

# **The Contextual Web of Fertility Control: A Case Study of Chisang Village**

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**F**ertility decline occurs in various sociocultural, and economic contexts, mediated by the "proximate" factors (Davis and Blake, 1956; Bongaarts and Potter, 1983). Generally context is more complex to understand and its role more difficult to identify than the influence of proximate factors. In order to understand context, McNicoll (1975, 1980, 1994) underscores the need to examine institutions that encourage or discourage high levels of fertility in a society. Such institutions are multifaceted and form an integral part of the ideational, political and economic systems. McNicoll draws upon institutional theory from multidisciplinary fields and argues that the pattern of reproductive change is shaped by the combination of "institutional endowments" each society has inherited from the past. The institutional endowments include but are not limited to family systems, gender roles and community structures. He argues that reproductive behavior is the outcome of a decision-making process that involves both institutions and individuals.

This paper examines how various village and family/individual level factors have triggered measurable changes in reproductive attitudes and behavior in Chisang, a village in the Eastern Terai of Nepal. Furthermore, the research shows how the onset of changes is influenced by outside forces. The paper employs multiple research

methodologies and underscores the importance of looking at fertility change in the larger perspective.

### Chisang Village

Chisang is a Terai village, located about 400 kilometers southeast of Kathmandu and 45 kilometers northeast of Biratnagar, Nepal's second largest municipality. The study village lies in the district of Morang which ranks fifth among the 75 districts in terms of the "human development index" (Thapa, 1995). For over three decades, Chisang has been linked by the East-West Highway. The village is known to have a relatively well developed educational infrastructure and school enrolment is high. Many people in the village believe that they are living longer and healthier lives than 25-30 years ago. Thus, Chisang can be considered relatively more developed compared to other villages in Morang.

Chisang's population includes a number of *jat* (castes), each of which is associated with one of three main, ranked ritual categories (Caplan, 1972). The village has a total of 638 inhabitants. Of them, 451 and 35 are "high" and "low" caste Hindus, mostly migrants from the hills. Another 89 are from the middle caste Tibeto-Burman groups. The caste Hindus and middle caste Tibeto-Burman (ethnic) groups are broadly referred to as *pahadi* (hill people). There are only 63 *adhivasis* (indigenous people of the Terai). Because of the overwhelming majority of the *pahadi* people, Chisang may be referred to as a migrants' village.

Agriculture is the primary source of employment and income for the majority of the families in Chisang. The average landholding owned by high caste households is 2.5 hectares, more than five times larger than that owned by the *adhivasi* and the low caste groups. The Tibeto-Burman households, on average, own a little over one hectare of land. There is thus a great deal of inequality in land ownership in the village. Furthermore, the land owned by the high castes is most valuable and productive.

Until about 30 years ago, much of Chisang's land was forest. Following the control of malaria in the early 1960s, the forests were cleared for cultivation by the migrants. During the same period, the East-West Highway, the principal road link in Nepal was constructed. In the 1970s, feeder roads linking the East-West Highway, Chisang and other destinations further south were constructed. Sand, stone and gravel from the Chisang *khola* (river) began to be extracted for commercial purposes. Electricity was brought into the area about five

years ago; but Chisang itself does not have electricity. The village received its first public telephone line during the time of this study.

In 1994, a sub-health post was opened in a bazaar, about a 45-minute walk from Chisang. That same year, a permanent family planning and maternal/child health clinic was opened in an adjoining village. Another non-governmental organization (NGO) based in Biratnagar began operating a mobile clinic providing antenatal and postnatal services at two locations within the area every month. The village has two medical shops.

Overall, Chisang is undergoing significant social and economic changes. Most of the villagers do not feel isolated from changes occurring in the region outside the village. The village is characterized by an increasing flow of people and ideas. Changes in reproductive attitudes and behavior need to be examined in this larger perspective.

## **Data and Methods**

The data used in this paper were collected as part of a larger study that sought to investigate changes in the fertility behavior of the people in Chisang (Karki, 1997). The research design employed a combination of survey questionnaires and unstructured interviews, complemented by participant observation. The methodology employed and the nature of research involved is what Caldwell and his colleagues have referred to as "micro-demography" (Caldwell and Hull, 1988; Caldwell, Reddy, and Caldwell, 1988). Micro-demographic research combines components of survey research with anthropological methods. The value of the micro-demographic approach to studying fertility and mortality trends in South Asia has been demonstrated (Caldwell, Reddy, and Caldwell, 1982 and 1983).

The survey was conducted over a period of six months from July 1995 through January 1996. The nature of data collection for this study can be classified into two broad types. The first component consisted of a census and a set of structured surveys. The census questionnaire was administered to every household. A marriage and fertility history questionnaire was administered to all ever-married village women between the ages of 15 and 49 (at the time of the study). A household formation survey was also administered to all ever-married couples and a few unmarried couples living in consensual agreement. This survey was conducted almost two-thirds of the way into the fieldwork. The household formation survey collected information on the timing of events for individuals, families and entire households. The second component included unstructured, in-depth interviews with

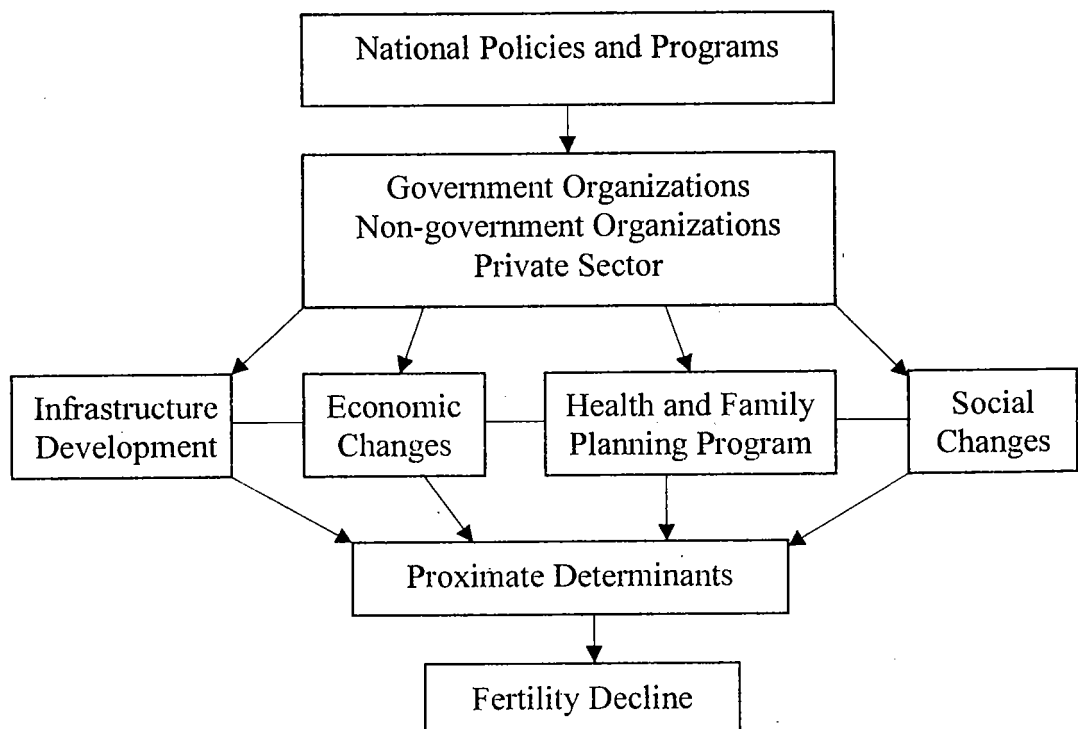
primary informants, complemented by participant observation. These unstructured interviews with primary informants and participant observation were useful in understanding perceived as well as actual changes in reproductive behavior.

The census was administered to all 111 households in the village, recording a total of 102 ever-married women aged 15-49; ninety-nine were successfully interviewed. The unstructured interviews were conducted with several individuals representing different strata of villagers, including male and female research assistants, shop owners, local leaders, high and low caste Hindus, other hill ethnic groups and *adhivasis*.

### *Conceptual Framework and Measures*

The basic conceptual framework and the measures used in this study are shown in Diagram 1. The framework is adapted from Hull's Indonesian study (1987). The national goals and priorities are implemented through public and private organizations (including NGOs). Such policies and programs are aimed to affect various development dimensions: economy, infrastructure, health and family planning programs, social systems. Changes in these sectors are

**Diagram 1** A Conceptual Framework for Understanding Causes of Fertility Decline in Chisang Village



expected to affect the proximate determinants of reproductive behavior, which eventually influence fertility. As Hull (1987: 90) has noted, "Any conceptual framework must still preserve as a basis the proximate determinants theory of fertility, which defines the interaction of social behavior with the biological processes of conception, pregnancy and birth."

The specific measures (discussed later) representing each of the dimensions were derived from in-depth interviews. Only two proximate determinants are included. The other factors, induced abortion and breastfeeding, are not included. Breastfeeding is universally practiced in the community and as such I thought that to find out reasons for breastfeeding was not central to the study. Because induced abortion is a highly sensitive topic, questions were not included in the survey component. Limited information regarding the nature and context of induced abortion was collected through in-depth interviews.

At the time of the study, a national survey—the Nepal Family Health Survey 1996—was conducted (MOH, 1997). Data from this national survey have been found to be one of the best ever collected in Nepal (Retherford and Thapa, 1998). I have used data from this survey to compare national levels and patterns of fertility, marriage and contraception with that of Chisang.

## Results

### *Fertility Patterns*

Table 1 presents age-specific and total fertility rates (per woman) for Chisang and for all rural and all urban Nepal. The total fertility rate for Chisang is slightly lower (by .22 birth per woman) than that of all rural Nepal. It is, however, considerably higher (by 1.76 births per woman) than that of all urban Nepal. This suggests that Chisang's reproductive behavior represents the more advanced spectrum of all-rural Nepal fertility. In Chisang the fertility of women aged 20-49 is consistently lower than that of the fertility of the all-rural population.

Figure 1 shows the age pattern of fertility for the three groups based on marital age-specific fertility rates for women age 20-49. (Marital fertility for women age 15-19 is not shown because teenage subfecundity generally has a "large and irregular impact" on teenage marital fertility (Knodel, 1983:66)). For comparative purposes, the figure also shows the fertility pattern of standard age-specific "natural

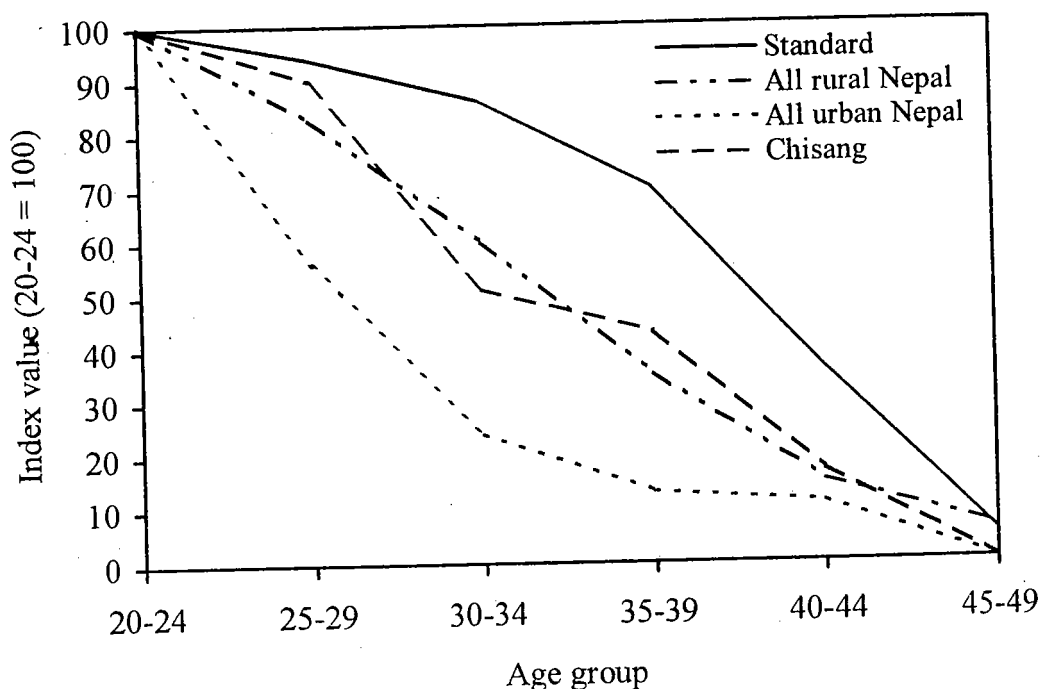
**Table 1** Age-specific fertility, cumulative fertility and total fertility rates (per woman), all urban and all rural Nepal (1995) and Chisang (1995)

Age Group	All Rural	All Urban	Chisang
15-19	.129	.101	.127
20-24	.271	.211	.262
25-29	.239	.141	.225
30-34	.171	.059	.142
35-39	.100	.034	.119
40-44	.038	.025	.046
45-49	.016	.000	.000
15-49	4.83	2.85	4.61

*Sources:* All rural and all urban (MOH, 1997: 37); Chisang (Karki, 1997: 123).

*Note:* The rates for all rural and all urban are based on data for 36 months preceding the survey date (mid-January to mid-June, 1996). The estimates refer to the mid-year, 1995. Rates for the 45-49 age group may be slightly biased due to truncation. The rates for Chisang are based on data for 12 months preceding the survey.

**Figure 1** Index values of age-specific marital fertility rates: Standard, all urban and all rural Nepal (1994) and Chisang (1994)



*Note:* All urban and all rural rates are based on averages for the period 1994 to 1996. Rates for Chisang are based on 12 months preceding the survey (1995).  
*Sources:* Chisang (Karki, 1995); all urban and all rural Nepal (based on Nepal Family Health Survey 1996 data, made available by S. Thapa).

fertility," as developed by Coale and Trussell (1974). The age pattern of natural fertility implies parity-independent fertility determined principally by the decline of fecundity with age.

Following the methodology adopted by Knodel (1983), the age-specific marital fertility data for all rural and all urban Nepal (based on the 1996 Family Health Survey) and for Chisang are standardized by expressing the rate of each age as a percentage of the rate of the 20-24 age group. The natural-fertility curve shows the typical convex shape. In contrast, the fertility curve for all urban Nepal shows a concave shape. This confirms considerable fertility control (within marriage) among urban residents. The fertility curve for all rural Nepal is also different from that of the natural-fertility pattern, suggesting the beginning of the fertility transition in the rural population. However, the degree of control in the rural population is less than that of the urban population. The marital fertility curve for Chisang reflects some deviation from the all-rural fertility pattern. For women ages 30-34 and 45-49, the fertility curve is more concave than that of all rural; but for women ages 25-29 and 35-39 it is more convex than that of all rural Nepal women. The data indicate that the fertility transition is underway in Chasing, partly due to fertility control within marriage.

### *Marriage*

Age-specific percentages of women who have never been married (among all women) in all rural and all urban Nepal and in Chasing village are shown in Table 2. Despite its rural characteristics, the percentage of women who have never been married in Chisang village is considerably higher than that of all rural and all urban Nepal. In the 15-19 age group, just over 70 percent of women in urban Nepal reported never being married; in Chisang, the percentage never married is almost 10 percentage points higher than in all urban Nepal. Similarly, among those 20-24 years of age, about 30 percent of women in urban Nepal reported never been married; 52 percent reported so in Chisang. The percentage not married in Chisang is higher in successive age groups also, although these percentages are based on a small number of cases. Overall, more than one-third of the women in Chisang were never married. The percentages for all urban and all rural women are 23 and 16, respectively. Clearly, lower percentage of married women and higher ages of marriage are important factors contributing to the fertility transition in Chisang.

**Table 2** Percentage of women who have never been married by age group: All rural and all urban Nepal (1995) and Chisang (1995)

Age Group	All Urban	All Rural	Chisang
15-19	70.3	54.7	78.9
20-24	30.3	13.4	51.7
25-29	9.6	4.2	25.0
30-39	3.6	1.6	(11.9)
40-49	2.2	1.3	(6.3)
15-49	22.5	16.0	35.2

*Sources:* Estimates for all rural and all urban are based on the Nepal Health Survey 1996 (made available by S. Thapa); Chisang (Karki, 1997).

*Note:* Values in parentheses are based on less than 5 cases.

### *Fertility Regulation*

In Chisang, 32.3 percent of currently married women reported using a modern method of family planning (Karki, 1997: 171). According to the 1996 Nepal Family Health Survey (MOH, 1997: 57), 24.3 percent of currently married women in rural areas and 45.1 percent of currently married women in urban areas are currently using a modern method of family planning. The percentage of women using contraception to regulate their fertility is, thus, considerably higher in Chisang than in all-rural Nepal. As in other parts of the Terai (for details on this, see Thapa and Friedman, 1998), female sterilization is the most widely used modern method among Chisang couples. This high prevalence of contraception is somewhat surprising since the sub-health post and family planning and maternal/child health clinic were established in the village only two years prior to the time the study. This suggests that those using contraception may have used services outside the village, providing further evidence of how the village is tied to the social and economic programs underway in the region.

In addition to contraceptive use, abortion is used to terminate unwanted pregnancies by some women in Chisang. In-depth interviews with the local health and social workers revealed that the workers receive Rs. 100 (approximately US \$1.60 at the time of study) and transportation expenses from health clinics in Biratnagar for referring women to obtain abortions at their clinics. Anecdotal evidence further suggests that abortion has been practiced among unmarried girls in the village. As previously stated, the prevalence of induced abortion could not be determined.



## Contextual Factors Affecting Age at Marriage and Contraceptive Use

Any interpretation of Chisang's fertility decline requires an exploration of the complexity of sociocultural, economic, historical and developmental contexts. These contextual factors are not unidirectional but form a complex set of interactions, which influence the proximate factors of fertility. Policies and national planning plans promoted by various forms of governments since 1951 have also influenced these sociocultural, economic and developmental factors.

### *Transformation of Economic Support System*

In the patron-client relationship each low-caste family performs its specialized task in return for *bali*, a fixed portion of grain at each harvest. The quantity of *bali* depends upon the size of the household or the landholding of the patron and the types of services performed by the client. In Chisang low caste families no longer perform these caste-specific occupations. Instead they are paid in cash for their work. All castes (low, middle and high) and tribes in Chisang are agriculturists; they sell their goods, services and labor for cash in the village and/or nearby towns.

After Nepal's borders were opened to the world in 1951, handmade goods had to compete with Indian and foreign mass-produced commodities. The Sarki (leather workers) and Damai (tailors) have been most affected by mass-produced imports, especially those from India, their traditional products and services were gradually replaced by mass-produced "modern" goods. This exacerbated lower demands for other low caste goods and services. In an analysis of economic and social changes in a hill village in western Nepal, Macfarlane (1976: 139) wrote: "... much of the former work of the village Blacksmith, Tailors and Cobblers is no longer necessary because of the growing market for cheap tools and clothes at Pokhara. In practice, such lower-class groups have become landless agricultural laborers working for their Gurung patrons."

Furthermore, traditional caste-based patron-client relationships were unable to compete with the emerging market driven economy. This led to a growing gap between work available for low castes and their traditional payments of *bali*. As one of the low caste Sarki from Chisang remarked:

With the decline in land productivity in the hills and the rise in grain prices, the high castes started to refuse to provide the same amount of *bali* to us as in the past. With declining *bali* payments, most of the *sano jat* (low castes) were forced to migrate to *madesh* (Terai) or India.

As a result of the failure of the economically based inter-caste patron-client relationships in the hill districts of eastern Nepal many high caste patrons and their low caste clients migrated to settings such as Chisang in the Terai. Through in-depth interviews the relationship between migration and reproductive behaviors, including later age at marriage and greater fertility control within marriage, became clear.

I migrated to Chisang because as a young and educated Brahmin I was unable to find enough *jajmans* (clients) in Pokhari (Tehrathum District). I returned to Pokhari to get married ten years later at age 33. I made sure that my wife was no more than eight years younger than I was.... At the time of my marriage I consciously decided to get married to an older (wife was 25 years old at the time of marriage) but more educated girl... After marriage I persuaded my wife to have only two children... Now that we have the desired number of children my wife takes the three-monthly injection, Depo (high caste male Brahmin).

When we left our home in Bhojpur district we first moved to Dharan and tried to find some *jajmans* (clients) only to find out that the services of the Brahmins were no longer popular in the *madesh* (Terai). We then moved to Chisang after my brother agreed to sell us some land so we could build a house. ... As a result of the demise of the *jajmani* system, we longer felt secured financially ... A few years after settling here, I had an operation in Dharan to terminate childbearing after giving birth my fourth child (wife of a Brahmin priest).

When I was growing up in Taplejung, my parents provided goods and services to most of the Brahmin families in the village in return for *bali* payments. Many of these Brahmin families were unable to make the *bali* payments on time and in sufficient quantities so my

family moved. In Chisang we provide similar goods and services for cash to people of all *jats*... I received cottage industry training from a Biratnagar based organization and I have been weaving cloth for *dhaka ko top* (traditional colored hats) for the last five years... I do not wish to get married for another five years. I think I will be around 25 years old then. If I was not attending school or was unemployed, then my parents and married brothers would have pressured me to get married. Although I am not attending school now, I am employed and pay for all my expenses. Therefore, both my parents and elder brothers no longer pressure me to get married (unmarried low caste woman).

The economic institution of *hattiya* (weekly market) in eastern Nepal has also helped to transform the economic support system. Many people in Chisang sell or exchange their surplus goods at the *hattiya*. Additionally, according to the VDC Chairman, the village pundit and the health and social worker, recently the *dhami* and *jhankri* (indigenous healers) have started to provide reproductive health care services at the *hattiya*.

During fieldwork I visited many nearby *hattiyas*, in both towns and villages. Approximately, half of those who frequented the *hattiyas* were women. Through attending these *hattiyas*, both married and unmarried women were exposed to the urban lifestyle and ideas that exist beyond Chisang. Thus, the *hattiya* serves to diffuse "modern" ideas as well as to dispense contraceptives. In the words of the VDC (Village Development Committee) Chairman with whom I visited a *hattiya* in a nearby town:

The weekly *hattiya* provides *gaonley* (rural folks) goods and services that city folks cannot live without. In a way the *hattiya* is the medium through which urban tastes and lifestyles are promoted to rural people. For example, in this *hattiya* you will notice that a doctor from Biratnagar has a clinic; a street vendor is selling *chakki* (contraceptive pills) and *dhaal* (condoms). If it was not for the *hattiya* in this part of the country many married women would face severe difficulties obtaining family planning materials... In the center of town three different cinema companies are screening Hindi movies today... What these *hattiyas* do is bring a part of the city into the rural town or village

for that day... At least for that day, the *hattiya* plays a major role in introducing rural people to a very different environment that exists in far away places, such as Kathmandu or Guhati or maybe Punjab.

In a similar vein, a 29 year old married Chettri woman underscored the importance of *hattiya*, stressing its role in ideational change to control fertility within marriage and the distribution of modern contraceptives:

I live with my in-laws and husband's brothers and their wives. As a member of a joint family it is not appropriate for me to go to the family planning office in order to be injected every three months. Instead I go with my neighbor to the *hattiya* in Belbari (nearby trading town) where a trained health worker provides the services free of cost at the weekly health clinic. Since many people come and go at the *hattiya* very few people take notice of women who make use of these services... I am also able to watch movies, purchase cosmetics and sell surplus products in exchange for cash at the *hattiya*. I use this cash income to purchase items that are normally found only in larger towns and in Biratnagar. I also save some money to pay for the school fees of my three children... If it were not for the *hattiya*, it would have been difficult for me to act against the wishes of my in-laws and travel to the family planning office every three months in order to be injected.

### *Changes in Land Tenure System*

Prior to the unification of Nepal in the latter half of the eighteenth century many of its tribal peoples followed a land tenure system known as *kipat*. In the words of Regmi (1978: 534): "A *kipat* owner derives rights in *kipat* land by virtue of his membership in a particular area... This, nevertheless, does not mean that land under *kipat* tenure is necessarily cultivated on communal basis."

Some two decades before this study was conducted, the authorities in Kathmandu had been successful in bringing all tribal lands under a uniform system of land tenure, akin to freehold and known as *raikar*. Regmi (1976) has described *raikar* as 'state landlordism' whereby the rights of an individual to the use and transfer of land are

recognized by the state as long as taxes are paid. In a study of the Limbu people of Ilam district in Pallo Kirat, Caplan (1970, 1991) maintains that it was particularly the high caste Hindus who were accused of bearing the responsibility for conversion of *kipat* lands to *raikar*. Caplan (1991: 311) states: "Indeed, because of their literacy and their sharing of caste and kinship backgrounds with members of the administration, well placed Hindus were certainly able to take advantage of legislation to improve their land holdings, and reduce those of the Limbus." The increasing loss of *kipat* land meant that the Limbu people were no longer able to support themselves from their land.

Due to the loss of security provided to middle caste Limbus after the alienation of their *kipat* lands in the Hill Districts, many Limbus have been forced to migrate to the Terai, including the village of Chisang. These Limbus, along with other caste Hindu migrants, have been forced to innovate in order to adjust in this new settlement. Rise in age at marriage and fertility control within marriage are two of the innovations of this migrant community.

Our parents and grandparents were lucky as they had access to the *kipat* lands. By the time I was married, we had land enough to feed us for only about six months of the year. Being unable to feed my family I left behind (in the hills) my wife and two children and moved to Chisang almost 12 years back. My wife and two children joined me in Chisang after a gap of four years. Due to separation we did not have any children during that time. Even then we did not have a lot of money and had to struggle to feed ourselves and our two children... By this time a few women from the village were traveling to Biratnagar and Dharan to be injected every few months. My wife also joined these women and has been receiving the injections every few months for the last seven years. Now our two children are in high school and we do not see any reason why we should have more children (Limbu farmer late 30s).

My parents tell me that they lost their lands to the clever Bahuns in our village in the hills and were forced to migrate to this village. Our family also lived in West Bengal (India) for about seven years where I completed high school. When we returned to Chisang I was hired as a teacher in the local primary school...

My parents want me to get married but there are very few unmarried men of my *jat* in this area who have completed high school and are employed in the government office. Marrying a man from my *jat* in a far away place means that I will have to stop teaching. That is something I do not wish to do. That means that I may have to remain unmarried for a few more years (unmarried Limbu woman early 20s).

### *Expansion of the Transportation Network*

The construction work on the East-West Highway, the main transportation link in Nepal, began in the northern part of the eastern Terai in the early 1960s, with the clearing of thick tropical forests. This construction, along with the implementation of the Malaria control program made it possible for *pahadis* to clear-cut forests and develop settlements such as Chisang. Upon establishing themselves in these new settlements, people established feeder roads, linking their village with the East-West Highway to the north and other settlements further south.

The construction of the East-West Highway and the feeder road networks linked Chisang with the rest of the eastern Terai, the eastern Hill region, the capital city, Kathmandu, and the states of West Bengal and Bihar in India and has had a profound effect on the people of Chisang. Many people from Chisang were employed as construction workers and paid in cash, thereby, introducing the concept of cash wage labor in Chisang. Furthermore, with the construction of the highway, small trading towns were established where people from Chisang sold surplus food, fruits, livestock and poultry products. As previously stated, in recent times, a majority of the households in Chisang are growing cash crops which they transport and sell at the *hattiya*; the subsistence farm economy has been monetized and to some extent integrated with the national economy. Additionally, village people can travel to distant places in search of health care, employment opportunities and even a bride or groom for their loved ones. Regular bus service has made it possible for wage earners and day students to commute to jobs, schools and colleges in nearby towns.

The development of the transportation network has also enabled mobile family planning and maternal child health programs to set up camps in the study area. Local authorities organize vasectomy and laparoscopy camps at least two times a year. Government funded mobile clinics provide antenatal services at two locations within the study area each month. Others seek health care in Biratnagar. The

health and social workers employed by the sub-health post and the family planning and maternal/child health center have recruited and transported women to be sterilized in both Dharan and Biratnagar.

These findings are consistent with transcripts of interviews from Chisang in which the rationale for seeking health care and family planning services was associated with the expansion of the transportation network.

Even prior to the establishment of the sub-health post and family planning office nearby, those couples that had had enough children traveled by road to Dharan and Biratnagar for the operation. After the establishment of the health center in this area it became more acceptable for married women to seek other forms of family planning methods besides the operation... I am quite sure that more and more married women are using various family planning methods, especially now that trained people from Biratnagar travel to the village several times a month to provide these services (elderly mother with two married daughters).

Now that we have better roads and bus services even to small villages in this district it is no longer a problem for most married women to have access to family planning services. Only those women that are ignorant or those desiring at least a son do not seek family planning services... There are no family planning services available in my village and therefore I travel with other women from my village to Biratnagar by bus to be injected every few months. I am pretty sure that if there were no roads and bus service there would be fewer women from my village using family planning services (daughter of the above quoted mother, visiting her maiti, natal home).

The development of the transportation network may be contributing to ideational change, including a rise in age at marriage and increasing fertility control within marriage, and aspirations rising in this migrant community.

If it were not for the road to the village and the East-West Highway, it would not be possible for my 20 year old daughter to attend college in Belbari. She goes to the private college on the local bus. Now that she is attending college there, I realize that we will have to postpone her marriage for a few years. What good is it marrying her early if it is possible for her to remain home and still be able to receive college education as a result of improved transportation (42 year old married woman).

### *Expansion of Education*

In 1963 the *Naya Muluki Ain* (New Law of the Land) was introduced. Among other regulations, this law stated that there was to be no discrimination on the basis of caste (HMG, 1963). Since then all primary, secondary, and tertiary educational institutions have been obligated to admit students of all castes and tribes. According to the village pundit, at first there was a lot of opposition in Chisang from the high and middle castes; however, in the last two decades, they have accepted the fact that low castes are also entitled to education.

In Chisang, many believe that increased schooling has affected not only the decisions made by younger couples at the start of their reproductive careers, but also the ideas of their parents (discussed below). There are at least three mechanisms through which schooling may have impacted on age at marriage and fertility control within marriage.

First, with the expansion of formal education both boys and girls are attending local schools and nearby colleges for longer durations. A Brahman girl about to complete her undergraduate education provided an explanation of the mechanism through which expansion of education increases age at marriage:

Unlike in the past, now it is more acceptable for girls to remain unmarried for longer periods of time, say until age 25, as long as they engage themselves in income generating activities and do not discontinue their education. Expansion of education in this part of the district has made it possible for women to further their education at the college level and remain unmarried into their 20s. I also think that the literacy and numeracy skills that are developed as a result of the expansion of education have helped many men and



women to earn cash incomes... I have already mentioned that those women earning cash incomes contribute to the household economy and are under less pressure to get married after they turn 18.

Another Brahman with four children noted the connection between schooling costs and social pressures on parents to limit fertility by accepting a modern family planning method:

When my children were too young to go to school, my wife and I were able to meet the costs of the children through our income from the little land we own. Now that three of our children go to school, my wife has had to raise green vegetables to sell in the *hattiya* in Pathari (a nearby town). I have started to work as a day laborer in Belbari from time to time... It is very difficult to afford to send three children to school... That is why my wife reminds me from time to time that we should have limited the number of children to two and used family planning services... My wife has also advised her younger sister to use a temporary family planning method until her two children grow up. Only then will my wife's younger sister be able to provide quality education to her two children.

Secondly, education generates new attitudes among educated men and women, young couples, and often among their parents. Caldwell (1980: 228) has stated that schooling speeds up cultural change. Indeed, schooling seems to influence ideas about family life, marriage and childbearing.

Now that I have completed my secondary education, and am attending college, it is in my interest to delay marriage until I am able to support my wife and family. This may also mean that I will have to set up a separate household (through partition) soon after my marriage and have only two children (unmarried male early 20s).

Finally, increased schooling leads to profound social change (Caldwell, 1980: 242). Both school aged children and older villagers associated education with national development. As a result of increasing educational opportunities in Chisang, children are growing up in an environment that is very different from the one in which their parents were raised (Hull, 1987: 93). Those with at least some education

look down the subsistence agricultural and the rural way of life. Education provides them with the social and economic advantages including the skills necessary to migrate to urban centers within Nepal and India i.e., in search of non-agricultural work. This was clearly stated by a 19 year old Dhimal boy who had returned to Chisang from his job in the Punjab, India:

After I failed SLC (high school certification) exams two years in a row, I wasted no time and ran away with some of my friends from school, first to Delhi, and moved on to Punjab. I have not yet passed my SLC exams but I know how to read and write and I am sure that no one can cheat me without my knowing it. I did not want to spend the rest of my life in Chisang grazing cows, and cutting firewood to sell on the black-market. Nobody who has gone to school for a few years will want that kind of job. Also, village life is too dull once you start living in a city.

### *Changing Role of Women*

In Chisang, social norms for castes and women have been changing. This has paved the way for increased participation in agricultural work by high caste Brahmins and has increased demands for women's labor across all castes and tribes. According to the village pundit, today women of different castes and tribes do work which was prohibited in the past. This has resulted in an overall increase in the number of women working and has provided these women new avenues to earn cash income in Chisang and the nearby trading towns of Belbari and Pathari. In Chisang the only agricultural work still monopolized by men is ploughing fields.

The relaxation of social norms for women's behavior and additional markets available for their manual services have increased women's cash income and brought about significant changes in family structure and relationships. Married women under the age of 30 and those earning cash income are more likely to live in nuclear households. Married women living in joint or supplemented-nuclear households (that is, households with widow or widower living with married son and his family) are less likely to have cash income and more likely to work on the family land.

As far as fertility is concerned, married women living in a nuclear household in Chisang have an average of 3.2 children. Women

under the age 30 who live in joint or supplemented-nuclear households have an average of 4.1 children. In contrast, married women of all ages living in a joint or supplemented-nuclear household have an average of 5.6 children.

In Chisang three major changes in women's roles have created an environment conducive to the acceptance of family planning methods. A rise in the age of marriage has meant that in-marrying brides are more mature and more educated. This combination of increased formal schooling and maturity has resulted in more assertiveness; brides are less likely to be overwhelmed by their in-laws' desires. Additionally, the brides tend to desire a smaller family and are, therefore, more likely to use contraceptives, especially when they are available locally.

Recently married women and unmarried girls over the age of 14 are engaged in various income generating activities, mainly trading agricultural and forest products. In the majority of cases, the women control the cash income received from these economic activities. A married 28 years old Yakha woman explained the connection between nonfarm based income, delayed marriage and small family size:

I used to supply live chickens to various local hotels and restaurants before I got married. In fact I met my husband for the first time at a hotel in Belbari... Among all my friends with whom I went to school I was married last. As I was earning money by trading my parents did not pressure me to get married. Also, I have made small investments in this area and have many regular clients who prefer to trade with me. It has been difficult to maintain my trade and raise my two children... I think that I will not have anymore children.

Women participating in nonfarm based economic activities usually travel from home to their jobs in groups and therefore are likely to gain information on family planning methods from their peers.

As an owner of a small grocery shop in the village I have to travel to Biratnagar to get supplies at least two times a month. I was introduced to a family planning clinic in Biratnagar by my friends with whom I traveled to get supplies for my shop. Had I not been an owner of a shop, I do not think that it would have been necessary for me to travel to Biratnagar with other women from the village... I think that I would have still made use of

the family planning services but that would have been delayed by a few years (married woman).

The changing inter-caste, social and economic relationships in Chisang have made it necessary for women of all castes and tribes to work on the family land as well as to participate in income generating activities in nearby towns.

Since I wanted my youngest daughter to find work in a government office I sent her to school and on to college until the time of her marriage. As a result, she was married when she was 24 years old, that is about five to six years later than her two elder sisters. Unlike her two elder sisters who stay home and work on the family farm, my youngest daughter works for the local biogas company..... She also tells me that she is happy having only two children (56 years old Chettri woman).

### *Health and Family Planning Services*

Family planning awareness got a boost in 1994 when a non-governmental organization (NGO) established an office in Chisang and began providing family planning services. This office was well organized and funded and was open several days a week. Women were encouraged to attend a series of informal discussion groups; the introduction of these informal group sessions was innovative and very popular among women in Chisang and neighboring villages. The office distributed contraceptives free or at a nominal price to men and women from the study area and provided training to a local Dhimal (*adhivasi*) woman who became a motivator for Chisang and eight nearby villages.

That same year a government sub-health post (SHP) was established within the VDC. The SHP was under-funded and thus lacked financial resources and trained manpower to perform many of its tasks; with three Village Health Workers (VHWs), it did provide immunizations, and some minor curative services, along with promoting contraceptive use.

In Chisang, a combination of major socioeconomic development and cultural change, together with the introduction of effective family planning services, has greatly increased the number of family planning acceptors in a short time period. The changing social, cultural, economic and political institutions have created an environment, which promotes use of family planning services among couples after they have reached their desired family size.

In the past villagers had genuine reasons to be fearful of operations (vasectomy and laparoscopy), as there was a lot of coercion from politicians and health care workers. In the last 10 to 15 years things have changed due to various development programs and the increased educational level of the villagers. They are less fearful of the family planning services and are more receptive to suggestions of the health care workers that promote health care and family planning services... These health care workers go door-to-door and advise the type of family planning method to be used according to the present family size and the couple's desires (representative of the VDC Council who completed undergraduate studies in Kathmandu).

Prior to the establishment of the SHP and the family planning office in the VDC in 1994, only two currently married Chisang women aged 15-49 reported that they had used temporary methods. Another six women were protected from pregnancy as either they or their husbands had been sterilized. After the local introduction of health care and family planning services the number of acceptors of both sterilization and temporary methods increased threefold. Over seven percent of men and 11 percent of women had been sterilized; 14 percent of women were using temporary methods. Even more remarkable is that the number of women using temporary family planning methods to space births ( $n = 14$ ) is keeping pace with the numbers who are sterilized ( $n = 18$ ). Hiring and training local women to promote contraceptive use in Chisang is another factor that has helped increase the number of contraceptive users.

### *Migration as a Catalyst for Change*

As stated in previous sections, Chisang has attracted its share of migrants from the eastern Mountain and Hill regions and from all castes and tribes. The *pahadi* people relocated to Chisang because of various push and pull factors (on this point, see also Gurung, 1989). Furthermore, Chisang is characterized by a continuing pattern of out-migration (permanent and temporary) and seasonal migration to urban centers within Nepal and into India; the subsistence agricultural economy is no longer able to support the population of rural communities, such as Chisang. Out-migration from Chisang is related to a number of factors including: types of households, ability to supplement household income by off-land income, mobility resulting

from a better transportation network, higher educational levels and receptiveness to change.

According to various studies on the relation between migration and fertility in different parts of the world, the fertility of rural to urban migrants is generally lower than that of non-migrants at place of origin but higher than that of urban natives (Goldstein, White and Goldstein, 1998; Goldstein and Goldstein, 1981; Lee and Farber, 1985). It has been noted above that Chisang is a transitional village, one which does not fit the category of either rural or urban. Although this study did not examine the fertility of non-migrants at place of origin there is evidence that migrants are changing their fertility behavior.

Unlike in the hills, people who have migrated to this village no longer see early marriage of their daughters as a meritorious act. I will argue that many parents consciously delay marriage of their daughters as they contribute to the household economy... The recent migrants to the village along with the more established families seem to have realized the benefits of family planning services. They use the family planning services for two reasons-- to put an end to childbearing, and also to delay births so as to allow three to four years gap between children (village priest who migrated to Chisang from Khotang district).

Another man who had recently migrated from Ilam District with his wife and three children expressed his surprise when the female family planning motivator arrived in his temporary dwelling to provide information on the three month injection and sterilization:

My wife had to walk for eight hours to Ilam Bazaar to get the injection. She went there a few times but stopped going there, as there was no one at home to look after our children. Here, we receive the same services within half an hours walk from our house... The *dhimalni didi* (that is, family planning motivator) convinced my wife to start taking the injections as soon as possible... As migrants with no land and three mouths to feed, my wife agreed and has received the injection two times in the last five months.

Migrants from the adjoining hill districts who have settled in Chisang have regulated their childbearing patterns as a result of various contextual factors and to take advantage of a broad range of

opportunities. As migrants they have been innovative and regulated their fertility through a combination of higher age at marriage and fertility control within marriage.

## Conclusion

Chisang is a transitional village, and as such can be categorized as neither a rural village nor an urban center. In Chisang fertility change is occurring as a result of changing sociocultural, economic and development factors including increased educational opportunities, changing roles of women and the local availability of family planning methods in addition to infrastructure changes. Many of the residents in Chisang village are migrants, and are therefore receptive to changing norms and practices. They are innovative and are breaking away from many traditional ways of thinking; one of these innovations is increased fertility regulation achieved principally by delaying age of marriage and increasing contraceptive use within marriage. This case study suggests that analysis of fertility changes in a village should not be viewed in isolation from regional or national socioeconomic changes that form the context of the fertility transition.

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