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# Who Goes to School? Educational Stratification by Gender, Caste, and Ethnicity in Nepal

SHARON STASH AND EMILY HANNUM

## Introduction

As societies develop, educational credentials play an increasing role in the status attainment process. While structural functionalists believe this change represents progress toward stratification based on ability, reproduction theorists believe that educational credentials reinforce and legitimize traditional status hierarchies. Using the case of Nepal, we focus on two fundamentally ascriptive status hierarchies of critical importance in South Asia: gender and caste. We choose Nepal as our example for several reasons. First, Nepal is highly stratified along gender lines, a situation that similarly applies to the populous Hindu states of North India.<sup>1</sup> Second, throughout Nepal, as in major regions of India, caste constitutes an enduring form of social inequality despite national legislation that outlaws caste discrimination.<sup>2</sup> Finally, Nepal presents an unusual opportunity to observe the shift toward a credential-oriented status attainment society because of the very recent and rapid emergence of a formal education system.

This study examines two issues: first, whether historical educational expansions have narrowed the education gap by gender and caste; and second, whether caste and gender individually and interactively affect basic educational access and progress among school-aged children. We begin by setting the context with a discussion of gender and caste stratification issues relevant to Nepal and with a description of educational expansions that have occurred in the last half century. From these discussions, we derive hypotheses about levels and changes in inequality in primary education associated with caste and gender. To evaluate these hypotheses, we analyze nationally representative data from the 1991 Nepal Fertility, Family Planning and Health Survey (NFS). We first present cross-cohort comparisons of entry into and completion of primary school to demonstrate the persistence of gender

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<sup>&</sup>lt;sup>1</sup> Elizabeth King and M. Anne Hill, *Women's Education in Developing Countries* (Baltimore: Johns Hopkins University Press, 1993); Sharon Stash and S. Phillip Morgan, "Women's Mobility and Basic Education: Community and Family Level Correlates of Primary Schooling in Pakistan, India and Nepal" (unpublished manuscript, University of Pennsylvania, 2001).

<sup>&</sup>lt;sup>2</sup> In Nepal, as in many regions of India, Hindu caste groups exist among other indigenous ethnic groups. For convenience sake, henceforth in this article we will use the word "caste" to imply the entire range of caste and ethnic groups that currently reside in Nepal. See also Andras Hofer, *The Caste Hierarchy and the State in Nepal: A Study of the Muluki Ain of 1854* (Innsbruck: Universitatverlag Wagner, 1979).

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and caste differences over time. We next examine the progress of children through their primary school years, focusing on a group of children who most recently underwent these experiences. We employ both descriptive statistics and multivariate regression techniques to illustrate the relationships among gender, caste, and primary school access and attainment. Our article closes with a discussion of the implications of results for the research and policy community.

# **Context and Hypotheses**

In this section, we provide the context and guiding questions for our study. We first discuss the comparative and Nepal-specific literature on gender and caste stratification in relation to education. We then discuss the rapid expansion in Nepal's education system in the last half century. We draw from these discussions specific hypotheses for empirical evaluation.

# Gender Stratification

Research in the fields of sociology of education, social stratification, demography, and economic development have suggested a worldwide trend toward equalization of educational credentials between girls and boys.<sup>3</sup> However, the unequal allocation of resources among children in households by gender remains a serious problem in many parts of the developing world, and particularly in some societies in South Asia and North Africa.<sup>4</sup> In many societies, social traditions and financial incentives exert positive pressure on parents to invest in the long-term economic viability of sons over that of their daughters. Researchers often explain this phenomenon with some variant of the "household welfare" framework articulated here by Hanna Papanek: "In countries where children's schooling faces many barriers of direct and indirect costs, as well as accessibility of schools, family decisions about children's schooling depend not only on available resources but also on what it is hoped that education will do for the children (as individuals) and for the collective interests of the household."<sup>5</sup> Girls can be disadvantaged by a ratio-

<sup>5</sup> Hanna Papanek, "Class and Gender in Education-Employment Linkages," *Comparative Education Review* 29 (August 1985): 319.

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<sup>&</sup>lt;sup>3</sup> Steven Brint, Schools and Societies (Thousand Oaks, Calif.: Pine Forge, 1998); John Knodel and Gavin W. Jones, "Post-Cairo Population Policy: Does Promoting Girls' Schooling Miss the Mark?" Population and Development Review 22, no. 4 (1996): 683–702; Hans-Peter Blossfeld and Yossi Shavit, "Persisting Barriers: Changes in Educational Opportunities in Thirteen Countries," in Persistent Inequality: Changing Educational Attainment in Thirteen Countries, ed. Yossi Shavit and Hans-Peter Blossfeld (Boulder, Colo.: Westview, 1993), pp. 1–24; T. Paul Schultz, "Investments in the Schooling and Health of Women and Men: Quantities and Returns," Journal of Human Resources 28, no. 4 (1993): 694–734.

<sup>&</sup>lt;sup>4</sup> For classic reviews of gender and education in the global context, see Nelly P. Stromquist, "Determinants of Educational Participation and Achievement of Women in the Third World: A Review of the Evidence and a Theoretical Critique," *Review of Educational Research* 59, no. 2 (1989): 143–83; King and Hill. For more recent reviews of gender issues and education in South Asia in the 1990s, see Neera Kuckreja Sohoni, "Women in India," in *Women in the Third World: An Encyclopedia of Contemporary Issues*, ed. Nelly Stromquist and Karen Monkman (New York: Garland, 1998), pp. 572–82; Madhuri Mathema, "Women in South Asia: Pakistan, Bangladesh and Nepal," in ibid., pp. 583–92.

nal cost-benefit analysis. For example, if parents feel that their daughters will be unable to capitalize on education in the labor market, they will be more likely to depend on sons for support in old age. When household resources are tight, investments in long-term contributors to the household economy (i.e., sons) are more easily justified than investments in short-term ones (i.e., daughters).6

In many, but not all, South Asian societies, the balance of household decision making is further tipped in favor of educating sons because of important considerations surrounding marriage.7 Although some level of education for girls may enhance their value on the marriage market, too much schooling could result in reduced marital opportunities for them. For India, Mysore Narasimhachar Srinivas writes, "as a girl gets more and more educated, her connubial circle narrows as there is an implicit rule which is only rarely broken that the boy be at least as highly educated as she is." 8 Moreover, conflict may occur between the process of public education and parents' desires to prevent girls from having contact with boys that is not sanctioned by the family, particularly as girls approach marital ages.<sup>9</sup> As a result, some daughters may be withheld from enrolling in school, or they may be prematurely withdrawn from school to perform needed tasks at home (e.g., housekeeping, care of younger siblings, and income-earning activities). Home training for girls in domestic activities may be viewed by parents as better preparation for their adult marital roles than is the training typically received through the formal educational system.

Among its neighbors in South Asia, Nepal is a country characterized by persistent poverty, slow economic growth, and wide differences in school attainment between girls and boys.<sup>10</sup> Gender has been shown to be the single strongest determinant of school participation among rural youth in Nepal by a national study.<sup>11</sup> Similarly strong gender effects were demonstrated in smaller regional studies.<sup>12</sup> In Nepal, Jacqueline Ashby and also Dean Jamison and Marlaine Lockheed identify three factors that tend to lower incentives

<sup>6</sup> Gale Summerfield, "Allocation of Labor and Income," in Stromquist and Monkman, ed., pp. 218-26.

<sup>7</sup> Stromquist; Mathema.

<sup>8</sup> Mysore Narasimhachar Srinivas, The Changing Position of Indian Women (Delhi: Oxford University Press, 1978), p. 24. <sup>9</sup> Zeba Sathar and Cynthia Lloyd, "Who Gets Primary Schooling in Pakistan: Inequalities among and

between Families," Working Paper no. 52 (Population Council, New York, 1993).

<sup>10</sup> Meena Acharya, The Status of Women in Nepal: A Critical Review (Kathmandu: Center for Economic Development and Administration, 1979).

<sup>11</sup> Gajendra Man Shrestha, Sri Ram Lamichhane, Bijaya Kumar Thapa, Roshan Chitrakar, Michael Useem, and John Comings, "Determinants of Educational Participation in Rural Nepal," Comparative Education Review 30, no. 4 (1986): 508-22.

<sup>12</sup> Jacqueline A. Ashby, "Equity and Discrimination among Children: Schooling Decisions in Rural Nepal," Comparative Education Review 29, no. 1 (1985): 47-67; Dean T. Jamison and Marlaine E. Lockheed, "Participation in Schooling: Determinants and Learning Outcomes in Nepal," Economic Development and Cultural Change 35, no. 2 (1987): 279-306.

for investment in the education of daughters relative to sons: (1) daughters are expected to leave their natal households through marriage in their midteen years, while sons are expected to coreside and contribute to the welfare of parents in their old age; (2) nonfarm employment is perceived as more appropriate and realistic for males than for females; and (3) the traditional gender-based division of farmwork requires more routine work from females than from males. In a survey of rural farm households, Jamison and Lockheed showed that girls are discouraged from attending school in order to care for small children.<sup>13</sup> Finally, relatively high returns from advanced levels of schooling have led to a strategy of "specialization" in poor households.<sup>14</sup> When resources are tight, families use available resources to enable at least one favored child to be educated, while access to formal education is delayed or denied to other children in the family-girls are unlikely recipients of such investments.

# Caste Stratification

Unlike gender, which has received significant attention in the literature on educational stratification, theoretical and empirical attention to caste as a determinant of status attainment has been minimal. Since Prithvi Narayan Shah unified the country in 1769, high-caste Hindus have been politically dominant in Nepal.<sup>15</sup> Politically elite high castes imposed a hierarchy on the resident ethnic groups. These ethnic groups were variously absorbed into the Hindu caste hierarchy; some groups allied with the high-caste political elite, while others were less influenced.<sup>16</sup> The 1991 census accounted for no less than 60 caste-ethnic groups. While many of these groups are concentrated in certain regions of the country, several of the major groups are scattered throughout. It was not until 1963 that Hindu rules, including those governing caste considerations, were formally removed from law. Therefore, the gradual loosening of caste influences was coincident with the expansion of modern education.

Yet, findings from other settings suggest that periods of rapid educational expansion may not necessarily be accompanied by a narrowing of educational disparities by caste. For example, in the Philippines, as Herbert Smith and Paul Cheung demonstrate, social origin differences fail to converge over time despite the rapid expansion of educational opportunities.<sup>17</sup> Similarly, in China, Emily Hannum and also Hannum and Yu Xie illustrate

<sup>13</sup> Jamison and Lockheed.
<sup>14</sup> Ashby.

<sup>15</sup> Ernestine L. McHugh, "Dialogue, Structure, and Change in Himalayan Anthropology: A Review Article," Comparative Studies in Society and History 34, no. 3 (1992): 552–59. <sup>16</sup> Sherry B. Ortner, High Religion: A Cultural and Political History of Sherpa Buddhism (Princeton, N.J.:

Princeton University Press, 1989).

<sup>17</sup> Herbert L. Smith and Paul P. Cheung, "Trends in the Effects of Family Background on Educa-tional Attainment in the Philippines," *American Journal of Sociology* 91, no. 6 (1986): 1387–1408.

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that even in the context of dramatic economic growth and widespread educational expansion, ethnic differences in educational attainment persisted at the national level as well as in the population of a minority autonomous region.<sup>18</sup>

The work of Bam Dev Sharda on caste and social mobility in a study of 11 villages in the Punjab, Haryana, and Himalchal Pradesh India allows for dual systems of stratification to function side by side and to affect one another in caste societies undergoing processes of industrialization and modernization.<sup>19</sup> In his study of occupational mobility, Sharda finds that the effects of caste on education are stronger than any other factor. He attributes this to "the different values castes place on educational attainment," noting the importance traditionally placed on education by higher castes.<sup>20</sup> Accordingly, Sharda finds caste stratification mirrored in patterns of educational attainment; illiteracy levels were observed to be low among high castes, high among mid-level castes, and quite high among the lowest castes.

From a conflict perspective, Ehsanul Haq defines a mechanism through which systems of modern education perpetuate caste inequality: "From the apex in the organizational hierarchy to the bottom, the caste dominance persists and manipulates the educational structure along caste lines in order to strengthen its traditional control."<sup>21</sup> Examining data from schools, colleges, and other educational institutions in Uttar Pradesh, Haq finds that despite modernization, higher castes continue to dominate educational opportunities, including teaching and other positions in schools and universities, and they are overrepresented in the student body. Haq concludes that educational inequality is a function of an overarching social inequality; educational systems mirror inherent structures of values opposed to the equalization of opportunities.

Educational studies from Nepal have suggested strong caste effects on school participation. Jamison and Lockheed, in a comprehensive analysis of data from a World Bank study in the Bara and Rautahat districts of Nepal, found that high-caste households were considerably more likely to send their children to school.<sup>22</sup> In her study in Kavre Palanchowk district, Ashby found that the amount of schooling households were able to provide for sons depended substantially on caste but did so among only a few predomi-

<sup>18</sup> Emily Hannum, "Ethnic Differences in Basic Education in Reform-Era Rural China" (paper presented at the American Sociological Association meeting, Chicago, August 1999); Emily Hannum and Yu Xie, "Ethnic Stratification in Northwest China: Occupational Differences between Han Chinese and National Minorities in Xinjiang, 1982–1990," *Demography* 35, no. 3 (1998): 323–33.

<sup>19</sup> Bam Dev Sharda, Status Attainment in Rural India (Delhi: Ajanta, 1977).

<sup>20</sup> Sharda, p. 65.

<sup>21</sup> Ehsanul Haq, "Open Education in a Closed Society: A Study in Social and Educational Inequalities in Contemporary India," in *Social Stratification*, ed. Dipankar Gupta (Delhi: Oxford University Press, 1992), p. 461.

<sup>22</sup>Jamison and Lockheed (n. 12 above).

nantly high-caste groups.<sup>23</sup> Other major studies on educational participation in Nepal have failed to report on caste altogether.<sup>24</sup>

On the basis of existing literature, we formulated tentative hypotheses on variation in educational attainment resulting from caste membership. We chose to use comparative caste-ethnic categories to summarize across groups at a national level that have some precedence in the demographic literature.<sup>25</sup> Drawing on available comparative ethnographic literature and ethnographies specific to certain caste or ethnic groups (that are referenced in the text below), we can comment on major differences across caste and ethnic groups as we posit they are related to the educational chances of boys and girls.<sup>26</sup> Consistent with major veins of contemporary social theory, we recognize that caste divisions are permeable and that individuals can and do negotiate movement across groups and, in the process, challenge systems of caste inequality. The strength of this analysis is our ability to identify broad patterns in national data, leaving richer contextual analysis for those using in-depth data from smaller locals and qualitative methods that are more suitable for the task.

High-caste Brahmins—including Brahmin and Chhetri castes—in the fulfillment of their social and religious roles as the priest caste have long prized literacy skills; however, high-caste women were traditionally denied any access to these skills. Social norms setting expectations for women are commonly considered to be more restrictive among high than low castes. Moreover, the activities of high-caste women beyond the home can be severely circumscribed, particularly in more remote or socially conservative regions of the country.<sup>27</sup> High-caste groups tend to be socioeconomically advantaged, and households with greater resources may be better able to implement stricter standards governing women's activities and interaction with men.

<sup>25</sup> Nominal variables defined on the basis of existing theory and literature have been used in studies of mortality and with national data sets. See Norman Y. Luther and Shyam Thapa, "Infant and Child Mortality in Nepal" East-West Center Working Paper, Population Series no. 105 (East-West Center, Honolulu, 1999); Minja K. Choe, Robert D. Retherford, Bhakta B. Gubhaju, and Shyam Thapa, "Ethnic Differentials in Early Childhood Mortality in Nepal," *Journal of Biosocial Science* 21, no. 2 (1989): 223–33. In the present study we employ a similar set of caste and ethnic groups based in theory; we also examine and reduce the number of categories through a series of descriptive and multivariate statistical techniques.

<sup>26</sup> For comparative ethnographic literature, we refer in particular to Dor B. Bista, *People of Nepal* (Kathmandu: Ratna Pustak Bhandar, 1967); C. von Furer-Haimendorf, *Caste and Kin in Nepal, India and Ceylon* (Bombay: Asia, 1966); Rajesh Gautam and Ashoke K. Thapa-Magar, *Tribal Ethnography of Nepal*, 2 vols. (Delhi: Book Faith India, 1994).

<sup>27</sup> Lynne Bennett, Dangerous Wives and Sacred Sisters: Social and Symbolic Roles of High-Caste Women in Nepal (New York: Columbia University Press, 1983); Lynne Bennett and Meena Acharya, The Status of Women in Nepal: An Aggregate Analysis and Summary of Eight Village Studies (Kathmandu: Center for Economic Development and Administration, Tribhuvan University, 1981).

<sup>&</sup>lt;sup>23</sup> Ashby (n. 12 above), p. 79.

<sup>&</sup>lt;sup>24</sup> For example, see Shrestha et al. (n. 11 above); this major analysis of educational participation in Nepal failed to investigate caste as a potential determinant.

Finally, a study in 1987 by Paul Seddon documented that high castes dominate the majority of positions of education and status in the country.<sup>28</sup> Yet, another elite group, Newars, who reside within the Kathmandu Valley, are very influential economically, socially, and politically, and both Newari men and women are extensively involved in business and trade activities that require some math and reading skills. Women's involvement in business activities is normative, and there are few restrictions on their travel or interaction with men.

Hill ethnic groups, Rai, Magar, and Gurung, whose presence in Nepal predates the importation of the caste system from India, have historically resided in the middle-hill regions of the country where they are farmers. Members of these ethnic groups have tended to be recruited for positions in the British and Indian armies, or for other low-skill occupations in India. From among these hill ethnic groups we separate people of Tamang, Sherpa, and other Bhotia ethnicities. These groups are of Tibeto-Burmese origin, and many reside in high mountain regions of the country. Gender systems among the hill tribes and Tibeto-Burmese groups are typically demonstrated to be more egalitarian.<sup>29</sup>

Terai ethnic groups include a variety of Hindu castes that reside in villages in the plains region bordering India (e.g., Tharus, Yadhavs, Muslim, etc.).<sup>30</sup> Cultural norms in the Terai are heavily influenced by the Hindu culture of Northern India. Terai ethnic groups are often considered to be socially conservative particularly with respect to women.<sup>31</sup> Finally, a variety of low castes, occupational castes, and untouchable castes have tended to benefit less from educational and other advances in the modern sector. This brief description of caste in Nepal makes a point consistent with Louis Dumont's seminal work in India: caste is linked to, but also distinct from, social class.<sup>32</sup>

# Access to Basic Education in Nepal

Educational expansion is a recent phenomenon in Nepal. Broad-based development of popular education began only in the latter half of the twentieth century, in 1951, with the establishment of the Ministry of Education

<sup>32</sup> Louis Dumont, *Homo Hierarchicus: The Caste System and Its Implications* (Chicago: University of Chicago Press, 1980).

<sup>&</sup>lt;sup>28</sup> David Seddon, Nepal: A State of Poverty (New Delhi: Vikas, 1987).

<sup>&</sup>lt;sup>29</sup> Bennett and Acharya.

 $<sup>^{30}</sup>$  We include a small group of Muslims in the Terai caste group. Census data suggests that there is a small minority of Muslims living in the Terai (less than 2 percent); however, Muslims also live in other regions of the country. We collapse Muslims with Terai ethnic groups because they are typically considered to be socially conservative, particularly with respect to women. We similarly justified this decision through various descriptive analyses and statistical tests of nested models (with and without a dummy variable for Muslims) using likelihood ratio  $\chi 2$  tests.

<sup>&</sup>lt;sup>31</sup> S. P. Morgan and B. Niraula, "Gender Inequality and Fertility in Two Nepali Villages," *Population and Development Review* 21, no. 3 (1995): 541–61; Shara Neidell, Bhanu B. Niraula, S. Phillip Morgan, and Sharon Stash, "Muslim and Non-Muslim Differences in the Eastern Tarai of Nepal," *Contributions to Nepalese Studies* 26 (August).

and the adoption of a constitution that made education a right for every Nepalese citizen.<sup>33</sup> Expansion was rapid in the ensuing years. Growing from a baseline of 321 primary schools and 11 secondary schools, the number of primary schools reached 14,500 in 1990, and the number of secondary schools reached 3,964 at the lower secondary level and 1,953 at the upper secondary level.<sup>34</sup> From 1981 through the date of this study, the structure of education conformed to a 5 + 2 + 3 system, with the first 5 years of primary education compulsory and provided free of charge.<sup>35</sup> In recent years, primary textbooks have been provided free of charge to all students up to grade 3, and to female students and students in remote areas up to grade  $5.3^{6}$ To increase girls' enrollment, 5 percent of girls are provided with uniforms and monthly allowances.37

Literacy rates reflect educational expansion, rising from an estimated 1 percent in 1950 to 23 percent in 1980.<sup>38</sup> In 1951, less than 0.5 percent of the population of school-aged children was enrolled in school.<sup>39</sup> More recent estimates of enrollment, while low, represent substantial progress. Our own estimates indicate that in 1991, nationwide, 62 percent of all 15-yearolds had ever enrolled in primary school.

However, substantial barriers to access persist. Beyond the still strikingly low rates of students who have ever been enrolled, delayed entry into schooling is a problem.<sup>40</sup> Repeated grades and poor attendance lengthen the number of years spent in primary school by many children. UNESCO data indicate national repetition rates of 45.5 percent for the 1991 first-grade student cohort of boys, 20 percent for the second grade, and 18 percent for the third grade. For girls, corresponding rates were 40 percent, 19 percent, and 14 percent.<sup>41</sup> Despite compulsory education laws and educational subsidies, dropout rates remain high by all estimates even during the earliest years of schooling.<sup>42</sup> Poverty is at the root of the problem. Studies have shown that

<sup>33</sup> Kim P. Sebaly, "Nepal," in World Education Encyclopedia, ed. George Thomas Kurian, vol. 2 (New York: Facts on File, 1988), p. 905.

<sup>34</sup> Kedar N. Shrestha, "Nepal," in *Handbook of World Education*, ed. Walter Wickremasinghe (Houston: American Collegiate Service, 1992), p. 569.

<sup>35</sup> T. R. Khaniya and M. A. Kiernan, "Nepal," in International Encyclopedia of National Systems of Education, ed. T. Neville Postlethwaite, 2d ed. (Tarrytown, N.Y.: Elsevier Science, 1995), p. 693. In 1991, the government announced that free education would be expanded to the sixth grade (p. 694).

<sup>36</sup> Shrestha, p. 565.

<sup>37</sup> Ibid.

 $^{38}$  Shrestha et al. (n. 11 above).

<sup>39</sup> T. R. Khaniya and M. A. Kiernan, "Nepal: System of Education," in International Encyclopedia of Education, ed. Torsten Husén and T. Neville Postlethwaite, 2d ed. (Tarrytown, N.Y.: Elsevier Science, 1994), p. 4062.

<sup>40</sup> Variation in timing of entrance is illustrated in the substantially lower ever-enrollment rates among 7-year-olds than among 15-year-olds (NFS; our estimates). <sup>41</sup> The NFS data provide an indirect confirmation of slow progression through primary school. For

example, among 10-year-old first-grade graduates in the NFS, 23 percent had not yet completed second grade. Among corresponding 11-year-olds, 14 percent had not completed second grade. The figure fell to 2.4 percent among 15-year-old first-grade graduates; http://unescostat.unesco.org. <sup>42</sup> Sebaly; Khaniya and Kiernan, "Nepal: System of Education," p. 4062.

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out-of-pocket expenditures are a considerable barrier to schooling.<sup>43</sup> Widespread poverty limits the resources families have to levy toward the direct costs of schooling, and the opportunity costs of forgone child labor are also prohibitive for many.<sup>44</sup> Vast differences exist between schooling in urban and rural settings, reflecting both different socioeconomic compositions and differential access to schools of reasonably good quality.<sup>45</sup>

# Hypotheses

Based on our discussion of the literature on gender and caste inequality in developing nations and the conditions characterizing Nepal, we formulate three general hypotheses. First, we expect that although schooling has expanded in Nepal, powerful social and economic incentives cause parents to continue to favor boys: persistent poverty, a predominantly agricultural economy with few nonfarm opportunities for women, and traditional family and marriage systems. Thus, we hypothesize that school credentials reinforce inequality on the basis of gender. Less evidence is available with which to form strong a priori hypotheses about the relationship between educational expansion and caste stratification. Historical patterns favoring highcaste groups socially, economically, and politically favor their acquisition of "modern" schooling credentials. Poverty, which is more prevalent among lower caste groups, is a ramification of inextricably linked structured caste and class inequalities and parallels those groups' lesser participation in the schooling process. For this reason, we hypothesize that access to schooling reinforces caste hierarchies. Finally, our review of literature has led us to some counterintuitive predictions regarding the relationships between higher caste status and girls' education. Although we expect higher caste status to result in higher levels of schooling among children overall, stricter forms of patriarchal control on young girls' lives suggest that gender differences may be somewhat larger in high-caste than in low-caste households.

# **Data and Analytic Approach**

In this section, we discuss the data set and subsamples employed in our analyses, present a rationalization for key variables, and introduce the analytic techniques employed.

# The 1991 NFS

The NFS was administered by the Department of Health Services under the Ministry of Health, and it received additional technical support from the Demographic and Health Surveys (DHS). Data from household rosters

<sup>&</sup>lt;sup>43</sup> Jamison and Lockheed (n. 12 above).

<sup>&</sup>lt;sup>44</sup> Shrestha et al., p. 509.

<sup>&</sup>lt;sup>45</sup> Among urban 15-year-old children, 85 percent had ever enrolled in school and 74 percent had completed a primary education. Among rural 15-year-olds, 61 percent had ever enrolled in school and 40 percent had completed primary school. The rural figures dominate national patterns because, as the estimates from the Central Bureau of Statistics for 1993 suggest, the vast majority of Nepalese (93 percent) reside in rural areas.

(completed in a total of 24,745 households) are analyzed in this study. The NFS used a multistage cluster-sample design, the first stage of which was the random selection of 20 clusters from within each of 75 districts. Within each cluster, a standard sample of 20 households was selected, using a random start and a standard sampling fraction (computed for each respective cluster relative to its total number of households). This strategy resulted in a standard sample of approximately 400 households per district. Within districts, the sample is self-weighted, meaning that the same design weight is applied to urban and rural settings. The DHS provided household-level weights to adjust for differences in the size of the population across districts, and for nonresponse of households and individuals. A complete household listing, or census, was conducted with heads of households, typically the oldest male relative currently in residence.

We drew three subsamples from the household rosters. First, a sample of all children and young adults listed in this roster was drawn for the purpose of estimating changes across cohorts in school enrollment and educational attainment by gender and caste. This subsample allows us to observe the educational experiences of cohorts born in the years 1965–91, a period in which the expansion of formal, compulsory education was very rapid. Second, a sample of all children of household heads ages 10–15 was drawn for the purpose of analyzing household determinants of students ever enrolled in school.<sup>46</sup> Third, a subsample of 15-year-olds was drawn for the purpose of examining primary school completion. This age was selected because it allows enough time for children in the sample to have enrolled in school and to have completed the fifth grade. For multivariate analyses, we drew one randomly selected child from households in which there was more than one eligible child of the household head.<sup>47</sup> All samples rely on a definition of de jure residence.<sup>48</sup>

 $^{46}$  Household weights provided by the DHS were adjusted so that the sample would represent all households (i.e., the DHS design household weight was multiplied by 1/total number of children in the household).

<sup>47</sup> This sample (including 80.2 percent of the sample of all children listed on the household questionnaire) was selected because we were interested in the effect of parental characteristics and household composition on the educational enrollment and attainment of children. Because of the structure of the NFS household listing, information on parents could be matched to that on their children most closely within nuclear family units in which fathers (or mothers) were listed as household heads. Reporting is also more likely to be accurate when household heads are providing information on their own children, than when they are reporting on other less proximately related, or unrelated, children living in their household. However, a sample of children of household heads is biased by the exclusion of more complex household structures that occur with some frequency in South Asian cultures. For example, households where sons and their families reside with a senior generation household head are excluded, as are households in which multiple brothers and their families coreside. In addition, we excluded children who are more distantly related to the household head, and unrelated children. We compared data from children of household heads with that of all children listed in households to look for evidence of systematic differences, but we found that the sample of children of household heads differed little from the sample of all children in households on these characteristics.

<sup>48</sup> In practice, therefore, we analyzed data on all children reported by household heads in the family listing regardless of their usual residence or their residence the previous night. In the case of the present

## Construction of Caste, Socioeconomic, and Geographic Variables

We collapsed a complex caste code into categories that capture major intergroup distinctions. This system of categorization was developed on the basis of the existing literature describing caste and ethnic groups in Nepal, preliminary analysis of the data, and the understanding of the caste system gained through Sharon Stash's long-term residence in the country.<sup>49</sup> The caste variable used in multivariate analysis distinguishes between these six major castes and ethnic groups: high castes, Newars, hill ethnic groups, Tamang and other Bhotia (ethnic groups of Tibeto-Burmese origin), Terai castes, and low caste–untouchables. In the multivariate analyses that follow, the reference category for caste is "low castes–untouchables."

We measure two important aspects of family background: a possession index and a measure of the educational attainment level of the household head. The possession index is an index of durable goods, specifically the unweighted sum of three dummy variables representing household ownership of radios, toilet facilities, and televisions. Comparisons are drawn across households that have none, one, two, or three items, regardless of the composition of the items possessed. Education of the household head was measured with dummy variables specifying three levels of education: less than 1 year, 1–4 years, and 5 or more years of schooling. A large body of literature suggests that parents' education is an important determinant of their children's education. Although we believe that the use of these two variables goes a long way toward controlling for variation in household wealth, a limitation of this study is the lack of a better measure, for example, household consumption or income.

A series of demographic effects are incorporated as control variables. These variables include linear and quadratic age effects, a dummy variable indicating a female head of household, and a continuous variable controlling for birth order.<sup>50</sup> Controls for geographic region are also included. Rural Nepal is characterized by topographic and infrastructural constraints that

analysis, this definition of coresidence offered advantages over the more commonly used definition of de facto coresidence. In Nepal, schools of reasonably good quality are not universally available. Children's residence can be the outcome of an educational decision should families decide to send their children to live with relatives in regions of the country that are better equipped with educational facilities, including boarding schools.

<sup>&</sup>lt;sup>49</sup> For literature on Nepal, see, esp., Bista (n. 26 above); von Furer-Haimendorf (n. 26 above). The information lost by not using a more detailed caste code was tested in a series of replications of the models used in this article, including caste codes of various specificity. The caste code used here was determined on the basis of model comparisons and test statistics that most efficiently captured key relationships in the data without loss of substantive meaning.

<sup>&</sup>lt;sup>50</sup> We include birth order rather than sibship size because birth order is time-invariant, while sibship size may have changed between the time that the child entered primary school and the time of the survey. At one point in our analysis, we included a variable on total children in the household (at the time of the survey) with a goal of understanding the sensitivity of model coefficients to sibship size variable. The inclusion of variables for total children and birth order had very little effect on model coefficients relative to those estimated when only birth order was included in the model.

result in an uneven pace of development across regions. In the multivariate analyses that follow, we adopt two approaches to account for regional variation in access to schools. In analyses of children ages 10–15, we use a set of district-level dummy variables accounting for each of Nepal's 75 districts and a variable denoting urban-rural residence. While analyzing the smaller sample of 15-year-olds, we use a smaller set of variables representing the four major developmental regions in Nepal and the urban-rural variable.<sup>51</sup>

## **Outcomes of Interest**

Our interest centers around both access to and progress through schooling. We have constructed indicators of both constructs from the following two questions in the NFS instrument: (1) Has (name) ever been to school? (yes/no); (2) What is the highest grade of schooling he/she completed? (grade). An enrollment variable based on the first question is used to gauge access. Rates of primary completion, derived from the second question, are also considered. Finally, information provided by a combination of these two questions was used to calculate conditional measures of completion that register attrition across primary grades. One measure represents overall attrition during primary school and is defined as completion of fifth grade conditional on ever being enrolled. An additional set of measures represents completion of each of grades 1–5 conditional on ever being enrolled and completion of preceding grades.

# Analytic Approach

In the analyses that follow, we examine the effects of gender and caste stratification on the process of educational expansion in Nepal, and of contemporary children's progress through primary school. First, we present descriptive evidence of changes across cohorts in educational attainment by caste and gender, concentrating on entrance and completion of primary school (or 5 years of basic education). We demonstrate a high level of inequality along lines of caste and gender that changed little over the period of observation. Next, we describe the extent of inequality by gender and caste experienced by a group of children who recently underwent the primary school process (children ages 10-15 at the time of the survey), focusing on entrance and completion of grades 1-5. To separate the effects of gender and caste on primary school entrance and completion, while controlling for other key determinants of educational attainment, we then estimate multivariate models of ever being enrolled in school and primary school completion. It is important that these models incorporate interaction terms that test for the presence of differences by sex in the effects of caste

<sup>&</sup>lt;sup>51</sup> Because the sample of 15-year-olds is now relatively small, we included regions rather than districtlevel geographical controls in order to save degrees of freedom. A variable representing nine subregions was tested for inclusion in the model; however, likelihood ratio  $\chi^2$  tests indicated no improvement in model fit over models with the variable representing only the four major developmental regions.

and of two important control variables: the education of the household head and urban residence. Results of this exercise provide evidence on gender inequality in Nepal and its effects on even the most basic level of schooling during a period of time in which the educational system grew considerably. Our analysis similarly addresses the important and largely ignored question of how caste hierarchies continue to affect children's educational opportunities, even as levels of overall schooling increase.

# Analysis of Educational Attainment across Cohorts

In this section, we employ data on all children and young adults listed on the household rosters to obtain an understanding of recent trends in primary school entrance and completion, 1965–79. Predicted probabilities (expressed as percentages) were calculated from the coefficients from the logistic regression models of ever being enrolled in school and of completion of primary school (conditional on ever being enrolled). We present estimated probabilities of ever being enrolled and primary school completion by gender and birth cohort (figs. 1 and 2) and by caste and cohort (figs. 3 and 4).

The fitted model of how many students had ever enrolled used to estimate the probabilities presented in figure 1 includes a constant term, an indicator variable for male (vs. female), a linear age term, and an age-bymale interaction term. The fitted model of conditional completion used to estimate the probabilities presented in figure 2 includes a constant term, an indicator variable for male (vs. female), linear and quadratic age terms, and an age-by-male interaction term. The fitted model of ever being enrolled used to estimate the probabilities presented in figure 3 includes a constant, a set of indicators for caste groups (vs. low-caste), linear and quadratic age terms, and two significant ethnic group-by-age interaction terms (high casteby-age and Terai caste-by-age). The fitted model of conditional completion used to estimate the probabilities presented in figure 4 includes a constant, a set of indicators for caste groups (vs. low-caste), linear and quadratic age terms, and two significant caste-by-age interaction terms (high caste-by-age and hill ethnic caste-by-age). Other caste-by-age and gender interactions were insignificant and were dropped from the fitted model.

As figure 1 demonstrates, recent years have brought rapid increases in access to primary schooling. Between 1965 and 1979, the estimated proportion of boys ever enrolled in primary school increased from 63 to 86 percent, while the proportion of girls ever enrolled increased from 12 to 47 percent. We observe a significant positive interaction between gender and birth cohort, suggesting some convergence in the gender differential in ever being enrolled in school over the 15-year period of observation. This observation implies that the rate of increase in enrollment was more rapid among girls than among boys. However, a 37 percent gap between girls' and boys'



FIG. 1.—Predicted probabilities of ever enrollment by gender and birth cohort, 1965–79



FIG. 2.—Predicted probabilities of completing primary school by gender and birth cohort, 1965-79



primary enrollment probabilities observed in 1991 indicates substantively minimal improvement from the 39 percent differential observed in 1979.<sup>52</sup>

In figure 2, we present a similar graph for the completion of primary school. Once again, the trend over time indicates increases in the probability of completing primary school over the 15-year period.<sup>53</sup> In this graph, girls appear to be slightly more likely to complete primary school than are boys, but the difference is not statistically significant. The lack of a gender gap in conditional completion is striking and will be revisited in the analyses that follow.

For figure 3, we modeled ever being enrolled in school by caste and birth

<sup>&</sup>lt;sup>52</sup> See also United Nations, *The World's Women 1995: Trends and Statistics*, Social Statistics and Indicators series K, no. 12 (New York: United Nations, 1995).

<sup>&</sup>lt;sup>53</sup> In figs. 2 and 4, there is a slight leveling of the trend in primary school completion. In 1979, the youngest people in the sample are 15 years of age. By age 15, the majority of children have completed their primary schooling. However, some additional children continue to complete their primary education at later ages; hence, the slight leveling in the predicted probability of completing primary schooling between 1974 and 1979.



FIG. 4.—Predicted probabilities of completing primary school by caste/ethnicity and birth cohort, 1965-79

cohort. Ever being enrolled among all caste groups has increased. Yet, strong caste differentials persist throughout the period, and there was no tendency for these differentials to converge. The extremes of this range are occupied by Newars (50 and 86 percent ever enrolled in school in 1965 and 1979, respectively) and low castes (7 and 31 percent ever enrolled in school in 1965 and 1979, respectively). Higher enrollment rates among Newars no doubt reflect their tendency to reside in the capital city and other centers of business that had earlier and better access to schools. High castes, with their traditional emphasis on literacy (particularly among the priest or Brahmin caste), higher social status, and traditional dominance of key social institutions including schools, are next most likely to enroll.<sup>54</sup> Hill ethnic groups remain third most likely to enroll throughout this time period. A fourth hill ethnic group, Tamangs and other Bhotia, are considerably less likely to enroll in school, reflecting in general their lower social status (even among hill ethnic groups) and their tendency to reside in more impoverished, moun-

<sup>&</sup>lt;sup>54</sup> Seddon (n. 28 above).

tainous regions of the country where access to quality education is poor. Castes from the Terai, a socially conservative plains region bordering India, are next likely to enroll. Finally, low castes, including untouchable castes, consistently demonstrate the lowest percentage of children ever enrolled in school.

Completion of primary schooling also demonstrates considerable stratification by caste. Conditional on ever being enrolled in school, high castes are consistently most likely to complete primary school, followed by Newars and hill ethnic groups who are equally likely to complete their primary education. Tamangs and Terai castes demonstrate a similar level of primary completion, and one that is considerably lower than the previous groups. Finally, completion probabilities are lowest among low castes and untouchables: only slightly more than half complete primary schooling, once enrolled.

In summary, overall access to schooling has expanded. However, access to schooling has depended greatly on gender and caste and continued to do so up until 1991 when these data were collected. While there is some evidence of a statistically significant narrowing of the gender gap in ever being enrolled in school, its substantive importance is minimal given the small scope of the change. However, there was no evidence that once children were enrolled, their chances of completing primary school varied with their gender. In other words, conditional on ever being enrolled, girls and boys were equally likely to complete primary school. Finally, there was no evidence of a trend toward narrowing of caste differences in entry into schooling or completion of primary schooling over cohorts.

# **Description of Differences in School Entrance and Progress**

In this section, we examine progression through school by gender and caste. The universe for this analysis was restricted to a sample of 15-year-old children, or those children who are old enough at the time of the survey to have entered and completed their primary school education. We treat the educational process as a series of conditional transitions.<sup>55</sup> In figures 5 and 6, we present observed probabilities of ever being enrolled in school and grade completion probabilities conditional on ever being enrolled in school and completion of the previous grade(s). The probabilities are estimated separately for each gender and caste group. In figure 5, gender inequality is most evident at the time of first enrollment. Lines representing conditional probabilities of completing grades 1–5 converge rapidly thereafter. Conditional on ever being enrolled in school, an estimated 67 and 70 percent of 15-year-old girls and boys completed their primary education. However, for our sample of 15-year-olds, selection at the earliest stage of education means

<sup>&</sup>lt;sup>55</sup> For a similar methodology, see Stephen E. Fienberg and William M. Mason, "Identification and Estimation of Age-Period-Cohort Models in the Analysis of Discrete Archival Data," in *Sociological Methodology 1979* (San Francisco: Jossey-Bass, 1979).



FIG. 5.—Probability of enrollment and conditional probabilities of completing grades 1-5 by gender



FIG. 6.—Probability of enrollment and conditional probabilities of completing grades 1-5 by caste

that boys are twice as likely as girls are to ever enroll and complete their primary education. Among 15-year-old girls, 44 percent ever enroll and 29 percent complete primary school. Among 15-year-old boys, 81 percent ever enroll and 57 percent complete primary school. In other words, once children are enrolled, gender no longer discriminates among them with regard to completion of primary school.

As in the case of gender, differentials by caste in ever being enrolled in school are striking, and they correspond to a hierarchy of high castes to low castes, with Hill ethnic groups occupying the middle ranges (see fig. 6). Tamang and other Bhotia groups, many of whom reside in difficult mountainous environments and poorer regions of the country, experience higher rates of attrition. Although gender appears to influence primary school participation most strongly at the time of enrollment, caste affects both selection into and attrition from school. The size of these caste differentials is considerable: in this sample of 15-year-olds, primary entrance and completion probabilities differ across castes by as much as 40 percentage points. Differential progress through primary education is illustrated in greater detail in conditional completion probabilities for grades 1–5. At the higher primary grades, a general trend of decreasing conditional probabilities of completion can be observed with movement down the caste hierarchy.

# Multivariate Analysis of School Entrance

In this section, we examine the issue of whether caste and gender effects—effects that could be related to socioeconomic status—persist after the inclusion of appropriate controls. We also look for evidence that suggests a differential effect of gender according to women's caste-ethnicity. The universe for this investigation is the sample of children of household heads. In table 1, we present the results from a series of logit models predicting ever being enrolled in school (one equals ever enrolled in school, zero equals never enrolled in school) among children ages 10–15. Our models compare the effects of gender and caste before and after incorporating controls for geography, socioeconomic status, and demographic characteristics. The inclusion of interaction terms allow tests for differential effects of gender according to children's caste and family background.

The results in table 1 are consistent with previous findings, confirming that gender is indeed a very strong determinant of school entrance. Across the models, in terms of odds, boys are at least 7 times as likely as girls are to enter primary school. Caste effects are similarly strong, with high-caste and Newar children 4–7 times as likely ever to enter primary school as are low-caste or untouchable children. Gender and caste demonstrate strong direct effects on children's educational chances, however, as do factors describing family background. The measure of household wealth suggests that households with more durable goods are also better able to enroll their chil-

|                              | Baseli           | ne model        | Main<br>n | n effects<br>10del | Interact            | ion model       |
|------------------------------|------------------|-----------------|-----------|--------------------|---------------------|-----------------|
|                              | OR               | <i>p</i> -Value | OR        | <i>p</i> -Value    | OR                  | <i>p</i> -Value |
| Male                         | 7.10             | **              | 8.61      | **                 | 7.01                | **              |
| Caste and ethnicity (ref.    | low caste-untou  | chable):        |           |                    |                     |                 |
| Terai caste                  | .65              | **              | .66       | **                 | .65                 | **              |
| Tamang                       | 1.99             | **              | 2.03      | **                 | 2.00                | **              |
| Hill ethnic                  | 3.03             | **              | 3.04      | **                 | 2.96                | **              |
| Newar                        | 6.24             | **              | 4.56      | **                 | 5.41                | **              |
| High caste                   | 6.93             | **              | 4.90      | **                 | 4.28                | **              |
| Education of household       | head (ref. no ed | ucation):       |           |                    |                     |                 |
| 1-4                          |                  |                 | 2.11      | **                 | 1.74                | **              |
| 5+                           |                  |                 | 4.32      | **                 | 3.76                | **              |
| Possession index (ref. 0     | possessions):    |                 |           |                    |                     |                 |
| 1                            | possessions).    |                 | 2.25      | **                 | 2.25                | **              |
| 2+                           |                  |                 | 5.74      | **                 | 5.95                | **              |
| 75 district+                 | а                |                 | а         |                    | а                   |                 |
| Urban                        | 3.05             | **              | 1.47      |                    | 1.20                |                 |
| Female head                  | .84              | **              | 1.25      |                    | 1.23                |                 |
| Age                          | 1.36             |                 | 1.15      |                    | 1.15                |                 |
| Age <sup>2</sup>             | .99              |                 | .99       |                    | .99                 |                 |
| Birth order                  | 1.07             | **              | 1.05      | **                 | 1.06                | **              |
| Interactions:                |                  |                 |           |                    |                     |                 |
| $Male \times urban$          |                  |                 |           |                    | 2.06                | *               |
| Male $\times$ caste:         |                  |                 |           |                    |                     |                 |
| Male $	imes$ Newar           |                  |                 |           |                    | .47                 | **              |
| Male $	imes$ high caste      |                  |                 |           |                    | 1.57                | **              |
| Male $\times$ education of l | household head:  |                 |           |                    |                     |                 |
| Male $\times$ 1–4 years      |                  |                 |           |                    | (1.68) <sup>b</sup> | **              |
| Male $\times$ 5+ years       |                  |                 |           |                    | (1.68) <sup>b</sup> | **              |
| Log likelihood               | -5,451.90        |                 | -4,981.70 |                    | -4,951.10           |                 |

| TABLE 1  |
|--|
| LOGISTIC REGRESSION OF EVER-ENROLLMENT AMONG CHILDREN, AGE 10-15 |

Note.—N = 11,707; OR = Odds ratio, or the expentiated coefficient from the logistic regression model. Huber standard errors were estimated to correct for cluster sampling.

\*P < .10.

\*\* P < .05.

<sup>a</sup>Dummy variables representing 74 districts in Nepal (not presented above).

<sup>b</sup>Constrained to one variable on the basis of a comparison of nested models using likelihood ratio tests and Bayesian Information Criterion (BIC) approximations.

dren in primary school. Children in households in which the head has received 1-4 or 5 or more years of education are also much more likely to enter primary school.

Thus far in this analysis we have treated the effects of gender, caste, and socioeconomic status as independent forces, resulting in differential selection into and completion of primary school. To look for interdependence between systems of stratification we examine whether, for example, the effects on school entrance of membership in a particular caste group are substantially altered by the gender of the child. The inclusion of interaction terms reveals significant differences in the enrollment likelihoods of girls and boys in high-caste and Newar households (vs. other castes).<sup>56</sup> The odds ratio for the interaction between male and high-caste status is greater than one and significant, suggesting that the positive advantage high-caste men experience (relative to high-caste women) at the time of enrollment is greater than that for all lower tiers of the caste hierarchy. The odds ratio for the interaction between male and Newar caste is less than one and significant, perhaps reflecting women's higher status relative to men in these households. Similarly, significant interaction terms for urban residence and more educated household heads (1-4 and 5 or more years of schooling vs. no schooling) suggest that the gender gap is in fact wider in these households-households that have easier access to schools, and in which household heads can convey their own educational experience to their offspring. The interactions, although somewhat counterintuitive, indicate that boys' educational participation responds positively and more strongly than girls' to urban residence, more highly educated household heads, and high-caste status.

In sum, neither urban residence nor higher levels of education among household heads appear to facilitate gender equity in educational decision making in Nepal—in fact, our findings suggest that ever being enrolled in school among boys (relative to girls) increases by virtue of these factors. These results are substantively meaningful because they contradict the theoretical expectation, supported by numerous empirical studies, that socioeconomic prosperity facilitates gender equity in household educational decision making. In substantive terms, they suggest an ambiguous relationship between socioeconomic status and women's schooling: higher socio economic status may give families the luxury of enforcing stricter standards of behavior on women. In addition, more conservative attitudes toward women in high-caste households are reflected in fewer chances for girls (vs. boys) ever being allowed to enter the educational process. Socially conservative, high-caste households discriminate more strongly against girls (relative to boys) than do ethnic groups in the middle or lower parts of the caste hierarchy.

# **Multivariate Analysis of School Completion**

Our descriptive results revealed the importance of differential rates of attrition in producing educational differentials by caste-ethnicity, but not by gender. This final section explores the issue of attrition in a multivariate

<sup>&</sup>lt;sup>56</sup> Interaction terms were included in the final model on the basis of likelihood ratio  $\chi^2$  tests between nested models (with and without each of the interaction terms). Because of the large sample size, Bayesian Information Criterion approximations were also estimated to compare the same nested pairs of models. The interaction terms included in the model were also shown to contribute on the basis of this more stringent criterion. See Adrian Raftery, "Choosing Models for Cross-Classification," *American Sociological Review* 51, no. 1 (1986): 145–46.

|  | OR   | P-Value |
|--|------|---------|
| Male   | 1.39 | *       |
| Caste and ethnicity (ref. low caste–untouchables): |      |         |
| Terai caste  | 2.04 | **      |
| Tamang   | .83  |         |
| Hill ethnic  | 2.43 | **      |
| Newar  | 2.15 | *       |
| High caste   | 4.39 | **      |
| Region (ref. east):                                |      |         |
| Central  | 1.58 | *       |
| West   | 1.38 |         |
| Midwest  | .90  |         |
| Far west   | .46  | **      |
| Urban  | 3.00 | **      |
| Education of household head (ref. no education):   |      |         |
| 1-4  | 1.64 | **      |
| 5+   | 4.03 | **      |
| Possession index                                   | 1.50 | **      |
| Female head  | .63  |         |
| Birth order  | .98  |         |
|  |      |         |

 
 TABLE 2

 Logistic Regression of Completion of Primary School among Children, Age 15 Who Have Ever-Enrolled in School

NOTE.—N = 1,011; log-likelihood – 534.10; OR = odds ratio; Huber standard errors were estimated to correct for cluster sampling.

\*P < .10.\*\*P < .05.

context in order to view disparities by caste and gender, controlling for the effects of geographic and socioeconomic characteristics. Once again, we employed logit models to examine the completion of the fifth grade (conditional on ever being enrolled in school). The model presented represents the most parsimonious fit after testing for the full set of possible interactions between the main effect variables and gender; that is, no significant interactions with gender were found. The sample is restricted to 15-year-old children who had ever enrolled in school (N = 1,011).

The results of this exercise, presented in table 2, confirmed a caste hierarchy in attrition: coefficients associated with high-caste status were significant and large in magnitude. The persistence of caste disparities in a multivariate context indicates that the observed relationship between caste and attrition from primary school cannot be attributed to differences resulting from region of residence or variation in household socioeconomic characteristics. The advantages of lower attrition rates for high-caste children (relative to low-caste children) augment their earlier increased likelihood of entering primary school (Odds ratio [OR] = 4.39, P < .01). Newars (OR = 2.15, P < .01), hill ethnic group (OR = 2.43, P < .01), and Terai castes (OR =

2.04, P <.01) are also significantly more likely to complete their primary education than are low-caste children. Completion probabilities are similar for low-caste and Tamang or Bhotia children, reflecting their relative social disadvantage. Gender also exerts a significant effect on attrition, though the magnitude of the effect is relatively small (OR = 1.39, P < .10). The larger, significant coefficients associated with urban residence, household head's education, and higher scores on the possession index indicate that these characteristics, as well as higher caste status, are associated with lower rates of attrition.

## **Discussion and Conclusions**

In this article, we have analyzed the relationship between caste and gender stratification in the context of the early stages of formal educational expansion in Nepal. Results showed that educational gender gaps in Nepal changed little in substantive terms during the period of observation, despite educational expansion. Among school-aged children, gender continued to strongly condition entry into schooling. However, girls who did enter school progressed at an equal rate with boys through the primary grades. Equally striking are findings that suggest that more highly educated household heads and higher positions in the caste hierarchy, characteristics associated with increased educational participation, were not associated with decreased discrimination against girls. Neither was urban residence-a variable associated with improved access to higher quality schools and teachers and greater interaction with the modern economic sector-associated with improved relative opportunities for girls. Rather, boys disproportionately shared in the improved educational opportunities of urban residence. These findings run counter to expectations in the gender and development literature, and they highlight the dangers of generalizing expectations across nations characterized by ethnic diversity.

In contrast to gender differentials, there was no evidence of any tendency toward decreasing differentials by caste over a recent 15-year period. Throughout the period of observation, caste affects both selection into and attrition from primary school, and these effects were only slightly weakened by the inclusion of controls for socioeconomic status. Even if differentials have substantially decreased since 1991, the caste and ethnic effects observed in this study are unlikely to have disappeared entirely. Caste and ethnicity no doubt continue to affect children's educational opportunities in contemporary society. In Nepal, as in other major regions of South Asia, large caste and ethnic differentials in entrance to and attrition from primary education must be grappled with by policy makers, educational planners, and researchers.

The presence of significant interactions between caste and gender indi-

cate that girls are further disadvantaged in socially dominant and economically advantaged high-caste households. Throughout the history of modern Nepal, high-caste men have occupied a major proportion of influential positions in the government, the Ministry of Education and schools throughout the country, and the modern economic setting.<sup>57</sup> To the extent that this pattern continues, socially conservative attitudes toward women, the ramifications of which are seen in their relative educational disadvantage, are likely to be perpetuated by the actions of this influential sector of Nepalese society.

More broadly, we submit that caste and ethnicity have not received enough attention in the comparative research on educational stratification despite their obvious importance.<sup>58</sup> Results presented here illustrate why this deficiency presents a significant barrier to our understanding of the basic structure and process of social stratification experienced by a significant proportion of the world's population. While we do not claim that results generated from the experience of Nepal should necessarily be generalized to other South Asian societies, we believe that the evidence we present illustrates the importance of caste as a stratifying mechanism, its differential impact on men and women, and its likely continuing significance given the reinforcing impact of educational expansion. It is our hope that the results presented here will stimulate both general awareness of the significance of caste as a dimension of social stratification on a world scale and an increased empirical attention to caste in academic research on educational stratification in Nepal and other regions of South Asia.

Further research on caste and ethnicity will require additional sources of empirical data, because surveys often fail to include information on caste and ethnicity. This lack of empirical data is a direct ramification of national policy. For example, as designated by the government of India, postindependence censuses do not collect data on people's caste except to identify whether or not a person is from a scheduled caste or tribe, despite increasing calls for such evidence. It is worthwhile to note that the most recent Nepalese census (1991) included a comprehensive ethnic variable, as did the 1991 NFS analyzed here. Analytical methods that utilize complex empirical caste and ethnic information need to be further developed and standardized to permit comparison across studies or over time.

Finally, there remains considerable scope for comprehensive, comparative treatment of caste and ethnic groups, particularly where, as in this study, the object of investigation is a national system affecting all students seeking basic education. It is fair to say that most work on caste and ethnicity has been done at a microlevel of investigation using ethnographic methods. Of

<sup>&</sup>lt;sup>57</sup> Seddon.

<sup>&</sup>lt;sup>58</sup> Claudia Buchmann and Emily Hannum, "Education and Stratification in Developing Countries: A Review of Theories and Research," *Annual Review of Sociology* 27 (2001), in press.

note are some recent ethnographies on Nepal that have adopted comparative perspectives and examine ethnic groups as part of an interlinked system of societies.<sup>59</sup> This literature gives attention to the continuing process of dialogue across ethnic boundaries that adds flexibility to caste and ethnic systems; it also rightfully acknowledges individuals who challenge systemic inequalities and who serve as important mechanisms of change. Conversely, macrolevel, empirical studies demonstrate the social systems in which all actors are embedded—even those actors who exercise considerable personal agency. Quantitative analysis of trends over time add to the picture an understanding of the magnitude and direction of change that is occurring in relationships among caste and ethnic groups, including that which can be attributed to individual action. We believe that studies at this higher level of aggregation are a necessary complement to microlevel research that is oriented toward understanding mechanisms that shape those trends.

<sup>&</sup>lt;sup>59</sup> McHugh (n. 15 above).