-caste Hindu	0=No, 1=Yes		0.47	0.50	0	1
Low-caste Hindu	0=No, 1=Yes		0.12	0.32	0	1
Newar	0=No, 1=Yes		0.06	0.23	0	1
Hill Tibeto-Burmese	0=No, 1=Yes		0.14	0.35	0	1
Terai Tibeto-Burmese	0=No, 1=Yes		0.21	0.41	0	1
Distance to city	miles	537	7.35	6.33	0	17.6
Nonfamily Experiences						
Education	years	537	5.08	4.97	0	16
Nonfamily work		537				
Never worked for pay	0=No, 1=Yes		.71	0.46	0	1
Worked for pay, not now	0=No, 1=Yes		0.16	0.37	0	1
Currently working for pay	0=No, 1=Yes		0.13	0.34	0	1
Media exposure						
Radio in past 12 months	0=never/rarely 1weekly/daily	537	0.35	0.48	0	1
Movies in past 12 months	0-7+	537	1.91	2.34	0	7
T.V. in past 12 months	0= never/rarely 1=weekly	537	0.46	0.50	0	1
Family Experiences						
Ever Married	0=No, 1=Yes	537	0.86	0.35	0	1
Number of Children	0-7+	537	2.86	2.28	0	7
Ever lived in polygamous marriage	0=No, 1=Yes	537	0.17	0.38	0	1
Birth Cohort/Age		537				
18-23	0=No, 1=Yes		0.26	0.43	0	1
24-32	0=No, 1=Yes		0.26	0.44	0	1
33-45	0=No, 1=Yes		0.24	0.43	0	1
46+	0=No, 1=Yes		0.24	0.43	0	1

Table 3.2. Classification and Frequency of 8 Classes of Belief in Developmental Models

| | Respondent Supports Model of: | | | | |
Class	Modern Family and Modern Society Are Associated	Family Change Causes Development	Development Causes Family Change	N	Percent
1	Yes	Yes	Yes	459	85.5
2	No	No	No	8	1.5
3	No	No	Yes	0	0
4	No	Yes	Yes	11	2.0
5	No	Yes	No	5	0.9
6	Yes	No	No	7	1.3
7	Yes	Yes	No	28	5.2
8	Yes	No	Yes	19	3.5

Table 3.3: Estimated Odds Ratios of Logistics Regression Predicting Rejecting DI

Measure	(1)	(2)	(3)	(4)
Social Exclusion				
Female	1.08			0.66
	(0.33)			(-1.57)
Ethnicity				
High-caste Hindu	--			--
Low-caste Hindu	7.35***			4.12**
	(4.10)			(3.07)
Newar	3.59			3.68
	(1.62)			(1.87)
Hill Tibeto-Burmese	2.00			1.31
	(1.50)			(0.67)
Terai Tibeto-Burmese	10.41***			5.96***
	(6.84)			(4.75)
Distance to city	1.05**			1.02
	(2.58)			(0.81)
Nonfamily Experiences				
Education		0.77***		0.81***
		(-5.81)		(-3.78)
Nonfamily work				
Never worked for pay		--		--
Worked for pay, not now		1.29		0.78
		(1.22)		(-0.51)
Currently working for pay		2.00		1.21
		(0.71)		(0.35)
Media exposure				
Radio in past 12 months		0.87		0.99
		(-0.61)		(-0.02)
Movies in past 12 months		0.98		0.96
		(-0.50)		(-0.58)
T.V. in past 12 months		0.52*		0.67
		(-2.26)		(-1.29)

* $p<0.05$. **$p<0.01$, ***$p<0.001$

Table 3.3: Estimated Odds Ratios of Logistics Regression Predicting Rejecting DI (cont)

Measure	(1)	(2)	(3)	(4)
Family Experiences				
Ever Married			1.54	0.84
			(0.76)	(-0.35)
Number of Children			1.19*	0.85
			(2.03)	(-1.77)
Ever lived in polygamous marriage			1.60	1.22
			(1.44)	(0.52)
Birth Cohort				
1980-1985	--	--	--	--
1971-1979	1.28	1.78	0.72	1.18
	(1.14)	(-0.99)	(-1.28)	(0.51)
1958-1970	0.82	0.28***	0.26*	0.79
	(-0.44)	(-3.84)	(-2.28)	(-0.45)
1940-1957	2.24*	0.45*	0.46	1.58
	(2.01)	(-2.39)	(-1.46)	(0.92)
Log-likelihood	-183.85	-187.40	-214.93	-172.54
LR χ^2 (intercept only model)	77.34***	70.24***	15.18*	99.98***
Δ df	9	9	6	18
N	537	537	537	537

* p<0.05. **p<0.01, ***p<0.001

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Chapter 4

Whose Will Dominates: Individual, Family and Community Influences on Participation in Spouse Selection

Abstract

This article examines child autonomy, parental power and social control as evidenced by the influences of individual, parental and community beliefs about the level of participation youth should have in selecting their spouse choice on later spouse choice behavior. The author develops a theoretical framework to explain how the individual, family and local community interact to determine whose desires for spouse choice behavior are fulfilled. This framework pays particular attention to the role of education as an allocator of social status. Analyses show that both the child's and the father's attitudes influence spouse choice participation. Finally, for children with higher levels of education or more education than their parents, their attitude toward spouse choice is significantly stronger than for those children with lower levels of education or less education than their parents—suggesting education acts as an allocator of social status.

INTRODUCTION

According to official accounts, on June 1, 2001, Nepal's Crown Prince Dipendra

shot and killed ten members of the royal family, including his father and mother, King

Birendra and Queen Aishwarya (Bedi 2001; Lak 2001). The ramifications of this event

were felt nationwide, and may have contributed to Nepal's currently unstable political

state. The main reason provided for this tragedy was that Dipendra and his parents

disagreed over his choice of spouse (Ahearn 2004; Bedi and Laville 2001). It appears his

parents wanted to arrange his marriage to a person they felt more suitable, while he had

already chosen the woman he wanted to marry. Although this is an extreme example (on many levels), the conflict of wills between parents and children on arranged marriage in Nepal has recently become more common (Ahearn 2004; Ghimire et al. 2006). It is indicative of the intergenerational and societal tension rising from the changing attitudes and values, and ambiguous (and shifting) social status that often accompanies social change. Indeed, the fact that arguing over an arranged versus choice marriage is accepted as reasonable motivation for homicide is noteworthy. More generally, the question of whose desires, will and requests are acknowledged and fulfilled is indicative of the hierarchy, social structure and values of a society (Gould 2003; Thornton 2005; Thornton, Axinn and Xie 2007).

The relationship between the individual and society is a foundational issue within the social sciences. Social scholars like Durkheim, Marx, Weber, Comte and many others were interested in how individuals and different levels of others, like the family, church and community, express and enforce their will. A primary convergence point of the individual, family and community wills and desires is family formation behavior. Family formation has long lasting influences on later social, health and psychological outcomes for the individuals and their kin (Furstenberg, Brooks-Gunn and Morgan 1987; Hoffmann and Su 1998; Mirowsky 1989; Thornton, Axinn and Xie 2007; Umberson 1989; Upchurch 1990). Marriage is particularly important in an impoverished country as it shapes many trajectories for schooling, childbearing, work, and many other later life course events. Who controls the initiation of a family, either through marriage, partnering or child bearing, is an indication of who has power, not only in that particular relationship, but society-wide (Thornton 2005; Thornton, Axinn and Xie 2007).

Of particular note here is how a marriage is created, or rather, who selects the spouse. Like endogamy is an indicator of social openness, the extent to which the individual has a choice in who they marry can be viewed as a sign of the society's level of autonomy afforded to the individual (Kalmijn 1998; Mare 1991; Rosenfeld 2008; Smits 1998; Gould 2003). Thus, an important focus of sociological and demographic research is examining the social causes and consequences of arranged marriage, where youth have little or no say in their spouse choice, as well as the shift from a society based on arranged marriage to a society based on marriage decided by the choice of both partners, or what Nepalis call a "love marriage" (Ahearn 2004; Caldwell 1983; Dyson and Moore 1983; Ghimire et al. 2006 ; Goode 1970; Malhotra 1991; Thornton, Chang and Lin 1994). There is substantial evidence that in the recent past arranged marriage was prevalent in multiple places around the world, but that its prevalence is also declining rapidly (Caldwell 1982; Caldwell 1983; Dyson and Moore 1983; Ghimire et al. 2006; Malhotra 1991; Thornton, Chang and Lin 1994). This research also details important social transformations related to the decline in arranged marriage, including changes in education, work, media and values (Ahearn 2004; Caldwell 1983; Ghimire et al. 2006; Goode 1970; Smith 1973; Thornton, Chang and Lin 1994).

Despite this research on marital arrangement, however, gaps in our understanding of this important process remain. For example, although youth selecting their own spouse may be seen as an indication of autonomy, in reality, a better measure of autonomy in spouse choice is the relationship between their attitude about spouse choice and their later spouse choice behavior (Mirowsky and Ross 2007). That is, a better indication of a youth's autonomy is if they have the amount of participation in the spouse choice process

they believe should be afforded them. Likewise, if others' beliefs, values and wills, such as those of the parents or community, more accurately indicate future behavior, greater control has been afforded to them. Primarily this lack of attention is due to the extraordinary data requirements of ideational measures from the unmarried individuals, their parents and others followed by later marital information on their spouse selection process.

This paper provides the first examination of the ideational influences on arranged marriage. By examining the relationship between a person's own beliefs concerning arranged marriage and their later degree of choice in their spouse selection process we gain better understanding of their own autonomy (Barber and Axinn 2005 ; Fishbein and Ajzen 1975). Also, by incorporating intergenerational and neighborhood level beliefs I examine the extent to which certain wills dominate others to influence the young adult's family formation behavior (Barber 2001; Bengtson 1975; Coleman 1990; Heckman 1998). There has been a greater emphasis in recent years on the importance of intergenerational and neighborhoods effects, but only rarely focusing on ideational influences (Barber 2000; Furstenberg, Brooks-Gunn and Morgan 1987; McLanahan 1988; McLanahan and Sandefur 1994; Thornton, Axinn and Xie 2007; Thornton 1991; Wu 1996).

This advance is feasible because of the unique data and study location used in this article. The data come from a large and multifaceted data collection effort aimed at gathering information at the individual, family and neighborhood levels between 1996 and 2007, and thus also relies on relatively new statistical models to properly manage all of this information. Nepal is particularly well suited to this study as the society is

structured around the family and the local community. In addition, Nepal is particularly

interesting as it is currently undergoing dramatic social change, including in rates of

arranged marriage where it was, even recently, nearly universal (Axinn and Yabiku 2001;

Ghimire et al. 2006). Prior to examining the data I outline the theoretical framework of

this paper with particular attention spent on ideational, intergenerational and

neighborhood effects. In addition, I also outline the particularly important role of

education in changing and maintaining certain values and social hierarchy.

THEORECTICAL FRAMEWORK

Typically scholars view an individual's sense of personal control[17], or one's

perception of their ability to exercise influence over their life, as a reflection of the family

and community-level opportunities given to, and restrictions placed on, the individual

(Mirowsky and Ross 2007). Thus, by examining society-wide sense of control we garner

a reflected view of the society's inequality (Bista 1994; Geis and Ross 1998; Mirowsky

and Ross 1983; Mirowsky and Ross 1990; Mirowsky and Ross 2003; Mirowsky and Ross

2007; Ross and Mirowsky 1992; Ross and Mirowsky 2002). It is important to note that

this sense of self control may be related to both achieved and ascribed statuses (Bista

1994; Mirowsky and Ross 2007). People can vary tremendously in their sense of control

or personal autonomy: including by gender, race, education, age, marital status and

numerous other characteristics (Mirowsky and Ross 1983; Mirowsky and Ross 1990;

Mirowsky and Ross 2003; Mirowsky and Ross 2007; Ross and Mirowsky 1992; Ross and

Mirowsky 2002). As well, an individual's sense of personal autonomy has several social,

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17 As Mirowsky and Ross (2007) explain, the concept of sense of control is similar to several other
concepts in the social sciences, including: locus of control, self-efficacy, personal autonomy, fatalism,
helplessness and powerlessness (Bista 1994; Gecas 1989; Rotter 1996; Seeman 1983; Seeman and Seeman
1983).

psychological and even biological effects throughout the life course (Mirowsky and Ross 2007). By better understanding the ways in which individuals gain their sense of control, we have a better understanding of the complex mechanisms through which inequality, hierarchy and power operate in society.

To examine the issue of personal autonomy in spouse selection I build on three significant social theories or frameworks. One theory emphasizes the relationship between beliefs and action—particularly the micro-level theory of reasoned action and planned behavior (Fishbein and Ajzen 1975). The second theoretical framework emphasizes the role of education in inducing changes in individuals' attitudes, behavior and social status (Caldwell 1982; Pallas 2000; Stevens, Armstrong and Arum 2008; Thornton 1994; Thornton and Fricke 1987). Finally, the third component of this research is that I expect the two previous frameworks to work at multiple levels to influence an individual's behavior. In part, I expect this to operate at multiple levels because social-psychological research consistently reports that an individual's sense of control, power or autonomy is significantly influenced by the social environment (Bird and Ross 1993; Krause 1987; Ross and Mirowsky 1992).

Attitudes and Behavior

Since the beginning of sociology, scholars have theorized about how communities, families and individuals interact to influence individuals' actions. A major question is the extent to which society's norms, attitudes, beliefs, and values affect individual behavior. Some scholars have theorized that people closer to the individual, like family and friends, may have unique effects. Others suggest that the local community, such as neighbors, may have an important independent effect on an

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individual's behavior. Even the extent to which individuals' own ideas affect behavior, conditional on the local community's ideational context, is generally unknown. However, despite their importance and long history in sociology, questions concerning the interaction of the effects of community, family and individual attitudes on behavior are unknown because inadequate data and incapable statistical methods have halted complete examination of these questions. Nevertheless, a large body of literature examines pieces of this larger issue and therefore provides important insights into what we can expect by combining all three levels of ideational influences.

Scholarly work relating people's beliefs to their family formation behavior covers fertility, contraceptive use, cohabitation, marriage, and divorce (Barber 2000; Thornton, Axinn and Xie 2007). One of the most widely used frameworks for linking attitudes and behavior at the micro level is Fishbein and Ajzen's theory of reasoned action and planned behavior. Attitudes, defined as "disposition[s] to respond favorably or unfavorably to an object, person, institution, or event" (Ajzen 1988 p. 4), along with social pressures, predict intentions, which predict behavior. Thus, positive attitudes toward a particular behavior make that behavior more likely (Barber and Axinn 2005; Fishbein and Ajzen 1975). For example, individuals with more positive attitudes toward marriage are likely to enter marriage earlier, and those with more positive attitudes toward cohabitation are more likely to enter cohabitation prior to marriage (Thornton, Axinn and Xie 2007). Following this theoretical model, an individual with greater desire for choice of their own spouse would try to gain greater control of the spouse selection process. It is important to note that although they may not get complete control, they may at least get some ability to approve or disapprove the match (Ahearn 2004; Ghimire et al. 2006). Likewise, we

would expect an individual who wants to have their marriage arranged to encourage parents or others to organize the spouse match.

Researchers concerned about family formation behavior also rely on intergenerational models (Barber 2000; Furstenberg, Brooks-Gunn and Morgan 1987; McLanahan 1988; McLanahan and Sandefur 1994; Thornton, Axinn and Xie 2007; Thornton 1991; Wu 1996). In particular, the idea of parental attitudes affecting children's behavior has been applied to the study of parents' influence on their children's marriage behavior (Barber 2000; Thornton, Axinn and Xie 2007). This research shows that parents' desires operate in two related mechanisms: socialization and social control. Parents socialize their children by influencing their children's beliefs so that they are in line with their own beliefs and desires about family formation. This comes not only from direct teaching, but also from less direct influences such as the shared environment, social modeling and the experiences of the parents and children (Barber 2001; Bengtson 1975). This would suggest that parents' desire to arrange their children's marriage would influence their child's own attitude on participation in spouse selection. However, as Barber (2001) shows, through social control mechanisms parents' desires may strongly predict the child's family formation behavior despite the child's own attitudes. Social control uses both punishments and rewards, and is often combined with socialization (Coleman 1990; Heckman 1998). Therefore we might expect that parents' attitudes to not only influence the child's attitude-behavior link with arranged marriage, but that it might also have an independent effect.

The intergenerational literature on marriage cited above is primarily from western societies, where both parents may have effects that depend on a multitude of parent-child

relationship characteristics such as if the child lives with the parent or if the parent-child relationship is strong (Barber 2000; Furstenberg, Brooks-Gunn and Morgan 1987; McLanahan 1988; McLanahan and Sandefur 1994; Thornton, Axinn and Xie 2007; Thornton 1991; Wu 1996). In contrast to this work, Nepal provides an alternative context where parental influences and decision-making abilities are not symmetrical. That is, Nepal is a strongly patriarchal society where the father makes the majority of the decisions concerning major family-life events such as marriage (Ghimire et al 2006). Thus we would expect the father's attitude to be more predictive of the level of participation in spouse choice than the mother's, and possibly even more than the child's.

In addition to parents, other people's desires and expectations have also been shown to influence individual behavior (Bernardi 2003; Harris 1995; Montgomery and Casterline 1996; Troyer 1997; Yabiku 2006). In past sociological theorizing, the neighborhood was seen as a primary unit, where common norms and shared culture were expected to influence behavior (Cooley 1909; McKenzie 1921). In particular, neighborhoods acted as both agents of socialization (Hogan and Kitagawa 1985; Vartanian 1999; Wilson 1987; Yabiku 2006) and as social modelers (Crane 1991; South and Baumer 2000; Yabiku 2006). This idea of the neighborhood as a primary unit is particularly powerful in Nepal where neighborhoods are often areas of tightly packed homes surrounded by fields, thus strongly encouraging the constant face-to-face interaction required by these theories (Cooley 1909; McKenzie 1921). In fact, Yabiku (2006) shows that when neighbors' ideal age of marriage is older than the single person's age, that person has a much higher rate of marriage, and when neighbors believe that there is a strong benefit to remaining single, single individuals marry at significantly

lower rates. This suggests that neighbors' shared attitudes may influence the spouse selection behavior of individuals, both by socializing the individual (and parents), as well as independently as a normative control.

In sum, I expect an individual's own attitudes toward arranging their own marriage to have a significant influence on their participation in their later spouse selection. Similarly, I expect that parents may influence the attitude-behavior link of the child through socialization, and might also have a unique effect on the spouse choice participation of the child through social control. In particular, I expect the father's attitude to have a stronger effect than the mother's attitude due to the patriarchal family context of Nepal. Local community, or in this case, neighborhoods, are also expected to influence the behavior link of the child through socialization, and possibly may still have an independent influence on the behavioral through mechanisms of social control.

Education and control

Education plays an important role in the distribution of authority in people's lives. I argue that one mechanism of education's influence on an individual's participation in spouse choice is through allocation of social status. Research on allocation concentrates on the use of education as an easy marker of knowledge, skills and personal traits for others in the society (Becker 1993; Pallas 2000; Schieman and Plickert 2008; Stevens, Armstrong and Arum 2008). Thus, regardless of the person's real ability, the symbol of educational attainment is sufficient for others to imbue the person with greater authority and trust, which essentially gives the person greater power and personal autonomy. In the Western context, this imputation occurs at all levels of education, but is primarily noted for college education (Collins 1979; Pallas 2000; Stevens, Armstrong and Arum 2008). In

Nepal, where educational attainment is often only a few years of schooling, even low levels of education are valued and may be treated with high levels of trust and status. In particular, education in Nepal has seen a striking expansion over the last several years—from low levels of educational attainment, where only the wealthy and privileged were able to get education, to a large expansion of available schools today (Axinn and Barber 2001; Axinn and Yabiku 2001). This rapid expansion of education often leads to a large education gap between generations (Axinn and Barber 2001; Thornton, Chang and Lin 1994). This lends itself particularly well to the idea of even low levels of education changing the social status of individuals in society and the power dynamics within between parents and children.

There is strong evidence that education confers people greater control over their own, and reduces the influence of others (i.e. the parent or society) in decision making (Caldwell 1982; Kerchkhoff 1976; Mirowsky and Ross 2003; Pallas 2000; Schieman and Plickert 2008; Thornton and Lin 1994). That is, independent of the values, skills and knowledge gained from education, education changes both the child-parent relationship and child-society relationship by modifying the meaning of childhood and the social and economic value of the child (Caldwell 1982; Kerchkhoff 1976; Mirowsky and Ross 2003; Mirowsky and Ross 2007; Pallas 2000; Schieman 2001; Schieman and Plickert 2008). The literature explains that by attending school, parents lose some authority over their children as the direct responsibility of the child's daily activities shifts from the family to the school (Thornton, Chang and Lin 1994). This affords students the ability to participate in normally restricted, or at least closely monitored, activities while not under their parent's control. As well, because their children are attending school, parents cannot

rely on their children to supply as much labor as if they were not in school (Caldwell 1982). In fact, the students may have additional work related to school even when they return home—thus further reducing their economic contribution to the family.

Of particular note here is that the increase in status due to education may have ramifications for social and family hierarchy (Gould 2003). Clearly hierarchy is based on several ascribed characteristics such as gender, age, caste and role in the family, however, hierarchy can also be based on earned statuses such as employment, education and intelligence. In fact, it is rarely just one characteristic that determines hierarchy, thus making hierarchies vague and confusing—which can lead to interpersonal conflict (Gould 2003). Thus, while the father and mother may have authority in the home, if they are less educated, they may be granted less authority by the community to make decisions than their highly educated son. Key to this study is that education confers status, and at some point that status may be sufficient to modify the social hierarchy.

Education's role as an allocator of status implies an interaction with other effects of spouse choice participation. For example, at lower levels of individual education, parents' access to nonfamily work, education or attitudes may strongly influence their children's spouse choice behavior, independent of the child's own desire to participate. However, as an individual's education increases—thus providing more status (and more control) to the child, these influences may decrease and the desire of the child may become more influential in determining the amount of participation in the spouse selection process. Thus, while education is expected to have an additive effect—due to multiple mechanisms beyond the scope of this paper—I am particularly interested in its interaction with other effects. By illustration, during my fieldwork in Nepal, I visited with

several parents who reported preferring arranged marriage for their children, but often provided the reasoning that if they did not let their child pick their own spouse, they were afraid the child would leave them. This was a possibly horrifying situation since the child was expected to know how to interact in the future world, a future the parents were certain they would be unable to survive in alone. Thus, I expect that education not only influences control over spouse selection, but it also changes other factors' effects on the marital arrangement process.

DATA and METHODS

To examine the impact of individual, family, and community beliefs, behaviors and experiences on the amount of participation in the spouse choice process, I rely on several data collection projects within the Chitwan Valley Family Study (CVFS) in Nepal. Using individual interviews, life histories, neighborhood histories and prospective demographic surveillance data, I am able to examine several possible influences simultaneously. In the paragraphs below I detail the setting, methods of data collection and coding, as well as my analytic framework.

Setting

There are several considerations that make Nepal an especially appropriate location for the study of participation in spouse choice. Although not all Nepalis are Hindus, the country was, until recently, ruled by a Hindu king and other Hindu ruling elites. In part due to the extreme exploitation of the ruling elite, there was a Hinduization of the non-Hindu population which has had an enduring influence on many aspects of Nepali life (Adhikari 1998; Ghimire et al. 2006). This is important because several aspects of the Hindu religion secure parents' authority over spouse choice by prohibiting

youth from participating in the spouse selection process for spiritual, pragmatic and social reasons (Ahearn 2004; Berreman 1972; Ghimire et al. 2006). Thus, for at least the last several hundred years the standard practice for families in Nepal was to have parents arrange the marriages of their children. Nevertheless, Ghimire and colleagues (Ghimire et al. 2006) show that from the mid 1970's to the mid 1990's arranged marriage has gone from being essentially universal to comprising only 2/3rds of marriages.

In particular, the data for this research were collected in Chitwan Valley, which lies in the south central part of Nepal. In 1955, the Nepalese government opened this valley for settlement; prior to this it was covered with dense tropical forest. Chitwan soon became a social melting pot, receiving migrants from all over the country. The valley has become connected to the rest of the country by all-weather roads, making it a business hub for the country. Furthermore, there has been a massive expansion of schools, health services, markets, bus services, cooperatives, and employment centers in Chitwan (Axinn & Yabiku, 2001). Previous work in Chitwan shows that there has been a sharp increase in school enrollment, visits to health clinics, employment outside of the home, and exposure to different sources of mass media and new ideas in recent birth cohorts (Axinn and Barber 2001; Axinn and Yabiku 2001; Ghimire et al. 2006).

Sample

In order to properly examine both ideational and nonfamily experience influences on behavior it is necessary to have longitudinal data, where the ideational concepts and nonfamily experiences are measured prior to the behavior being studied. I also need these measures for individuals, families and local communities. To accomplish my objectives I use data gathered as part of the 1996 CVFS. These data come from 151 randomly

selected neighborhoods where all individuals 15-59 years old in the neighborhoods were

interviewed concerning their values, beliefs, experiences and behaviors (Barber et al.

1997). The 97% response rate to the 1996 study generated 5,271 individuals within the

sample.

The marital behavior of the 1,011 never married study participants was collected

in regular (typically monthly) interviews between 1996 and 2007—providing 126 months

of information. In 2006, we administered a supplemental questionnaire to the 841 young

adults that had married in the intervening 10 years (we also interviewed those few

couples that married during 2007). The primary focus of the instrument was to gather the

details of the arrangement of the marriage, as well as some additional marriage related

information. Approximately 400 of the young adults no longer lived within the study

area, and thus we conducted the interview in their new location. The marital supplement

was completed by 753 respondents for a response rate of 90%. However, for the purposes

of a more uniform analytic sample, I exclude all respondents over age 25 in 1996, thus

reducing the analytic sample to 734 respondents.

Even though my focus is on prospective marital behavior, I also use information

gathered from life histories to account for pre-1996 nonfamily experiences and

institutions for the individual, the parents and neighborhood. This information was

gathered using the life-history calendar method, which has been shown to provide

accurate information for these types of experiences (Axinn, Pearce and Ghimire 1999;

Freedman 1988). Also, this study uses information from the neighborhood histories, but

particularly for 1996. Similar to the life-history calendar, the neighborhood histories

provide information on the distance to several services including markets, schools and

religious locations. Finally, the English translations of the Nepali question wordings are noted below.

--Table 4.1 about here--

Measures

Participation in Spouse Choice

As mentioned earlier, marriage in Nepal has historically been arranged by the parents or extended family. However, the greater control of spouse selection this society has afforded to the youth has been on graduated levels (Ghimire et al. 2006). Therefore, I use a measure of the continuum of participation in spouse choice. The marital supplement questionnaire asked: "People marry in different ways. Sometimes our parents or relatives decide who we should marry, and sometimes we decide ourselves. In your case, who selected your husband/wife? Your parents/relatives, yourself, or both." Those respondents who reported their parents or relatives decided who they could marry I code as 0, and those who chose their own spouse themselves I code as 4. People who responded "both" received the follow-up question, "Although both of you may have decided, one of you may have had a little more influence than the other. Who had more influence in choosing your husband/wife? You, or your parents and relatives, or both equally?" Respondents who reported parents or relatives having greater influence I code as 1, those who reported having greater control themselves I code as 3 and those who reported having equal control with their parents and relatives I code as 2. Thus, I create a 5 point scale from 0-4 where 0 means no control of the child in the spouse selection process (i.e. an arranged marriage), and 4 suggests the child had complete control of the spouse selection (i.e. an individual-choice marriage).

This study also relies on the prospective marital history gathered between 1996 and 2007 as part of the household registry system. The household registry system relies on household reports of marriage and other family formation behaviors. This registry allows me to create a timing of the first marriage, which I then use to estimate a discrete-time hazard model. By recoding the information above into arranged (code 0 from above) vs. some participation (codes 1-4 from above), I can estimate models of rates of entering an arranged marriage vs. entering a marriage with some individual spouse choice. These are then competing models of entering marriage. For those 88 respondents who we were unable to interview concerning their marriage arrangement type, I tested the model both by leaving them out and by treating them as a third state in the competing risk model (i.e. rates of entering an arranged marriage vs. an individual-choice marriage vs. a marriage that we don't know how it was arranged). The results suggest that the characteristics of this group of missing respondents are unrelated to our variables of interest.

Attitudes

In order to capture the influence of beliefs and norms on spouse choice selection I rely on a question asked of all individuals in the 1996 interview. Specifically this question asks, "Next I would like to ask a little more about your attitudes toward family life. I will read some statements to you. Please listen to them carefully and tell me whether you strongly agree, agree, disagree, or strongly disagree with the statements. Parents should always choose a spouse for their child." I code the responses as 0=Strongly Agree, 1=Agree, 2=Disagree, 3=Strongly Disagree. I interpret a low score of this attitude as preferring parental arranged marriage, and a high score as evidence of a strong belief that children should have some control in the spouse selection process. This

relies on the assumption that when respondents disagreed that the parents should arrange the marriage, they were implying that the child should have some control, and not that other people, like extended family, the government, etc, should have more control. Based on my own experience in Nepal, this assumption is reasonable. Among our marital supplement study participants, the average score on the 0-3 measure was 1.3, or less than halfway along the continuum.

To obtain a measure of the parents' and neighbors' ideational influences on spouse choice I also use the 1996 interview question described above, but asked of them. Approximately 158 of the fathers, and 86 of the mothers did not provide attitudinal information. To account for this loss of information I impute the parents' attitude using standard imputation methods (Little and Rubin 2002)[18]. The average attitude of the parents on the 0-3 scale is 1.2 for fathers and 1.0 for mothers, or just slightly lower than their children. I also use the same attitude question and coding for the neighborhood measure. That is, I average all the neighbor's attitudes to create a "generalized other" attitude. The average for the 151 neighborhoods was also 1.2. The range of scores was small—from 0.62 to 1.69, and thus a standard one unit increase in this variable would equal the entire range of variation. To compensate for this in the model I report the effect as a change in 0.1 units (or equivalently, I multiplied the variable by 10 so the range went from 6.2 to 16.9 with a one unit increase).

All of these attitudes are measured prior to the spouse selection behavior. This fact strengthens the causal interpretation of the effects as long as marriage arrangements were not made prior to the survey question. Nepali marital arrangements, are typically not from birth, and marriages are often completed within a year of the arrangement

18 I also tested the models by excluding these cases and found no influence on the effects.

(Ghimire et al 2006). For this reason, we might expect the few marriages occurring during the first year of the study to be more prone to endogeneity bias, but after the first year the bias is essentially nonexistent. Even after excluding all marriages that occurred in the first year of the study, the results remain as indicated below.

Controls

In any study such as this there are several important factors that are not the focus of the study, but are necessary to correctly understand the context of the study. For this paper I include several important controls, but I do not report the effects in the tables of results. Below I briefly discuss the roles of all of the controls in this research.

The relationship between *age* and arranged marriage is well-documented (Ghimire et al. 2006). Those who have marriages primarily arranged by their parents also tend to marry at much younger ages, and those who choose their own spouse are typically much older. In part, this is a result of the fact that by delaying marriage individuals are expected to have more nonfamily experiences. This is particularly true if the delay is due to educational goals or nonfamily work necessities. Therefore it is reasonable that although I start at a fairly young age for marriage of 15, I may have already missed people who were already married by the 1996 interview. As well, age often has a nonlinear relationship to marriage in general, with sharp increases seen at earlier ages, and decreases in rates of marriage at older ages; this creating an inverted U relationship (Yabiku 2006). Thus, I use the age at the time of risk of marriage as an important control when predicting participation in spouse choice. In addition I use the time varying age and its square in the hazard model to account for the nonlinear relationship. The average age of marriage is a surprisingly high 22.5 years, with a range from 15 to 35 years old.

Gender differences for many social, health and demographic outcomes exist in Nepal (Ahearn 2004; Bennett; Macfarlane 1986). Compared to men women are typically seen as having lower status (Caldwell 1983; Dyson and Moore 1983; Ghimire et al. 2006). In relation to marriage, women are typically younger than their husband, and often have less control over the spouse selection (Ghimire et al. 2006; Yabiku). Thus I also expect that women will have less control over their own spouse choice, and will enter marriage, and particularly arranged marriage at much faster rates than men.

Caste/Ethnicity is an important control variable for this study because certain castes, particularly Hindus, prefer to have their family play a large role in finding or deciding on a spouse. Although caste is extremely complex, a common classification is into five major groups: high-caste Hindu, low-caste Hindu, Newar, Hill Tibeto-Burmese, and Terai Tibeto-Burmese (Axinn and Yabiku 2001; Ghimire et al. 2006). The first two groups both have similarly origins from India, and both practice the Hindu religion, but the former has had much greater access to political, economic and social resources. Newars are unique in that they practice elements of both Buddhism and Hinduism. Despite being native to the Kathmandu valley, due to their extensive involvement in the business sector of Nepal, they can be found all over Nepal. The Hill Tibeto-Burmese group is primarily from Tibet and primarily practice Buddhism. Finally, the Terai Tibeto-Burmese groups are the native inhabitants of the Chitwan Valley. Despite the strong Hinduization of the non-Hindu groups which has influenced almost every ethnic group to arrange their marriages to some extent, (Ahearn 2004; Berreman 1972; Ghimire et al. 2006), ethnic groups still differ widely in their forms of arranging marriage, with the two Hindu groups being the major practitioners of arranged marriage followed by Newars

and then the two Tibeto-Burmese groups (Ahearn 2004; Bennett 1983; Fricke 1986;

Ghimire et al. 2006; Macfarlane 1986).

I also control for 6 types of nonfamily experience that have been shown to be

particularly important for arranged marriage: education, nonfamily work, media

exposure, participation in youth clubs, travel and residential moves (Ghimire et al. 2006;

Thornton, Chang and Lin 1994). I also include a neighborhood measure of the distance to

the nearest school. Below I briefly describe how each measure was constructed.

Educational experiences have been a major focus of the CVFS. Using the 1996

interview I create two measures of education for the main, or focal, sample of never

married youth. One measure is the total accumulation of education, in years, until 1996.

The second measure is if the respondent was enrolled in school in 1996. Including both is

typically important as they often have opposite effects on timing of marriage (Raymo

2003; Thornton, Axinn and Teachman 1995; Yabiku 2006). The mean number of years of

school of the main sample was 7.3 years and 63% were enrolled at the time of the

interview.

Measures of parent and neighborhood education also use the 1996 interview data.

However, in the few cases where either the father or mother did not supply an educational

attainment measure; I use the child's report of the parent's education level. Among the

parents of the focal sample of unmarried children, fathers had attended school for an

average of 3.6 years while mothers had attended an average of only 0.7 years of school.

Nonfamily work is also an important measure of nonfamily experiences. For all

individuals including children and both parents, I use the life history calendar to

determine if they ever worked for a nonfamily institution (both wage and salary

positions) by 1996. For those parents who did not have a work experience history, I rely on the child's report of if the parent had ever worked for pay. Looking at Table 4.1 we see that 59% of the unmarried children, 53% of fathers, and 27% of mothers had ever had a nonfamily work experience.

Mass media, including radio, television and movies, in Nepal generally present Western values and views, and typically have been shown to encourage the reduction of social control (Axinn and Barber 2001; Janowitz 1981). Ghimire and colleagues (Ghimire et al. 2006) found that for past generations, any exposure to mass media was associated with greater participation in the spouse selection process. To control for the media exposure of individuals this study uses three questions about the extent to which people listen to the radio, watch T.V. and attend movies. Few in this study had never seen at least one of these three media forms, and the amount of consumption for the three types is highly correlated. Therefore I create an index by combining the three types of media consumption, where 0=never or rarely consume the media, 1=refers to low levels of consumption such as once a week for the radio, once a month for T.V. and fewer than 4 movies a year, and 2=is higher levels of media consumption. Combining all three variables gives a range of 0-6, with a mean of 4.2.

Participation in youth clubs has increased tremendously over the past several years, and research shows they provide an important venue for youth to exchange ideas, as well as facilitating finding romantic partners (Ghimire et al. 2006). The measure of youth club participation comes from the question on the life history calendar, "Have you ever been a member of a youth club?" A "yes" response was coded as 1 and a "no"

response was coded as 0. By 1996, 17% of the focal sample had ever participated in a youth club.

Travel can provide several opportunities to see new behaviors and learn new ideas. In particular, traveling to a major city (i.e. Kathmandu), or abroad may be a particularly powerful experience. Based on the interviews I create two dichotomous measures: 1) if they ever traveled to Kathmandu and 2) if the respondent had ever traveled out of Nepal. In 1996, 30% of the respondents had traveled to Kathmandu and 10% of the focal sample had traveled out of Nepal.

Residential moves may also introduce people to new ideas and enlarge their social networks. Although most likely a decision of the parents (or other family member), children have been shown to be strongly influenced by the number of residential moves. In particular, Ghimire and colleagues (Ghimire et al. 2006) find that those who moved more frequently in their premarital life, had greater control over their spouse selection. Using the life history calendar, I can estimate the number of moves based on the changes in residential location. Prior to 1996, half of the focal sample had never moved (giving even more strength to the influence of the neighborhood), another 25% had only moved once, and typically the rest only move 1 or 2 additional times.

The number of children a respondent's mother has may be a measure of resource competition within the household. To account for this I control for the number children the mother had by 1996. Also as discussed above, I control for those respondents who were not living in the same neighborhood as their parents in 1996. About 10% of the focal sample was in this group. This variable has the important methodological role of indicating whose parent information was imputed. It also may be a measure of the current

non-family living. Like other nonfamily experiences, this measure may influence spouse choice, and thus it is an important methodological and substantive control (Thornton and Lin 1994).

Analytic Framework

In order to examine the multiple influences of spouse choice participation simultaneously, my analysis consists of two components. The first uses ordinal logistic regression to examine spouse choice participation. As part of that analysis I interact the entire model by education to test my hypothesis that education changes the influence of other variables. The second portion of the analyses is a variation of the participation model which models the hazard of having an arranged marriage as a competing risk to having a marriage with some spouse choice given to the child. For reasons I detail below, I also run each model separately by gender and caste. What follows is a description of each of these steps.

Participation in Spouse Choice

In order to estimate multivariate models of the five point ordinal measure of participation in spouse choice, I use ordinal logistic regression (Hoffmann 2004; Powers and Xie 2000). This technique uses the cumulative logit function to estimate the relationship between the ordinal dependent variable and the collection of independent variables. This approach is particularly useful because the underlying assumption of the statistical model is that the ordinal measure represents a continuous underlying function. Because the data are hierarchical, I use Mplus' multilevel option to account for the clustering at the neighborhood level (Muthén and Muthén 2006). Because of the scarce number of multiple observations within family, I do not cluster at that level.

The multilevel ordinal logistic regression estimates of the odds ratios predicting increasing control of the individual in the spouse choice are presented in Table 4. 2. My general interpretation for these coefficients is that for each unit increase in the independent variable there is a multiplicative increase in the odds of moving to the next highest category in the ordinal scale of individual (i.e. child) control of the spouse choice process. Presented coefficients greater than 1 indicate a positive relationship between the independent variable and spouse choice participation, and coefficients less than 1 indicate a negative relationship. Finally, although not shown here, I also tested these models in a multilevel multinomial logistic regression to examine the proportional odds assumption of the ordinal logistic regression model (Powers and Xie 2000). I find that for the most part the categories do appear ordinal in nature, and therefore do not need to be treated as nominal categories.

To examine the influence of education as a method of allocation, I interact the ordered logistic regression model with two education categories based on the respondent's education attainment in 1996. For the first education grouping, I divided the sample into those with 8 years or greater of education, and those with fewer than 8 years of education. I have two reasons for this cut point. First, the median level of education for this sample is 8 years of school. Thus the groups are of equal size, which provides maximum statistical efficiency. More importantly, however, is that I originally chose the 8 year cutoff because that is the grade level everyone should have obtained by age 15. Thus, if they had gone to school according to standard schooling practices (and even if they started late or were held back) they should have completed the 8th grade by age 15, the youngest age in this sample. I present the same model for each of the two groups

(above vs. below 8 years of school), and point out significant differences between the two.

The second categorization of education I use for an interaction is if children had more schooling in 1996 than their parents, or if they had the same or less education. I used the child's educational attainment in 1996 and whichever of the parent's education was higher (usually the father). This measure focuses the issue of education's role of providing status. Thus, if the child has higher education levels than the parents, then they may have more status and even more autonomy. Although I did try a measure of the number of years more education a child had, because the results are so similar, I went with the more parsimonious measure of education. Again, I present the same model for each of the two groups, and point out significant differences between the two.

Hazard of Arranged Marriage

I also estimate the effects of individual, family and neighborhood beliefs and nonfamily experiences on the rate of marriage using discrete-time hazard models. These models take the full unmarried sample and follow them for 126 months to estimate the timing of marriage (Hoffmann 2004; Powers and Xie 2000). Specifically, I am using a competing-risks hazard model, and focus on the effects of the independent variables on the rate of entering an arranged marriage vs. the rate of entering a choice marriage (i.e. any amount of choice). In this model, person-months of exposure become the unit of analysis, and although the number of person-months is extremely large this does not inflate the standard errors (Allison 1982). I use logistic regression to estimate the effects of the independent variables on rate of marriage. Again, I present the results as exponentiated log-odds ratios (i.e. odds ratios) and because the time periods (i.e. months)

are so narrow, I interpret the estimates as changes in the rate of marriage, as is standard in the literature (Thornton, Axinn and Xie 2007). Following the example of Yabiku (Yabiku 2006) I control for the seasonality of marriage by giving each of the 12 months its own dummy variable (i.e. 11 dummy variables and one comparison month), but these effect estimates are not presented in the results. I also tested for several other parameterizations, including a full parameterization of 125 dummy variables for all 126 months of observation. None of the parameterizations of the baseline hazard influenced the results, and thus I used the more parsimonious 12 month parameterization. I also present a model that explicitly compares the effects of the different independent variables on arranged marriage compared to their effects on choice marriage. Finally, I also run all the education, gender and caste interactions but do not present those results in this paper, other than to note any important findings.

RESULTS

--Table 4.2 about here--

Before presenting the results in Table 4.2, it is useful to examine the amount of spouse choice over the last 10 years for this sample. As mentioned earlier, of the 1,011 never married respondents in 1996, 843 (83%) were married after 10 years. Of those, we were able to interview 753[19] respondents. Of these respondents, 28.4% reportedly had no control over their spouse choice, 13.4% reported having some control, but that their parents had more, 12.0% were recorded as saying that they and their parents' shared equally in the spouse selection process, an additional 15.0% said both they and their parents had say in the process, but that they had more of the control, and finally 31.2%

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19 The analytic sample, of 734 youth 15-25 in 1996, provides very similar percentages to the full sample of 753 respondents.

reported choosing their spouse by themselves. When combined with the retrospective work of Ghimire and colleagues (Ghimire et al. 2006) the results confirm a dramatic change in marriage in Nepal. In their study of ever married people ages 25-54 in 1996, 65% reported no control over the marriage arrangement and 22% chose their spouse for themselves (the other percentages in order of increasing children participation were 6%, 2% and 5%). This is evidence of a fast shift from a society of almost no child participation in spouse choice, to one where most people have the majority of the control over their own spouse selection, to possibly one soon that will see few parents having the majority of the control of choosing a spouse.

Participation in Spouse Choice

I present the results of the multilevel ordinal logistic regression in Table 4.2. Also, although not shown in Table 4.2, I will refer to models where the effects were run alone or in groups to test their mediating effects on other relationships. In addition, all models control for age at marriage, gender, caste, child and parent educational attainment, distance from neighborhood to closest school, if respondent was enrolled in school in 1996, media exposure, if respondent ever traveled to Kathmandu, if respondent ever traveled outside of Nepal, number of residential moves in respondents lifetime and the number of children the respondent's mother has (i.e. number of siblings still living); but these results are not presented in the tables, nor are they extensively discussed. Generally, the effects of these controls did not differ from past research findings (Ahearn 2004; Caldwell 1983; Ghimire et al. 2006; Goode 1970; Smith 1973; Thornton, Chang and Lin 1994).

Model 1 presents the estimate for the effect of the child's attitude that youth should have more say in their spouse selection on their the child's own spouse selection process, conditional on the controls mentioned above. In line with my hypothesis, model 1 shows that the more a individual believes youth should have more control of their spouse choice the greater the control they receive in their own spouse choice (Fishbein and Ajzen 1975; Thornton, Axinn and Xie 2007). However, despite the nontrivial size of the estimate, statistically, the effect is non-significant. The addition of parental and the neighborhood average attitudes in model four changes the size of this effect (or it significance) little. Thus, although the effect is in the expected direction, the evidence is lacking that the individual's own attitude predicts their spouse choice participation.

Model 2 of Table 4.2 presents the estimated joint effects of the parents' belief that children should have more control over their spouse choice, while controlling for several other factors. Recall that the hypothesis is that parents who believe that children should have more choice in their marriage partner selection will have children with more involvement in the process (Barber 2000; Barber and Axinn 2005 ; Fishbein and Ajzen 1975; Thornton, Axinn and Xie 2007). Jointly, parent's attitudes do predict spouse choice participation, although only marginally significant. More interesting is that the effect of the father's belief is larger and in the hypothesized direction, compared to the mother's attitude. More specifically, as father's belief that children should have more say in the spouse choice increases by one level, there are ((1.17-1)*100) 16% higher odds the child will move to the next highest level of participation. This effect implies that the father's belief is at least as important, if not more important, than the child's own value in determining the level of participation in the spouse selection process. The positive effect

of the father's belief is in line with the hypothesis that parents play an important role in determining the child's level of participation and that within the patriarchal context of Nepal father's attitudes are typically more influential than mother's view. The inclusion of the child's and the neighborhood attitudes inconsequentially change the effects for both parents.

Model 3 is the test of the neighborhood average attitude on the child's spouse choice. Both the coefficient in Model 3 and the full model in the final column point to community having little to no effect on participation in spouse choice. Of course, important here is to note that the effect is really the attitude of the members of the neighborhood in 1996. That is, while all of the measures of attitudes suffer from possible changes within individuals (i.e. the father becomes more accepting of child participation which leads to more child participation), the neighborhood suffers the additional problem that people move in and out. Therefore, even if these attitudes were fixed across time and within individual, a neighborhood could change substantially due to migration of people with different beleifs. Thus, it may be that neighborhood effects are more difficult to detect, due to this possibly constant change. Similarly, the average attitude of the neighborhood may not be the "generalized other" most people are influenced by. That is, a better measure may include different age groups, peer networks or gender.

Models by Gender and Caste As discussed earlier, both gender and caste are extremely influential in determining the level of participation in spouse choice. As expected, being female is the largest (negative) indicator of participation in spouse selection (Ahearn 2004; Bennett; Caldwell 1983; Dyson and Moore 1983; Ghimire et al. 2006; Macfarlane 1986; Yabiku). The results in all of the models (not shown) confirm these findings and

suggest this is still the case in Nepal. Young women typically have 78-80% lower odds of participating in next higher category of spouse choice than men. The results of all four models show that caste is strongly related to spouse choice participation, paralleling past research (Ahearn 2004; Bennett 1983; Berreman 1972; Fricke 1986; Ghimire et al. 2006; Macfarlane 1986). Generally we see that Low-caste Hindus do not have significantly different spouse selection involvement from High-caste Hindus. Newar youth appear to be about 2 times more likely to be in a higher category of spouse choice participation than High-caste Hindus. And both Tibeto-Burmese groups are 3.4 to 4.6 more likely to participate in the next highest level of spouse choice involvement. Altogether this suggests that caste still plays a strong role in marital arrangement, and in fact, because the effect sizes appear to be larger than previous work, it may be evidence the Hinduization of non-Hindu's is declining (Ghimire et al. 2006). This may suggest that soon arranged marriage may only found within the Hindu caste groups.

In order to consider the different cultural milieus for people of different castes and the different processes for young men and you women, I run model 4 allowing for interactions by gender and then by caste (results not shown). Although most variables appeared to operate in similar directions and magnitudes for both men and women, some important distinctions are evident. First, the moderate positive effect of the child's attitude appears to be the result of combining the essentially no effect for males (odds ratio of 0.99) and the significant positive effect for females (odds ratio of 1.28). This result indicates that the child's attitude matters more for women than for men (an unexpected result). Of course it is also important to keep in mind that while 44% of boys chose their own spouse only 20% of girls did the same, and similarly while 15% of boys

had their marriage arranged 41% of girls had no say in choosing their marriage partner. Hence if arranged marriage is primarily for girls, an attitude effect would be much easier to detect than it would for boys.

Another interesting finding is that, for males, both parents' attitudes are relatively large, positive and significant. That is, for boys, both the mother's and the father's attitudes toward giving more control to the child increase that child's participation in their spouse choice selection (odds ratio of about 1.25 for both). Because of the lack of the effect from the boy's own attitude, this implies a stronger social control mechanism over socialization (Barber 2000). However, for girls, the effect of the father's attitude similar to that for boys, but the mother's attitude has a very strong negative effect (odds ratio of 0.73). The large negative effect may be evidence of a statistical anomaly due to the moderate correlation of 0.325 with father's attitude. However, further exploration suggests that this effect is negative and significant even after removing other ideational measures. One possible explanation is that in the case where the mother is pushing for greater control over the spouse choice process for her daughter, the father may in fact put greater limitations on the young woman's role. However, this is purely speculative and would require greater field world to flesh out this issue.

The models of spouse participation do fit slightly better for the Hindu groups (both High-caste and Low-caste) compared to the non-Hindu groups. That is, the person's own attitude toward greater child participation in spouse choice has a stronger (and significant) effect on actual participation. However, the differences in most of these effects are not statistically significant (in part due to the smaller sample sizes of the non-Hindu groups). Thus, although there are certainly large differences in the amount of

control afforded to the children in their spouse selection, the ideational effects do not appear to be significantly different across caste.

Interaction with Education

--Table 4.3 about here--

Table 4.3 reports the test of the interaction of two categorizations of education with the ordered logistic model in Table 4. 2 (model 4). These tests are intended to reflect the hypothesis that education allocates status, trust and autonomy, so that parents and others view the individual differently. That is, under different levels of education we would expect different effects from multiple variables.

An examination of the results suggests this hypothesis is supported. Those youth with 8 years or higher education in 1996 have substantially higher levels of control over their spouse choice, and those with lower levels of education are more influenced by the experiences and characteristics of others. The best example of this is the change in the coefficient for the child's own attitude toward spouse choice. Recall that in the previous model there was a positive relationship between the attitude and behavior that was interpreted as an indication of some level of control over spouse selection for at least some of the children. The interaction with education shows that this small positive effect is a result of the strong positive effect of the attitude for the individuals with higher levels of education (odds ratio of 1.43), while those with less than 8 years have little control as the odds ratio of 0.97 is not significantly different from 1. That is, the effect of the attitude for those above 8 years of education is a 43% increase in the odds of moving in to the next highest participation category for each one unit increase in disagreeing that parents should control their children's spouse choice, while for those with less than 8

years there is essentially no effect of the individual's attitude on later participation in spouse selection.

This result is confirmed in the third and fourth columns when comparing significant difference in the effects of the child's attitude for children with the same or fewer years of school than their parents (a nonsignificant odds ratio of 0.94) and those having more education than their parents (odd ratio of 1.27). One reason for the slightly smaller effect in this education interaction is that while few of the children with less than 8 years of education probably ever obtained enough additional education to move into the 8+ years of education group, several of the children could have moved from the less than or equal to group to the kids having more than their parents group between the survey date and the marriage date. Nevertheless, overall, this supports the hypothesis that education provides an avenue for youth to express their will, possibly due to the higher social status they obtain by completing more education (Caldwell 1982; Gould 2003).

The interaction with education produces interesting effects in the other ideational measures as well. Regardless of having more or less than 8 years of school, the father's attitude has a similar effect for those with less than 8 years of school and for those with more than 8 years. And although the difference between the effects is somewhat larger in the interaction with the child-parent education comparison (i.e. columns 3 and 4) the effects are not significantly different. However, for the effect of the mother's attitude on child participation in spouse choice there does appear to be a significant change in effect size. That is, for those with less than 8 years of school the effect of the mother's attitude is negative (i.e. odds ratio of 0.79) which is significantly different from the effect of mother's attitude for children with more than 8 years (odds ratio of 1.07). This result is

interesting in that for children with higher education the individual and both parental attitudes are all in the expected positive direction, whereas for those children with lower levels of education the effects are more difficult to understand.

Models by Gender and Caste To conclude the discussion of the spouse choice participation model I briefly discuss the differences in these regressions by gender and caste. To be clear, at this point these models are three-way interaction models, and are difficult to interpret in part because it is difficult to know how to compare across the four groups (i.e. male-lower than 8 years, male-higher than 8 years, female-lower than 8 years and female higher than 8 years). Nevertheless, the general pattern holds that among lower educated people (or people with less education than their parents)—whether male or female, or of most any caste—their parent's attitudes have stronger effects and their own attitudes have weaker effects when compared to those effects of people with higher levels of education (or more education than their parents). In other words, education's ability to provide greater control of the spouse choice to the child (as indicated by a significant attitude effect for the child) appears to work for both males and females and works similarly for most castes.

<div align="center">--Table 4.4 about here--</div>

Competing-risk hazard models of arranged and some choice marriage

I present the results of the competing risk hazard model in Table 4.4. The first column of results represents the odds of entering a marriage where the spouse was selected solely by the parents (i.e. an arranged marriage). The second column of results represents the odds of entering a marriage where the child had some involvement in selecting their spouse (i.e. a choice marriage). Both of these models account for the risk

of entering the other (and of being in the married but did not respond group). The third

column supplies the effect size difference comparing arranged marriage to choice

marriage. Thus while the first two columns examine the rate of entering a certain type of

marriage, controlling for the option of entering another type of marriage, the third column

explicitly compares those two types of marriages. Thus, a significant effect larger than 1

reports that the characteristic promotes choice marriage over arranged marriage, and a

significant effect below 1 asserts that the characteristic discourages choice marriage over

an arranged marriage. Recall that the purpose of this model is to control for the censoring

of people who never married. It also provides a secondary examination of the results

from the ordinal logistic regression and the education interaction. Finally, because the

monthly time period is so narrow and events are rare, the odds of experiencing the event

approximate the continuous-time rate of experiencing the event (Thornton, Axinn and

Xie 2007; Yabiku 2005). Therefore, in this situation, I use the terms odds and rates

interchangeably in my discussion of the results.

Because many of the results here parallel the findings of Tables 4.2 and 4.3, I will

only emphasize the important substantive findings. For example, we can see that the

stronger a person's own belief that parents should not choose their child's spouse, the

slower their rate of entry into any marriage, and particularly into arranged marriage.

More specifically for every increase in disagreeing that parents should choose their

children's spouse there is a 29% decrease in the rate of entering an arranged marriage,

and a 7% decrease in the rate of entering a choice marriage. Although the effect is only

significant for arranged marriage, the third column indicates that having a more positive

attitude toward greater child control in spouse choice does significantly reduce entry into

an arranged marriage over a choice marriage. Thus, even if children do not get the full participation they want, their attitude may delay the arranged marriage substantially.

Parental attitudes are consistent with the intergenerational transmission literature that suggests that even after controlling for the child's own attitude, parent's attitude has significant influences on family formation (Axinn, Clarkberg and Thornton 1994; Thornton, Axinn and Xie 2007). More specifically, increasing the father's attitude toward greater child participation in spouse choice increases rates of entering a choice marriage and promotes entering a choice marriage over an arranged marriage. Again this unique effect of father's attitude implies that parent's influence operates through social control mechanisms in addition to any socialization mechanisms—and that the patriarchal family system of Nepal is still relative in family formation decisions. Also note that in this case the effect of mother's attitude is never significantly different than 1, but does still appear to discourage choice marriage over arranged marriage.

The effects of the controls (not shown) are also worth quickly mentioning. Age operates under the well-established inverted U shape (Yabiku 2006; Yabiku 2005). However, arranged marriage does seem to have a more compressed inverted U. Women are entering choice marriage at 33% faster rates than men, which is consistent with previous work (Ghimire et al. 2006; Yabiku 2006). However, more impressive is that women enter arranged marriage at 6.1 times faster rates than men. This effect has actually increased from the past generation, and suggests that for some women in Nepal there is still a great lack of control in one of the defining events of their lives. As well, caste appears to have strong effects for entering an arranged marriage, with the Hindu castes having much higher rates than the Newar and two Tibeto-Burmese groups. However,

there is evidence that caste is less an issue with choice marriage timing. That is, many of the difference seen in arranged marriage are not evident in the hazard of entering a choice marriage. In sum, the results of the controls imply that arranged marriage is now primarily an issue for females within the Hindu castes.

Finally, I ran each of the competing risks models for both sets of education groups (more/less than 8 years and more/less than parents). These interactions reaffirmed the overall findings of this study. For example, although the child's own attitude toward greater participation in spouse choice lowers rates of entering both the arranged and choice marriage, it was only in the higher education groups (i.e. 8 or more years of school, or children with more education than their parents) that the effect the attitude had significantly stronger effect on delaying arranged marriage compared to choice marriage[20].

CONCLUSION

The purpose of this paper is to explore a central focus of social science research; namely the influence of parents and neighborhood context on a person's sense of control, or autonomy. As a manifestation of autonomy I examine the extent to which people participate in the selection of their spouse. More specifically, I operationalize autonomy as the relationship between a person's attitude toward spouse choice and their later spouse choice participation. That is, greater autonomy would be related to stronger relationships between the attitude and later participation. I test the extent to which the individual, parents and neighbors influence participation in spouse choice and the rate at which people enter arranged versus choice marriages.

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20 I also extended these models to include interactions with caste and gender, but no new or important findings were evident, so I do not discuss them for the sake of parsimony.

Historically in Nepal, arranged marriage was almost universal. However, recent social changes have seen that practice quickly and consistently decline (Ghimire et al. 2006). I document the continued decline of arranged marriages over the past 10 years in Nepal. For the first time in hundreds (if not thousands) of years, more people are probably choosing their spouse completely by themselves than having their parents choose one for them. Only about 28% of the sample still had their marriages arranged, down from 65% of the previous generation. However, I also document that certain historical relationships still remain. For example, Hindu castes (both Upper and Lower Hindus) are still the primary participants of arranged marriage. This is not surprising since it was the Hinduization of the other groups that lead to the near universal practice of arranging marriage. Also, there is strong evidence that the bulk of the decline of arranged marriage is among males. That is, women often have 5-6 times higher odds of being in an arranged marriage than their male counterparts.

An important finding of this study is that there are strong ideational influences on spouse choice. For example, there is a positive effect of preferring more child participation in spouse choice and then getting to participate in one's own spouse selection process. Interestingly, it is important to note that one possible cause for women's lower level of participation is that they report lower levels of thinking children should participate in spouse selection. I judge the significant positive relationship between attitude and behavior to be a sign of some autonomy given to these youth in the marriage process. More importantly, this paper shows that children with higher levels of education (8 years and over) and those with higher levels of education than their parents have a much stronger attitude-behavior link, thus suggesting that autonomy is greater at

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higher levels of education. This finding confirms the hypothesis that allocation of status and autonomy by education is changing the effects of other variables, and not just acting as a mediating factor. As well, for those who have higher levels of education there is evidence that both parental attitudes toward child participation in the spouse choice process positively influence the child's spouse selection. However, among less educated youth, it is only the father's attitude that influences the participation of the child. That is, for children with lower levels of education the patriarchal context of Nepal affords the father the authority to determine the amount of participation the child has in his or her own spouse choice.

As noted earlier, this study attempts to find influences on autonomy by using the instrument of arranged marriage. It has shown a strong effect of the allocation of status through education. However, this study was not able to fully examine the socialization effects of education, although there is some evidence of the effect of socialization. A better study of this would examine the role of nonfamily experience in changing values or abilities. Also, more work needs to be done on women's experience with spouse choice. Based on these results, unless there is dramatic social change, Nepal will soon be a place where only Hindu women have arranged marriage, and they will have few mechanisms for gaining more control over their spouse selection.

Table 4.1. Descriptive Statistics of Measures Used in Analyses

Measure	Coding	N	Mean	Std. Deviation	Min	Max
Dependent Variable						
Participation in spouse selection	0=low - 4=high	734	2.07	1.63	0	4
Independent Variables						
Attitude-Parents should always choose spouse						
Child's attitude	0=SA - 3=SD	734	1.29	0.88	0	3
Father's attitude	0=SA - 3=SD	576	1.18	0.91	0	3
Mother's attitude	0=SA - 3=SD	648	0.98	0.90	0	3
Neighborhood average attitude	0=SA - 3=SD	734	1.205	0.23	0.62	1.69
Controls						
Respondent Age at Marriage	Age in years	734	22.54	3.65	15	35
Gender	0=male, 1=female	734	0.52	0.5	0	1
Ethnicity		734				
High-caste Hindu	0=No, 1=Yes		0.54	0.5	0	1
Low-caste Hindu	0=No, 1=Yes		0.08	0.27	0	1
Newar	0=No, 1=Yes		0.07	0.26	0	1
Hill Tibeto-Burmese	0=No, 1=Yes		0.13	0.33	0	1
Terai Tibeto-Burmese	0=No, 1=Yes		0.17	0.38	0	1
Child's Educational attainment	Total years	734	7.26	3.06	0	14
Father's educational attainment	Total years	720	3.62	4.18	0	1
Mother's educational attainment	Total years	730	0.67	1.82	0	1
Distance walk to nearest school	in minutes	734	9.2	6.55	0	30
Child enrolled in school in 1996	0=No, 1=Yes	734	0.63	0.48	0	1
Child ever worked for pay	0=No, 1=Yes	734	0.59	0.49	0	1
Child's media exposure	0=low - 6=high	734	4.2	1.14	0	6
Child ever participated in youth clubs	0=No, 1=Yes	734	0.17	0.37	0	1
Child ever traveled to Kathmandu	0=No, 1=Yes	734	0.30	0.46	0	1
Child ever traveled outside Nepal	0=No, 1=Yes	734	0.1	0.3	0	1
Number of residential moves for Child	0 - 3+	734	0.81	0.97	0	3
Father ever worked for pay	0=No, 1=Yes	734	0.53	0.5	0	1
Mother ever worked for pay	0=No, 1=Yes	733	0.27	0.45	0	1
Mother's number of children	1 - 9+	734	5.1	1.89	1	9

Table 4.2. Ordinal Logistic Regression Estimates of the Influence of Individual, Parental and Neighborhood Attitudes on the Participation in Spouse Selection for First Marriages

Measure	(1) Individual	(2) Parents	(3) Community	(4) Combined
Attitude-Children should participate in spouse choice				
Child's attitude	1.11			1.13
	(1.29)			(1.44)
Father's attitude		1.16 +		1.17 +
		(1.72)		(1.79)
Mother's attitude		0.92		0.94
		(-1.00)		(-0.79)
Neighborhood average attitude (0.1 unit increase)			0.97	0.96
			(-0.85)	(-1.19)
N	734	734	734	734
df	21	22	21	24
-2 log likelihood	2097.69	2095.47	2098.58	2092.62
Z-values in parenthesis	+ p<0.10, *p-value<0.05, **p-value<0.01, ***p-value<0.001 (two-tailed tests)			

All analyses control for respondent age at marriage, gender, caste, child and parental educational attainment in 1996, neighborhood distance to closest school, 1996 school enrollment, media exposure, child and parent nonfamily work, travel, migration, and number of siblings.

Table 4.3. Ordinal Logistic Regression Estimates of Participation in Spouse Selection by Two Education Groups

Measure	Level of Education		Parent/Child Years of Education	
	> 8 years of education	8+ years of education	Child ≤ Parent	Child > Parent
Attitude- Children should participate in spouse choice				
Child's attitude	0.97	1.43 **	0.94	1.27 **
	(-0.21)	(2.70)	(-.040)	(2.25)
Father's attitude	1.22 +	1.24	1.15	1.24 *
	(1.65)	(1.60)	(0.81)	(1.97)
Mother's attitude	0.79 +	1.07	0.81	0.97
	(-1.78)	(0.56)	(-1.32)	(-0.33)
Neighborhood average attitude (0.1 unit increase)	1.08	0.96	0.93	0.98
	(1.34)	(-.29)	(-1.07)	(-0.51)
N	366	368	233	501
df	24	24	24	24
-2 log likelihood	926.48	1020.60	645.06	1352.13
Z-values in parenthesis	+ p<0.10, *p-value<0.05, **p-value<0.01, ***p-value<0.001 (two-tailed tests)			

All analyses control for respondent age at marriage, gender, caste, child and parental educational attainment in 1996, neighborhood distance to closest school, 1996 school enrollment, media exposure, child and parent nonfamily work, travel, migration, and number of siblings.

Table 4.4. Discrete Time Hazard Model of the Influence of Individual, Parental and Neighborhood Characteristics on Timing of First Marriage

Measure	Arranged marriage		Choice Marriage		Choice compared to Arranged	
Attitude Children should participate in spouse choice						
Child's attitude	0.71	***	0.93		1.30	*
	(-3.64)		(-1.29)		(2.39)	
Father's attitude	0.90		1.12	+	1.25	*
	(-1.14)		(1.94)		(2.00)	
Mother's attitude	1.10		0.98		0.88	
	(1.00)		(-0.40)		(-1.06)	
Neighborhood average attitude (0.1 unit increase)	1.01		0.97		0.95	
	(0.32)		(-1.58)		(-1.11)	
Person-months			64,947			
df			108			
-2 log likelihood			8934.08			
Z-values in parenthesis			+ p<0.10, *p-value<0.05, **p-value<0.01, ***p-value<0.001 (two-tailed tests)			

All analyses control for respondent gender, caste, child and parental educational attainment in 1996, neighborhood distance to closest school, 1996 school enrollment, media exposure, child and parent nonfamily work, travel, migration, number of siblings and month parameterization for seasonal changes in probability of marriage.

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CHAPTER 5
Conclusion

This dissertation has expanded on two areas of research within the study of ideational influences on family behavior. One area examines people's understanding of the world and their beliefs in the causal relationships behind family and social change. The second area focuses on the intersection of the wills and desires of the individual and influential others in making important family formation decisions. This work also contributes to the larger body of literature on how individuals operate within a social context to influence others and act for themselves.

Ideational frameworks help individuals describe, understand, and explain the world, by defining certain behaviors and institutions as meaningful. They also identify what is important and good in life, and what methods are appropriate and productive for achieving desired goals. Thus, understanding what people believe in, and the extent to which they believe it is requisite to comprehending individual behavior, which, in turn, aides in understanding social and demographic change. The primary focus of this dissertation is to supply additional knowledge on the role of people's beliefs and values on behavior.

W.I. Thomas' Theorem, that a person's belief, perception or definition of the event or issue has its own effect on the individual's later actions, is a foundational statement of sociology (Thomas and Thomas 1928), and yet there are few large scale projects have addressed it. Currently, many studies fail to recognize that some behavior is

a result of the person's definition of the situation, and whether or not the situation would have had an effect is possibly inconsequential because the definition of the situation itself has a real effect on actions. One exception to this pattern is a recent stream of theorizing linking people's understanding of societal and family change (Thornton 2005). Chapters 2 and 3 show that people have very strong views about what will make their family and society better, more educated, wealthier and more developed. This result has implications beyond work on family behavior because if the Thomas theorem is correct, then we would expect beliefs to have implications on people's lives, regardless of if the beliefs are based on false assumptions of faulty logic. This then leads to further questions of where people learn these models, how often people rely on them, and how easily the models are changed or exchanged.

In a first step to examine how people's perceptions of the world differ, I use theory on variation in acceptance of rules and norms (Merton 1938) to show that two important elements appear: 1) people must have knowledge of the common model, and 2) people must have access to the means to work within that model and achieve the goals designated by the model. The lack of either one produces alternative models, or at least the rejection of the mainstream model. With both, there is conformity. Thus, people who are socially isolated or excluded tend to reject the common model linking societal and family change. Similarly, people with fewer nonfamily experiences, such as with education or mass media, are more likely to reject the modernization model. In addition to replicating this work in other social contexts, future work should examine the alternative models these groups provide for societal change. These alternative models of

the causal connections between family and societal change may help explain the variation in the demographic behavior of these groups.

Because individuals are nested in a social context of status, norms and, most importantly, other individuals, even a complete knowledge of an individual's own beliefs is insufficient to fully understand an individual's behavior. Since the beginning of sociology, scholars have theorized about how communities, families and individuals interact to influence individuals' actions. A major question is the extent to which society's norms, attitudes, beliefs, and values affect individual behavior. One possibility is that in the same way parents socialize their children by influencing their children's beliefs, local communities can socialize its members to follow its norms and internalize its values, and that the social control mechanisms parents use in conjuncture with family socialization may parallel similar processes at a higher level of social organization (Cooley 1909; McKenzie 1921). Thus, this dissertation research reiterates the importance of scholars use of intergenerational models (Thornton, Axinn and Xie 2007), but also extends the literature further by examining multiple intergenerational relationships (i.e. both father and mother) and the influence of neighbors.

Until recently, inadequate data and incapable statistical methods have halted any joint examination of the multiple levels of ideational influence. This dissertation, particularly chapter 4, addresses these issues by relying on theoretical insights from social-psychologists, sociologists, historians, demographers and anthropologists, and by utilizing exemplary social data and advanced statistical methods. Important findings from this study are that there is empirical support of independent effects of multiple levels of ideational influence, and that these levels of ideational influence interact to influence

individuals' later behavior. That is, not only are family and community context important, but the relationship between the individual and other levels of society influences their effects on behavior. In this case, not only do the individual and parents' attitudes toward spouse choice influence spouse choice behavior, but the level of the child's education influences how well the child's (and parents') attitude predicts their later behavior. And although this essay only documents three levels of influence (individual, family and neighborhood) and one behavior (spouse choice), the number of possible parallel studies is infinite. Future work in this area should examine the specific mechanisms of socialization and social control parents and neighbors use to influence the children's marital behavior. Also, learning more about how children and parents perceive their relative change in status and power as the child increases in education could be extremely fruitful.

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Appendix

The tables below contain the question wording, response options and distributions of the 36 measures used in the paper. Each question was asked in one of nine sections with 4-10 other questions. The introduction and first question wording are recorded under the appropriate section heading. "About the same" and "don't know" were not given in the option categories and were only accepted after a probe. The question wording is followed by the code that was coded 1, the opposite answer (i.e. more vs. less common, richer vs. poorer, etc) as well "Same" and "don't know" and "missing" were then coded as 0. The following columns provide the percent response distribution for each question. The order presented here is not necessarily the order of the sections or questions in the survey.

Family & Society Characteristic Association
Rich/Poor
I would like you to think about life in poor places compared with life in rich places. I am going to read you a list of items.
For each item, please tell me whether you think it is more common in poor places or more common in rich places. People marrying at older ages?
Is that more common in poor places or more common in rich places?

Questions	Coded as 1	Rich	Poor	About the Same	DK	Missing
People marrying at older ages	Rich	73.2	24.2	1.5	1.1	0.0
Women getting treated with respect	Rich	79.7	16.9	2.8	0.6	0.0
Young people choosing their own spouse	Rich	66.1	26.4	6.3	1.1	0.0
Married couples using contraception	Rich	81.4	14.9	2.6	1.1	0.0

Traditional/Developed
Now, let us talk about life in traditional places and life in developed places. People marrying at older ages? Is that more common in traditional places or more common in developed places?

Questions	Coded as 1	Developed	Traditional	About the Same	DK	Missing
People marrying at older ages	Developed	80.3	19.0	0.2	0.6	0.0
Women getting treated with respect	Developed	79.1	19.0	0.9	0.9	0.0
Parents controlling who their children marry	Traditional	30.9	67.2	1.1	0.7	0.0
Married couples using contraception	Developed	91.6	7.4	0.6	0.4	0.0

Uneducated/Educated

Now, let us talk about life in uneducated places compared with life in educated places. People marrying at older ages? Is that more common in educated places or more common in uneducated places?

Questions	Coded as 1	Educated	Uneducated	About the Same	DK	Missing
People marrying at older ages	Educated	80.1	18.4	0.6	0.9	0.0
Women getting treated with respect	Educated	89.9	8.4	0.9	0.7	0.0
Young people choosing their own spouse	Educated	89.4	8.4	1.1	1.1	0.0
Using contraception	Educated	92.2	6.3	0.7	0.7	0.0

Society Change Causes Family Change
Development

Now let us talk about whether the following things would be more common or less common if Nepal became more developed. People marrying at older ages? If Nepal were more developed, would people marrying at older ages be more common or less common?

Questions	Coded as 1	More Common	Less Common	About the Same	DK	Missing
People marrying at older ages	More Common	72.6	26.3	0.0	1.1	0.0
Women getting treated with respect	More Common	88.1	10.1	0.6	1.3	0.0
Young people choosing their own spouse	More Common	79.1	19.2	0.6	1.1	0.0
Married couples using contraception	More Common	80.1	19.2	0.0	0.7	0.0

Education

Many efforts are being made in Nepal these days to make the people of Nepal more educated. Please tell me whether each of the following things would be more common or less common if the people of Nepal were to become more educated. People marrying at older ages? If Nepal were more educated, would people marrying at older ages be more common or less common?

Questions	Coded as 1	More Common	Less Common	About the Same	DK	Missing
People marrying at older ages	More Common	80.1	19.0	0.0	0.9	0.0
Women getting treated with respect	More Common	87.7	11.2	0.2	0.9	0.0
Young people choosing their own spouse	More Common	83.1	16.2	0.2	0.6	0.0
Married couples using contraception	More Common	84.7	14.5	0.0	0.7	0.0

Wealth

Many efforts are being made these days to make Nepal richer. Please tell me whether each of the following things would be more common or less common if Nepal were to become richer.

Questions	Coded as 1	More Common	Less Common	About the Same	DK	Missing
People marrying at older ages	More Common	74.7	24.2	0.0	1.1	0.0
Women getting treated with respect	More Common	89.6	9.1	0.2	1.1	0.0
Young people choosing their own spouse	More Common	81.6	16.4	0.7	1.3	0.0
Married couples using contraception	More Common	80.6	17.7	0.6	1.1	0.0

Family Change Causes Society Change
Richer/Poorer

Some people talk about making Nepal richer. For each of the following things, please tell me whether you think it would help make Nepal richer or help make Nepal poorer. If more people married at an older age? (Would that help make Nepal richer or make Nepal poorer?)

Questions	Coded as 1	Richer	Poorer	About the Same	DK	Missing
If more people married at an older age	Richer	88.6	9.3	0.7	1.3	0.0
If women were treated with more respect	Richer	87.7	10.4	0.7	1.1	0.0
If more people chose their own spouse	Richer	69.8	20.9	6.9	2.2	0.2
If more married couples used contraception	Richer	89.4	8.8	0.6	1.3	0.0

Better/Worse

Some people talk about making Nepal a better place overall. For each of the following things, please tell me whether you think it would help make Nepal a better place or help make Nepal a worse place. If more people married at older ages? Would that help make Nepal a better place or help make Nepal a worse place?

Questions	Coded as 1	Better	Worse	About the Same	DK	Missing
If more people married at older ages	Better	88.3	10.4	0.4	0.9	0.0
If women were treated with more respect	Better	88.5	9.9	0.7	0.9	0.0
If more young people chose their own spouse	Better	71.9	23.6	3.4	1.1	0.0
If more married couples used contraception	Better	91.6	7.6	0.0	0.7	0.0

More/Less Educated

Now, let us talk about how our country of Nepal could be more educated. If more people married at older ages? Would that help make Nepal more educated or help make Nepal less educated?

Questions	Coded as 1	More Educated	Less Educated	About the Same	DK	Missing
If more people married at older ages	More Educated	88.3	10.2	0.6	0.9	0.0
If women were treated with more respect	More Educated	89.0	9.3	0.6	1.1	0.0
If more young people chose their own spouse	More Educated	72.8	23.1	2.8	1.3	0.0
If more married couples used contraception	More Educated	83.8	14.5	0.9	0.7	0.0