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Individual and Neighborhood Influences on Intercaste Marriage

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Abstract: Although social scientists have long examined marital homogamy, most have focused on Western settings, and few have examined a marriage behavior that is relevant for South Asian settings: intercaste marriage. Using survey data from over 3200 individuals in the Chitwan Valley of Nepal, I examine individual and neighborhood influences on intercaste marriage. The findings suggest that an individual's education is negatively associated with intercaste marriage. Childhood exposure to neighborhood nonfamily organizations such as schools, health clinics, markets, and cinemas, however, is positively associated with intercaste marriage. These neighborhood influences suggest the importance of a life course approach in which early childhood experiences have long-term effects on individuals' intergroup relations, including intercaste marriage.

Key words: Nepal, marriage, caste, neighborhood

Introduction

Much social science literature has documented the tendency of spouses to resemble one another. The spouse selection process if often described as involving marital homogamy, that is the tendency of people to choose spouses with characteristics similar to their own (Kalmijn, 1998 and Stevens, 1991). Studying marital homogamy is important because it may be evidence of an increasing trend of intergroup acceptance and understanding. Most studies of marital homogamy, however, have focused on Western countries, such as the United States (Qian, 1997; Kalmijn, 1993 and Fu, 2001), Uruguay (Pullum and Peri, 1999), the United Kingdom (Lampard, 1997), and the former Yugoslavia (Botev, 1994). In addition, these studies have been limited to a set of factors that are most important in these settings: education, race, religion, and social class (Qian, 1997; Kalmijn, 1993; Kalmijn, 1991 and Fu, 2001). Smits, Ultee, and Lammers (1998) compared homogamy across 65 countries, but they limited their study to educational homogamy. Relatively few studies of homogamy have focused on a division that is of great importance in many South Asian settings: caste.

In this paper, I examine intercaste marriage in the Chitwan Valley of Nepal, an area that has experienced rapid social change. Issues of caste feature prominently in many South Asian settings, including Nepal, India, Pakistan, and Bangladesh. Using survey data from over 3200 married respondents, I investigate the potential causes of intercaste marriage at the level of both the individual and the neighborhood.

Theoretical Issues: Caste in Nepal is a combination of religious, ethnic, and racial issues. Ethnically, nearly all groups in Nepal can be divided into two categories: Indo-Aryan, who derive from Indian ancestry to the south of Nepal, and Tibeto-Burman, who derive from Tibetan and Mongoloid ancestry from the north of Nepal (Dastider, 1995). Religion and ethnicity in Nepal, however, are intertwined and complex, having evolved over centuries of political, historical, and religious change. According to the earliest evidence, Nepal was inhabited and politically controlled by Tibeto-Burman peoples who practiced Buddhism (Harris et al., 1973). These groups remained the dominant forces in Nepal through 1000 AD (Dastider, 1995), but following centuries saw increased attacks from Indian states in the south and west (Harris et al., 1973). By the 13th century, orthodox Hindu rule had been firmly entrenched (Harris et al., 1973) and would remain until 1951, when democratic reforms were began. Because Nepal was once largely Tibeto-Burman (who practiced Buddhism) and subsequently dominated by Indo-Aryans (who practiced Hinduism), religious assimilation of non-Hindus into Hindu religious and social customs has been extensive. This happened to non-Hindu groups in India as well as Nepal, where it has been described as "sanskritization": the adoption of values, ideas, and customs of the dominant caste (Dastider, 1995).

Further facilitating assimilation of Buddhists into Hindu culture is the common heritage of both religions: some broader sects of Hinduism consider Buddhism a branch of Hinduism (Bista, 1991). Furthermore, with the first major unification of the Nepalese state in 1854 came the first Legal Code of Nepal, which survived for over a century (Guneratne, 2001; Maskey, 1996 and Bennett, 1983). This code solidified into law the caste system, which provided for different laws for different castes and ensured the hegemony of the ruling caste: high caste Hindus, known as Brahmins and Chhetris (Maskey, 1996). Thus less privileged castes of both Hinduism and Buddhism had a very real incentive to imitate and follow the customs of Brahmins and Chhetris in hopes of better treatment (Pearce, 2000). These customs included a variety of rules for daily living, such as guides for bathing, eating, intercaste interactions, and occupational choices (Guneratne, 2001 and Pearce, 2000). Although the caste system

was officially abolished in the 1960s, the dominant position of the upper caste Hindus was already ensured from well over a century of a state-sanctioned caste society (Dastider, 1995).

The existing literature on racial, educational, religious, and class marital homogamy may not be directly applicable to intercaste marriage in Nepal for several reasons. First, much of this literature comes from studies conducted in Western countries with different marriage systems. For example, marriage in Chitwan often involves parental guidance or control of spouse choice. Second, the levels of education and religious differentiation in the populations can be very different. In the United States, for example, the overwhelming proportion of native-born individuals achieve at least twelve years of education. In Chitwan, on the other hand, mean educational levels are low, but there is great variance in education, with limited numbers of individuals achieving very high levels of education. With religion, the variance is reversed: the United States has many different religious faiths, with no one religion as the majority, while in Chitwan Hinduism is by far the most practiced religion. Third, caste by its very nature may be very different than the other well-studied homogamous characteristics. Caste practices in South Asia have a very long history, and the practices are closely intertwined with religious doctrine, making it very different from race in settings such as the United States.

Despite these differences, existing research and theory from marital homogamy in other settings may provide some useful starting points for hypothesis construction. One set of literature comes from exchange theories. Some previous research has indicated that education is negatively associated with intergroup (exogamous) marriages. Tucker and Mitchell-Kernan (1990) find that men's education is negatively associated with interracial marriage. This finding appears to implicate socioeconomic status hypotheses or exchange theories, in which men who do not have high income, status, or education may have to marry outside their own group (Kalmijn 1998; Pullum and Peri, 1999). In addition, research from the United States indicate that women may be more likely than men to have an interracial marriage in order to "marry up" to a higher social or economic class (Kalmijn, 1993 and 1998). A similar finding with British Pakistanis also finds that the marriage of a daughter with a different—yet higher caste—man is often viewed as social mobility (Shaw, 2001).

Other research points to the importance of residential propinquity, or simply being located near individuals of another group. This research falls along the lines of marriage market theories and the pool of available mates (Lichter et al., 1992). Sigelmen, Bledsoe, Welch, and Combs (1996) reported that exposure to other groups in childhood leads to greater intergroup contact in adulthood. They offer that "propinquity breeds positivity" (p. 1318). This finding also suggests that a life course approach may be important to consider, since events early in life may have long-term consequences (Elder, 1994; Axinn and Yabiku, 2001). Related research also mentions the importance of intergroup contact for interracial marriage. When people are more likely to interact only with their own group, the chances of marrying with their own group is higher (Kalmijn, 1998). Conversely, if people interact more often with those outside their group, intergroup marriage is likely to be more common.

Applying this existing theory to the setting of Chitwan Valley yields some additional predictions. The Chitwan Valley is a low-lying, rural valley 450 feet above sea level about 100 miles southwest of the capital city of Kathmandu. Chitwan is located in the Terai region of Nepal—lowlying plains along the southern borders of the country. Chitwan's location is often described as the "inner Terai" because a low range of mountains separates it from the rest of the Terai. The recent history of the Chitwan Valley has been one of rapid social change. Until the end of the 1950s, the area was largely uncultivated jungle (Guneratne, 1996). There was limited agriculture in Chitwan in the early 19th century, but following the Anglo-Nepal War of 1814-1816 the ruling Nepalese regime depopulated the area and let it revert to jungle (Guneratne, 1996 and Muller-Boker, 1999). By the end of the 19th century, the area became highly infected with malaria and was known as the Valley of Death (Guneratne, 1996). The majority of the inhabitants in the area were native inhabitants, such as the Tharu, Derai, and Kumal, who largely avoided agriculture and lived through subsistence wage labor opportunities (Guneratne, 1996). Up until the period of Indian independence, these wage labor opportunities in the 20th century came largely from British employers and military who needed short term, manual labor, opportunities which were very close because Chitwan borders India (Guneratne, 1996).

The Chitwan Valley remained jungle until the middle 1950s, when the government (with assistance from USAID) introduced the Rapti Valley Land Development Project to eradicate malaria and deforest the land (Axinn and Yabiku, 2001; Ghimire, 1992 and Shivakoti et al., 1999). Once cleared, the Chitwan Valley was poised to experience tremendous changes. What was once nonarable jungle became prime farmland by the end of the 1960s, drawing settlers from across Nepal. Immigration accelerated after the first all-weather road connecting Chitwan to Kathmandu was completed in 1979 (Axinn and Yabiku, 2001 and Guneratne, 1996). This road transformed Narayanghat (Chitwan's largest city) into a major transportation hub because nearly all goods that arrive from India, Nepal's largest trading partner, come by truck and pass through Chitwan.

A rapidly expanding population, growing wealth and productivity from newly created farmland, increasing links to Kathmandu and the world: these large changes in the valley accompanied many social changes in the organization of people's lives. One of these social changes was the increase in nonfamily organizations and services, such as

schools, health clinics, and employers. In the late 1940s, on the eve of the valley's transformation, there were no schools or health clinics in the Chitwan Valley. By the 1990s, there were 120 schools and over 80 health clinics (Axinn and Yabiku, 2001). Employers also are now widespread, and there are places such as mills, farms, a paper factory, tourist hotels, and restaurants where individuals work for pay. Theoretically, the increase in nonfamily organizations means that domains that were centered around the family now are no longer under complete family control: socialization and education, production, consumption, leisure, health and protection, and information (Thornton and Lin, 1994). When young people spend more time at nonfamily organizations, they may be more likely to come in contact with more heterogeneous groups of people, thus potentially increasing intercaste marriage. Hypotheses

Several hypotheses can be generated from the above theories. Exchange theories predict that education will be negatively associated with intercaste marriage: highly educated or high status individuals would be able to attract mates from within their own group and not have to look outside. Theories about propinquity, marriage markets, and nonfamily organization predict the factors that may allow individuals from different groups to come in more contact with each other, thus facilitating intercaste marriage. On the level of the individual, nonfamily experiences that cause individuals to spend less time within the family are likely to increase contact with people from other groups. Experiences such as work outside the family, spending entertainment and leisure time outside the family, and obtaining health and protection outside the family all are likely to increase contact with people from other groups. Thus I predict a positive association between these individual experiences and intercaste marriage. At the level of the neighborhood, organizations such as employers, schools, cinemas, and health clinics may facilitate these experiences. I predict a positive association between the presence of these kinds of nonfamily organizations near an individual's neighborhood and intercaste marriage. These organizations are likely to affect individuals when they are exposed to them both in childhood and adulthood (Sigelmen *et al.*, 1996).

Materials and Methods

The data for this study come from the Chitwan Valley Family Study (CVFS), a multifaceted data collection in a rural yet growing area in south-central Nepal. In 1996, an individual survey was completed with 5271 individuals that asked a variety of demographic, attitudinal, and status questions. A notable feature of this survey was the use of life history calendars, which collected the timing and occurrence of key events, such as schooling, employment outside the family, and marital events. The life history calendar is a semi-structured method of obtaining detailed information about the timing of important life events (Axinn, Pearce, and Ghimire, 1999). This calendar is important because it allows us to create measures that preserve the proper temporal ordering in our models: we use measures of individuals' experiences before their marriage to predict whether or not they have an intercaste marriage.

The analysis sample has 3262 cases of married men and women who were interviewed in the 1996 survey. A small amount of cases with missing data (less than 10%) were removed from the analysis, which is why there are slightly more women than men in the sample (it was not possible to interview some men who were working away from home at the time of the survey).

Dependent Variable. The dependent variable is intercaste marriage. A marriage is considered intercaste if the husband and wife are not the same caste or ethnic group. As a binary outcome, this variable is coded 1 if the respondent has an intercaste marriage, and 0 otherwise. Specifically, this variable is a measure of marriage across different ethnic and caste groups. There are a variety of different ethnic groups and castes in Chitwan, but they can be classifieds into five general groups (Axinn and Yabiku, 2001). High caste Hindus (such as Brahmins and Chhetris), lower caste Hindus (known as the occupational castes), Newars, Hill Tibetoburmese (including subgroups such as the Tamang, Gurung, and Magar), and Terai Tibetoburmese (including subgroups such as the Tharu, Derai, and Kumal). Intercaste marriage is conceptualized as marriage across any of the 22 categories by which caste and ethnicity was measured (e.g., a marriage between a Brahmin and Chhetri would be considered intercaste, just as would a marriage between a Newar and a Tharu).

Independent Variables. Several sets of independent variables are used: demographic controls, individual-level experiences, and neighborhood context. Controls include the respondent's age, parental background, ethnic/caste category, and age at marriage. An individual's age is an important indicator because it represents the time period in which a person was raised (Ryder, 1965). Standard parental background controls of father's education and mother's number of children are included, as are parental experiences with employment outside the home and exposure to mass media (seeing movies). These two parental variables are coded 1 if the respondent's parent had these activities before the respondent was age 12, and are coded 0 otherwise. Caste is controlled because some caste/ethnic groups may be more likely to marry outside their group. Instead of controlling for all 22 different caste groups that were collected in the data, I take a parsimonious approach and group these 22 categories into 5 major subdivisions that are present in the Chitwan Valley: high caste Hindus, low caste Hindu, Newars, hill Tibetoburmese, and terai Tibetoburmese. Age at marriage is controlled because young people who marry later may also be more likely to participate in nonfamily experiences and organizations, which are hypothesized to influence

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intercaste marriage.

Individual-level experiences. These variables capture the nonfamily experiences respondents had before marriage. Continuous variables are years of schooling before marriage and years of work outside the home before marriage. Dichotomous variables are whether or not the respondent saw a movie before marriage or visited a health clinic before marriage.

Neighborhood-level context in childhood. Respondents were also asked if a variety of nonfamily organizations or services were within a one-hour walk in their childhood (before age 12). Recall that because I am taking a life course approach, it is likely that events earlier in life have important consequence for later life outcomes. Respondents were asked about schools, health clinics, markets, employers of ten or more people, cinemas, and bus stops. They were also asked if their childhood neighborhood had electricity. Because these organizations and services are likely to be clustered together, I form a simple index that sums the number of these organizations and services that the respondent's childhood had. This index thus ranges from a low of 0 to a high of 7. Indexes such as these have been used in previous analyses of this data (Axinn and Yabiku, 2001).

To estimate the effects of the independent variables on intercaste marriage, I use logistic regression. Because the dependent variable is binary, logistic regression is appropriate (Hosmer and Lemeshow, 1989). Coefficients in logistic regression are log odds ratios, and they represent the effects of a predictor on the log odds of being in one category versus another. I transform the log odds ratios to odds ratios by exponentiating them. In this metric, effects are multiplicative. This means that an odds ratio greater than one is a positive effect that increases the odds of intercaste marriage, while an odds ratio less than one is a negative effect that decreases the odds of intercaste marriage. An odds ratio equal to one is a null effect that does influence the odds of intercaste marriage.

Results

Table 1: Descriptive statistics

Variable	Mean	St. Dev.	Minimum	Maximum
Intercaste Marriage	.08	.27	0	1
Years school before marriage	4.79	5.17	0	22
Years nonfamily work before marriage	1.70	3.11	0	27
Ever saw a movie before marriage	.57	.50	0	1
Ever visited a health clinic before marriage	.51	.50	0	1
Number of organizations and services present				
through childhood (age 12)	3.44	2.02	0	7
Age	34.95	10.80	14	59
Father ever went to school	.24	.43	0	1
Mother's number of children	5.96	2.62	1	18
Either parent worked outside home	.48	50	0	1
Either parent ever saw movie	.37	.48	0	· 1
Caste				
Upper caste Hindu	.46	.50	0	1
Lower caste Hindu	.11	.32	0	1
Newar	.06	.24	0	1
Hill Tibetoburmese	.17	.37	0	1
Terai Tibetoburmese	.18	.39	0	1
Age at first marriage	18.32	4.29	5	45

Before discussing the multivariate results, I briefly mention several descriptive statistics in Table 1. Most notable is the dependent variable, intercaste marriage: intercaste marriage has been relatively rare in the Chitwan Valley of Nepal at about 8% of all marriages. Remember that this data come from retrospective interviews with married respondents from a range of ages (14 to 59). Thus this is not a snapshot in 1996, but rather a summary of all marriages that may have happened to sample members in the past. Schooling and work were also somewhat uncommon in the sample: average years of schooling before marriage was only 4.79 years, and respondents averaged 1.70 years of work before marriage. Again, these averages are across a wide age range: younger respondents are likely to have much more schooling before marriage. Exposure to movies and healthcare before marriage was frequent, with about half the sample having these experiences. Of the seven types of nonfamily organizations and services examined, respondents on average had about half of them (3.44) within a one-hour walk during their childhood.

Table 2 shows the multivariate results. I conduct the analyses separately for men and women because the processes of marriage are likely to differ by sex. In model 1, I examine the effect of individual experiences

(schooling, work, movies, and health visits) and controls on the odds of intercaste marriage. Consistent with the hypotheses, the years of schooling before marriage is negatively associated with intercaste marriage. The odds ratio of .95 means that for each year of schooling, an individual's odds of intercaste marriage decreases by 5%

Table 2: Effects of individual experiences and organizations on odds of intercaste marriage

Table 2: Effects of individual experiences and Variable	Men		Women	
	1	2	3	4
Years school before marriage	.95*	.94*	.94*	.93*
	(-2.01)	(-2.40)	(-2.18)	(-2.40)
Years nonfamily work before marriage	1.07*	1.06	1.01	1.02
	(2.08)	(1.85)	(.17)	(.29)
Ever saw a movie before marriage	.79	.69	1.37	1.21
	(86)	(-1.34)	(1.23)	(.73)
Ever visited a health clinic before marriage	.83	.81	.97	.90
	(76)	(86)	(14)	(43)
Number of organizations and services		1.18*		1.17*
present through childhood (age 12)		(2.72)		(2.71)
Age	.97*	.98	.99	1.00
	(-2.60)	(-1.71)	(95)	(22)
Father ever went to school	2.04*	2.10*	.76	.75
	(2.85)	(2.95)	(-1.19)	(-1.25)
Mother's number of children	1.00	1.00	.98	.98
	(.00)	(.00)	(68)	(69)
Either parent worked outside home	1.28	1.23	1.42	1.35
	(1.22)	(1.03)	(1.75)	(1.48)
Either parent ever saw movie	.58*	.51*	1.23	1.15
	(-2.27)	(-2.72)	(.95)	(.64)
Caste †				
Lower caste Hindu	.57	.59	.33*	.34*
	(-1.73)	(-1.64)	(-2.61)	(-2.56)
Newar	1.02	1.03	1.38	1.39
	(.06)	(.07)	(.99)	(1.00)
Hill Tibetoburmese	1.16	1.24	.87	1.00
	(.62)	(.87)	(53)	(.00)
Terai Tibetoburmese	.13*	.13*	.16*	.17*
	(-4.49)	(-4.46)	(-4.12)	(-4.00)
Age at first marriage	.96	.97	1.03	1.03
	(-1.28)	(99)	(.77)	(.92)
Intercept	1.18	.45	.10*	.05*
	(.21)	(92)	(-3.21)	(-4.01)
Number of cases	1585	1585	1677	1677

Coefficients are odds ratios, with z-statistics in parentheses. *p<.05, two-tailed tests.

(1.00 - .95 = .05). These odds are multiplicative, so in comparing a man with 10 years of schooling versus one with only 4 years of schooling, the more educated man has an odds of intercaste marriage 26% less (.95(10-4) = .74; 1.00 - .74 = .26). Nonfamily work, on the other hand, increases the odds of intercaste marriage: each year is associated with a 7% increase in the odds. This may be because employment exposes men to greater varieties of people and groups, which can make intercaste marriage more common. Having seen movies or visited health clinics did not influence the odds of intercaste marriage.

Model 2 examines the additional impact of neighborhood organizations and services in childhood. Recall that these organizations and services may expose individuals to greater intergroup contact. There is a strong positive effect of these organizations on the odds of intercaste marriage. The coefficient of 1.18 means that each organization is associated with an 18% increase in the odds of intercaste marriage for men. Also of note is the fact that the effect of years schooling for men remains significant in model 2, suggesting that this effect is independent from these organizations and services.

Model 3 replicates model 1, except the sample is women. The results are similar to the findings for men. Each year

[†] Upper caste Hindu is reference group

of schooling for women is associated with a 6% decrease in the odds of intercaste marriage. This result may be somewhat surprising since some past research suggests that some women may "marry up" in order to achieve status mobility: it would have been reasonable to believe that these women would be more highly educated to facilitate an intercaste marriage to a man of a higher caste. Yet there is no evidence of this pattern. Nor is there evidence that the other experiences, such as work, movies, and healthcare visits, influence the odds of intercaste marriage for women.

Lastly, model 4 retains the same variables as model 3 but adds the indicator for the number of organizations and services within a one-hour walk of the woman in her childhood. As with the men's model (model 2), there is a significant, positive effect of the number of these organizations on intercaste marriage. Each organization is associated with a 17% increase in the odds of intercaste marriage. This is very close to the results for the effect of these organizations on the odds of men's intercaste marriage (18% increase). In fact, the results for men and women are very similar. For both men and women, the years of schooling before marriage decreases the odds of intercaste marriage by 5% to 7%.

Discussion

Although many previous studies have examined marital homogamy, few have examined the potential correlates of intercaste marriage in South Asian settings. The present paper has taken advantage of a data collection in the Chitwan Valley of Nepal to study how individual and neighborhood factors influence the odds of intercaste marriage. In general, the results have some similarities yet some difference with studies of marital homogamy in Western settings. One similarity was the finding that education is negatively associated with intercaste marriage for men, perhaps because they lack the status to attract mates of their own group. On the other hand, this relationship also holds true for women, which was unexpected: there was no evidence that highly educated women of lower caste use their education to marry up into higher castes.

Perhaps the most interesting findings concern the effects of childhood neighborhood organizations. For both men and women, these organizations were positively associated with higher odds of intercaste marriage. There are at least two potential reasons for these intriguing results. First, it may be childhood community context is simply correlated with adult community context, and thus similar organizations in adulthood may be exposing young adults to potential mates from other groups. Second, it could be that exposure to these organizations in early childhood—and corresponding exposure to people from other groups—may form life-long ways of thinking of other castes. This suggests a life course influence in which early exposure has long-term consequences on young people's beliefs (Elder 1994; Axinn and Yabiku 2001). In this case, it may be their beliefs and attitudes to intergroup contact, perhaps even intercaste marriage. Although it was not possible to differentiate these two possibilities in the analyses in this paper, it is a fruitful target for future research.

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