A BOUNDARY APPROACH TO UNDERSTANDING THE INTEGRATION OF ASIAN AMERICANS

Dina G. Okamoto

University of California, Davis*

KEYWORDS: Asian Americans; intermarriage; immigrant integration; panethnicity;

RUNNING HEAD: Boundary Approach to Integration

Word Count: 11,913 (including references)

*Direct all correspondence to Dina G. Okamoto, University of California-Davis, Department of Sociology, 1282 Social Sciences and Humanities Bldg., Davis, CA 95616 (dgokamoto@ucdavis.edu). I would like to thank Mary Jackman, Dalton Conley, Angie Chung, Mignon Moore, Ann Morning, Michael Rosenfeld, Jianbinn Lee Shiao, Mario Small, Kimberlee Shauman, and the participants of the Power and Inequalities Workshop at UC Davis for their useful comments on presentations and earlier drafts of this paper. I am also indebted to the Russell Sage Foundation Visiting Scholars Program.

A BOUNDARY APPROACH TO UNDERSTANDING THE INTEGRATION OF ASIAN AMERICANS

Abstract

For decades, studies of intermarriage have contributed to our understanding of integration and assimilation patterns of ethnic groups in the US. In this paper, marriage outcomes are analyzed to gain a better understanding of the integration of Asian Americans into American society. Instead of utilizing assimilation theories that focus on individual-level variables such as education and nativity, I develop and test a new boundary approach that emphasizes the importance of structured contexts at ethnic *and* racial boundary levels to understand intermarriage outcomes. This approach recognizes the layered character of ethnic boundaries and the salience of ethnic and racial boundaries for new immigrant groups. Multinomial logistic regression models are used to analyze 2000 US Census data. The results generally support the theoretical predictions, suggesting that demographic distributions and the ways in which groups are structured in relation to one another along racial and ethnic boundaries are important predictors of intermarriage.

A BOUNDARY APPROACH TO UNDERSTANDING THE INTEGRATION OF ASIAN AMERICANS

For decades, studies of intermarriage have provided insights regarding the extent and durability of social boundaries, contributing to our understanding of the integration and assimilation patterns of ethnic, racial, and immigrant groups in the US. For example, research has documented the successful assimilation of European immigrants who came to the US at the turn of the century: by the time that younger cohorts and the second generation had come of age, intermarriage was relatively high— an indication that the descendants of Southern and Eastern European immigrants were becoming integrated into the American mainstream (Alba and Nee 2003; Lieberson and Waters 1988; Pagnini and Morgan 1990). Studies of contemporary groups have focused on the black-white experience, documenting the rigidity of social boundaries between African Americans and whites (Kalmijn 1993; Model and Fischer 2001; Porterfield 1982). Other studies have examined intermarriage patterns of Native Americans, Latinos, and Asians to understand the extent to which these groups have experienced marital assimilation (Eschbach 1990; Gurak and Fitzpatrick 1982; Lee and Fernandez 1998). Given that recent immigration flows to the US have originated in Asia, Latin America, Africa, and the Caribbean, it is essential to understand the conditions under which racial boundaries are weakened and ethnic group members marry across racial lines, but it is also increasingly important to understand the conditions under which ethnic group members form *interethnic* unions[1] by crossing ethnic but not racial boundaries, conforming to racialized categories in a US context. By recognizing the differences within racial

[1] Interethnic unions refer to marriages involving two people of the same race, but different ethnicities or national origins.

categories that complicate the extent to which diverse ethnic groups affiliate with one another, interethnic marriage is an understudied form of incorporation into US society among contemporary immigrant and racial groups. As Qian, Blair, and Ruf (2001) and others have recently argued, there are two forms of marital assimilation for racial group members – integration into mainstream society through interracial marriage with whites and integration into the panethnic group through interethnic marriages between national origin groups within the same racial category (also see Espiritu 1992; Kibria 2002).

Recent research has examined the phenomenon of panethnicity, where diverse ethnic groups expand their group boundaries to construct a new, broader identity in the forms of collective action and organizing (Espiritu 1992; Nagel 1995; Okamoto 2003, 2005), friendship (Kao and Joyner 2002), and identification patterns (Itzigsohn and Dore-Cabral 2000; Lien, Conway, and Wong 2003; Portes and Rumbaut 2001). These studies highlight that panethnicity is an active response to racialization and reflects the layered, shifting nature of group boundaries, where ethnic boundaries can expand and contract depending upon social circumstance and context. Perhaps even more importantly, this body of research suggests that panethnicity is an increasingly notable form of adaptation to American society for contemporary immigrant groups – one that traditional assimilation theories did not anticipate[2] – and therefore, it is of empirical and theoretical interest to understand the conditions facilitating this new, emerging form.

To what extent are minority groups participating in panethnic unions? Qian and Cobas (2004) find that in 1990, US-born Latinos who are non-white are more likely to

[2] Traditional assimilation scholars once believed that immigrants would shed their cultural values, traditions, and norms to adopt those of mainstream American society and become fully integrated into dominant society so that no ethnic distinctions remained (Parks 1925; Gordon 1964). Such scholars did not foresee that immigrant groups might create broader panethnic identities and create new cultural traditions to support panethnic groupings.

marry Latinos of different national origins than their white counterparts, indicating that race is an important dimension that affects how Latinos assimilate to American society. Rosenfeld (2001) finds that Asian Americans marry across national origin boundaries but within the racial category of Asian more often than predicted patterns in certain geographic locations. In addition, interview data from second-generation Chinese and Korean Americans about marriage preferences reveal a pan-Asian consciousness and identity among the second generation, suggesting the possibility of a continuing trend in interethnic marriages among Asian Americans (Kibria 1997, 2002). While these studies provide evidence in support of a pan-national identity that operates at the individual level, there have been few studies that systematically explore the structural conditions facilitating such behavior. Recent studies on interethnic dating and marriage tend to be based on particular samples in a specific region (see Kibria 2002; Gilbertson, Fitzpatrick, and Yang 1996; Lee 2004a, 2004b). While this research has been useful for understanding the choices and preferences that individuals make in specific contexts, they have less to tell us about the structural forces that encourage certain types of marriage. Surprisingly, studies using census data have been largely descriptive or focus on individual traits, such as nativity and education, to understand intermarriage patterns among new immigrant groups (see Lee and Yamanaka 1990; Lee and Fernandez 1998; Model and Fischer 2001).

In this paper, I build upon past research to understand the structural conditions that influence the integration of new immigrant groups into American society by focusing on intermarriage outcomes among Asian Americans. The concept of panethnicity informs this study in two ways: (1) I focus on interethnic marriage, a type of marriage

outcome which has received less attention in past research, but represents an important form of integration into American society and (2) I develop an approach to understanding marriage outcomes among contemporary immigrant groups by explicitly recognizing that ethnic boundaries have a shifting and layered character, where ethnic *and* racial boundaries are salient for group members. Using this new approach, I make predictions about how structural factors measured at racial and ethnic boundary levels will influence not only panethnic unions, but interracial and endogamous marriage as well. These predictions are then tested, using extractions from the 5-Percent Public Use Microdata Sample from the 2000 census.

THE CASE OF ASIAN AMERICANS

The demographics of Asian Americans have changed dramatically over the past 30 years. Exclusionary legislation constrained the ability of most Asian immigrants to establish families in the United States before 1965. Beginning with the Chinese Exclusion Act of 1882, which barred Chinese laborers from immigrating to the US due to increasing fears about the influence of Chinese culture on American ways and economic competition from the newcomers, Asians faced barriers to entry. The National Origins Quota Act of 1921 (NOQA) limited the number of immigrants who could legally enter the U.S by allowing only 3 percent of each national origins group in the U.S. in 1910. The Johnson-Reed Act of 1924 replaced the NOQA when it expired, and the new legislation reduced each country's annual quota to 2 percent of its emigrants already in the U.S. in 1890. In addition, China, Japan, and Korea received no quotas under this legislation, virtually ending immigration from these countries. Finally, in 1965, the Immigration Act

abolished national origins quotas which favored European countries and enabled Asian immigrants to come more freely to the United States. New policies emphasized the reunification of families and needed occupational skills, resulting in a highly educated immigrant labor force from Asia (Hing 1993).

Since the Immigration Act of 1965, Asians have been arriving in the U.S. in unprecedented numbers. In 1970, there were 1.5 million Asian Americans in the U.S., concentrated predominantly in Hawaii and California. By 2000, the Asian American population increased to about 13 million with significant communities in Seattle, WA; Los Angeles, CA; New York, NY; Houston, TX; Newark, NJ; Chicago, IL; and Minneapolis, MN (Barnes and Bennett 2002). But not only has the Asian American population expanded in size and dispersed throughout the U.S. since the mid-1960s, it has also become increasingly diverse. Japanese, Chinese, Filipinos, and Asian Indians have had a long history in the U.S. (see Takaki 1990) and with continuing waves of immigration in the contemporary period, these communities continue to make economic and educational gains. With the fall of South Vietnam in 1975 and the implementation of the Refugee Act of 1980, refugees and immigrants from Vietnam, Laos, and Cambodia became the new faces of Asian America. Much different from their East and South Asian predecessors, Southeast Asian refugees were often traumatized by war and conflict in their homelands, tended to have low levels of education, and had developed skills related to rural farming or fishing which did not translate well into the American urban context (Ong 2003; Haines 1989).

Currently, there are more than 35 Asian ethnic groups living in the U.S., each with its own language, religion, and culture (see Min 1995; Min and Kim 2002). Along

with these differences, there are also antagonistic histories between the home countries of many Asian subgroups which tend to reinforce ethnic boundaries. For example, Japan's occupation of Korea and China before World War II has had lasting effects on the older generations, and attitudes toward certain ethnic groups have been passed down from one generation to the next (Chang 1997; Kibria 2002). In addition, there are phenotypical differences among Asian subgroups. South Asians, who lobbied the federal goverment to be identified as Asians instead of "white" or "other" in the 1980 Census, do not conform to established notions of Asian phenotype and thus there is often confusion about their racial identity (Fisher 1980; Morning 2001). Finally, today's Asian American community is economically different from the one 30 years ago. The mix of new immigrants, refugees, and native-born young professionals, has led to increasing class polarization and generational differences in ideology, norms, and values (Min 1995; Omatsu 1994). Given the diversity of ethnic groups that comprise Asian America, it is important to understand the conditions that facilitate or impede the integration and assimilation of Asian Americans in the US context.

INTERMARRIAGE PATTERNS AMONG ASIAN AMERICANS

It has been well established that among Asian Americans, interracial and interethnic marriages are less likely than endogamous marriages, or those marriages that do not cross national origin boundaries (Lee and Fernandez 1998; Qian 2001). Table 1 shows the marriage patterns for Asian American men and women in 1980, 1990, and 2000 from national census data. For women in 1980, about 9 percent of all marriages that that occurred outside of national origin boundaries were Asian interethnic. For men, about 21

percent of exogamous marriages were with spouses from different Asian ethnic groups. The gender differences indicate that a higher proportion of women marry outside of ethnic boundaries than men, and when women outmarry, they enter interracial marriages at much higher rates than interethnic marriages. When men exogamously marry, they also enter into interracial unions at higher rates, but the proportion of interethnic marriages is much higher for men than women. It could be that families exert more pressure on men to endogamously marry for cultural continuity, and that Asian women seek marriages outside of the group to avoid a traditional family structure and patriarchal cultural norms. The cultural images of Asian American men and women in US society may also contribute to the marriage patterns shown here (Fong and Yung 2004; Liang and Ito 1999; Espiritu 1997). Nonetheless, the frequencies across the three decades have generally remained stable, with decreases in the percentage of men and women exogamously marrying between 1980 and 1990. The data in Table 1 also reveal a slight increase in interethnic marriage from 1980 to 2000 for both men and women, suggesting that interethnic marriage continues to be a form of integration for some Asian Americans.[3]

[Table 1 about here]

Most of the literature on intermarriage among Asian American groups focuses on describing and explaining marriage patterns by nativity, gender, and education (Lee and Fernandez 1998; Liang and Ito 1999; Qian 1997; Qian et al. 2001). The focus on individual-level traits to understand marriage patterns reflects the dominance of the

[3] These tables reflect frequencies that include data on the six largest national origin groups: Asian Indian, Chinese, Filipino, Korean, Japanese, and Vietnamese. I use this restriction because the US Census only reported data on the six largest Asian national origin groups in 1980. To keep the data comparable, I report frequencies for only the six groups for 1980, 1990, and 2000.

assimilation perspective, which predicts that groups with higher levels of education and English fluency, and larger proportions of native-born, will marry outside of racial boundaries more often than their counterparts. Past studies suggest that interracial marriage is more likely among younger generations of U.S.-born Asians than older, foreign-born generations (Kitano and Chai 1982; Kitano et al. 1984). In addition, females are more likely to marry outside of racial boundaries than males (Kitano and Yeung 1982; Shinagawa and Pang 1988; Hwang and Saenz 1990; Lee and Yamanaka 1990). Other research finds that Asians who are interracially married tend to have higher levels of education than Asians who marry within national origin boundaries, indicating that education contributes to the breakdown of ethnic and racial barriers (Lee and Yamanaka 1990; Liang and Ito 1999; Qian 1997; Sung 1990). This finding is consistent with the overall marriage patterns in the US in the past few decades: there is a tendency to have more assortative mating along an educational dimension (Kalmijn 1991; Mare 1991). Qian (1997) speculates that this could partially reflect the differences in residential segregation by education, as better-educated racial minorities tend not to live in racially segregated communities, but these ideas about the role of group structuring have not been empirically tested.

There are few studies of interethnic marriage among Asian Americans, and similar to studies of intermarriage in general, most tend to use descriptive statistics or focus on individual-level traits to explain marriage patterns.[4] For example, Lee and Fernandez (1998) provide a comprehensive overview of marriage patterns among Asian

[4] Exceptions include two papers on Asian American intermarriage by Hwang and his colleagues (1994, 1997).

Americans in 1990, which includes patterns of interethnic marriage by national origin group. Qian, Blair, and Ruf (2001) report on patterns of interethnic marriage among Asian Americans by nativity and education, controlling for the marginal distributions of husbands' and wives' race/ethnicity, educational attainment, and nativity status at the national level.

In sum, most of the studies on intermarriage among Asian Americans document and describe marriage patterns[5], but do not examine how the structuring of groups within metropolitan areas influences the crossing of ethnic and racial boundaries. In addition, because assimilation theory has been the dominant theoretical framework for understanding immigrant integration in American society, most of the literature has focused on individual factors, such as education and nativity, to explain marriage patterns. In this paper, I build upon past research and develop a boundary approach to understand the larger structural conditions that influence intermarriage outcomes. In the next section, I introduce the main theoretical ideas used to construct this approach.

THEORETICAL BACKGROUND

Blau's theory of intergroup affiliation has been used by a number of studies to understand how social structure influences intermarriage patterns by opening and closing opportunities for contact and affiliation (Blau 1977; Blau, Blum, and Schwartz 1982). I draw upon Blau's theoretical ideas in this paper and also introduce a structured inequality perspective that presents different mechanisms for understanding the relationship

[5] The intermarriage literature on other groups, such as Latinos, also tends to focus almost entirely on individual-level factors (see Kulczycki and Lobo 2002; Rosenfeld 2002; Gilbertson et al. 1996; Gurak and Fitzpatrick 1982; Kalmijn 1993).

between social structure and outgroup affiliations. In addition, I broaden both approaches by utilizing ideas from a theory of panethnicity that emphasizes the importance of examining the ways in which social structure is manifested at both ethnic and racial boundaries.

Blau's Theory of Intergroup Association

The *intergroup association perspective* focuses on how social structure influences intergroup contact, interaction, and affinity. In particular, the ways in which populations are distributed and how these distributions are differentiated by specific parameters, such as race or nativity, affect group boundaries and social affiliations (Blau 1977; Blau, Blum, and Schwartz 1982). In regards to marriage, Blau (1977) recognized that people prefer to marry those who share similar attributes, and that there is often strong ingroup pressure not to marry outside of group boundaries. Nonetheless, individual and group preferences may be impeded by structural conditions, such as group size, heterogeneity, and inequality (Blau 1977; Blau et al. 1982). Specifically, the size of an ethnic group should influence opportunities for social affiliations inside and outside of group boundaries. Opportunities to find a marriage partner within the group should be greater when the group itself is relatively large. In contrast, when the group is relatively small, such opportunities decrease because there are simply not enough potential ingroup partners available. Therefore, ethnic group members from small groups are more likely to seek partners outside of group boundaries. Using 1970 Census data from 125 metropolitan areas, Blau and his colleagues (1982, 1984) discovered that the predicted relationship between group size and intermarriage holds for parameters such as race, nativity, birth region, industry, and occupation.

The chances for interaction and affiliation with outgroup members also increase when there are diverse populations present in metropolitan areas. Heterogeneity is defined as "the chance expectation that two randomly chosen persons belong to different groups," and is considered a structural element that increases intermarriage even when individuals have preferences for ingroup relations (Blau et al. 1982: 47). Blau and his colleagues (1982) found that heterogeneity on a number of dimensions, including national origin and language, was highly correlated with rates of intermarriage along those dimensions within metropolitan areas. Interestingly, racial heterogeneity had a positive effect on intermarriage only when economic inequality between nonwhites and whites was controlled. From this result, the authors concluded that status differences between groups also inhibit intergroup relations. In particular, these differences can impede social affiliations between groups, despite structural opportunities for interaction across group boundaries due to small group sizes and high levels of heterogeneity. Additional studies have found support for the positive effect of heterogeneity and/or the negative effect of status inequality on intermarriage (Blau and Schwartz 1984; South and Messner 1986).

Based on this research, the structural conditions of group size, heterogeneity, and inequality should influence the extent to which ethnic groups integrate into American society via intermarriage. The availability of co-ethnic partners should decrease marriage outside of ethnic boundaries, as should status inequality between racial groups. Racial heterogeneity should provide opportunities for interaction and affinity between different racial groups, leading to higher levels of interracial marriage.

A Theory of Panethnicity

Okamoto's (2003) theory of panethnicity also provides a useful framework for understanding the structural conditions that influence how groups interact and affiliate. This theoretical framework also focuses on social structure, but emphasizes how intergroup relations become increasingly complex when group boundaries can widen or contract. Okamoto claims that the structural configurations of groups along ethnic *and* racial boundaries lead to different processes, either promoting or hindering panethnicity – the expression of a common identity among diverse ethnic group members. Specifically, she finds that occupational segregation rather than factors that increase intergroup competition lead to panethnicity. In other words, the mechanisms of interaction and common interests generated by racial segregation (rather than interracial competition) contributed to higher rates of panethnic collective action among Asian Americans, while ethnic occupational segregation between the different Asian ethnic groups led to lower rates of panethnic collective action. As predicted by the hypotheses derived and extended from the cultural division of labor theory, Okamoto concludes that segregation processes at different boundary levels can enhance or discourage the salience of panethnic identities.

This research on panethnicity reveals two important ideas for our understanding of social structure and intermarriage outcomes. First, this theoretical framework reveals the importance of understanding spatial segregation not merely as a measure of opportunity for contact, but as a location where identity is developed and expressed, which has effects on outcomes, such as panethnicity. In the next section, I review the relevant literature and develop the structured inequality perspective.

Second, Okamoto's work points out that we must consider how groups are structured in relation to one another along ethnic and racial boundaries to more fully understand collective and individual action. Simply focusing on racial boundaries at the expense of ethnic boundaries may only disclose part of the empirical story. I extend this idea to both theoretical perspectives – intergroup association and structured inequality – and construct new hypotheses to understand the integration of Asian Americans.

Structured Inequality

The *structured inequality perspective* also focuses on how social structure influences social life, but emphasizes that spatial segregation influences intergroup relations *and* expressions of identity. According to this perspective, the population distributions within a metropolitan area are important to consider because they represent opportunities for interaction and affiliation, but the ways in which groups are structured in relation to one another within a metropolitan area are essential because they shape identities, which may influence how individuals affiliate with others. Specifically, this perspective suggests that when ethnic groups are concentrated in residential communities and occupational niches, higher levels of ethnic solidarity result (Bonacich 1973; Hechter 1999 [1975]; Yancey et al. 1976). Group segregation may be due to ethnic networks and culture that sustains patterns of occupational and residential segregation, but informal and institutionalized practices may also contribute to its maintenance, especially if dominant groups benefit from the current arrangement (Hechter 1999; Massey and Denton 1993). The concentration of ethnic and racial groups in certain geographic locations, whether voluntary or involuntary, facilitates in-group relations. Not only are there more opportunities for interaction within neighborhoods that are comprised largely of co-

ethnics, but community sanctions against intimate outgroup relations, such as intermarriage, are likely to be greater among groups that are spatially segregated from the larger society (Spickard 1989). In this sense, when racial and ethnic differences coincide with occupational and residential space, this heightens group boundaries and consolidates social positions within the larger social and racial hierarchy (Blau et al 1984).

The cultural division of labor theory (Hechter 1999, 1978) suggests that similar dynamics develop when ethnic populations are specialized in certain occupations. According to the theory, a common social identity will develop among ethnic group members and the mechanisms that lead to the formation of a common social identity based on ethnicity are similar work experiences, common structural positions, and daily interaction. In addition, if ethnic group members believe that their position in the occupational structure is tied to their ethnicity, they will feel that they are part of a community of fate and either leave the group (if possible) or increase their level of ethnic attachment and solidarity. As mentioned earlier, Okamoto's work (2003, 2006) finds that the occupational segregation of Asians from other racial groups facilitates the construction of a pan-ethnic identity. The literature on ethnic enclaves also provides a considerable amount of support for the notion that ethnic attachments are maintained by participation in shared economic activities (Light 1980; Min 1991).

Based on this research, the ways in which ethnic groups are segregated in occupational and residential spaces should influence ethnic as well as panethnic outcomes. In terms of marriage, residential segregation should influence the choices individuals make regarding marriage partners, especially if ethnic organizations in the local community aid in the development of social networks which lead individuals to

meet potential co-ethnic partners. In addition, living in a segregated neighborhood may lead ethnic group members to develop stronger feelings of ingroup solidarity, and reduce levels of exogamy. Occupational segregation should also play an important role in facilitating marriage outcomes. The workplace is considered a social arena where individuals meet potential partners (Kalmijn 1998), and if occupations are segregated by ethnicity or race, this will structure individuals' opportunities. In addition, much like residential segregation, ethnic group members who work together on a daily basis are likely to form strong ties within group boundaries.

Of the few studies that have tested the relationship between residential segregation and intermarriage, all have focused on residential segregation as an indicator of assimilation and have measured the degree to which *racial* group members are spatially segregated from whites (see Heer 1966; Hwang et al. 1997). In other words, these studies have examined how intermarriage is influenced by the separation of groups along *racial* boundaries. But given that ethnic boundaries are not static but have a layered character, I argue that the inclusion of variables measured at both boundary levels – *ethnic and racial* – is critical for a more complete understanding of the context within which ethnic group members are forming unions. [6]

Theoretical Predictions

Here, I present hypotheses derived from the intergroup association and structured inequality perspectives to understand intermarriage outcomes among Asian Americans.

[6] Blau and his colleagues measured the extent to which a given social attribute, such as race, intersected with other attributes, such as ethnicity, place of birth, occupation, education, and income, in a metropolitan area, and then examined the effects of these intersections on rates of intermarriage. The approach to intermarriage taken by Blau and his colleagues is quite different from the approach developed here.

These hypotheses take into account the layered character of ethnic boundaries and the continuing salience of ethnic and racial boundaries.

First, the sheer size of the group and the availability of potential marriage partners should influence Asian American intermarriage outcomes. Given that the racial category of Asian is comprised of different ethnic groups, group size at both boundary levels should affect whether men and women cross ethnic boundaries when entering marriage. Specifically, the size of the Asian population should be positively related to interethnic marriages and negatively related to interracial marriages: the larger the size of the overall Asian population, the more opportunities that ethnic group members will have to marry within racial boundaries and less opportunities that ethnic group members will have to marry outside of racial boundaries. Ethnic group size should be negatively related to interethnic and interracial marriages and positively related to endogamous marriages: the larger the ethnic group, the more likely that marriage will occur inside rather than outside ethnic boundaries.

Sex ratios are another measure of group size that might influence intermarriage outcomes. For men, as the Asian sex ratio increases, there will be more Asian men than Asian women in a metropolitan area, and therefore men may need to look outside of racial boundaries for partners. For women, an increase in the Asian sex ratio suggests a higher availability of Asian male partners, leading to lower levels of interracial marriage and higher levels of interethnic marriage. The same logic should hold for ethnic sex ratios: as the sex ratios for specific ethnic groups increase, women will not need to look outside of ethnic boundaries for a marriage partner. For men, as ethnic sex ratios

increase, interethnic marriage should be more likely than endogamous marriage because there is a shortage of female partners for men within a specific ethnic group.

Heterogeneity should also influence marriage outcomes. The chances for interactions and affiliations with outgroup members increase when there are diverse populations present, and this structural condition will weaken group boundaries, even in the face of preferences for ingroup association. When racial diversity is high in a metropolitan area, interracial marriage should increase and interethnic marriage should decline, as there are more choices for marriage partners outside of racial boundaries. In addition, if several Asian-origin groups reside in one area, then it will be more likely that individuals will form interethnic unions, crossing national origin boundaries. Under such conditions, interracial marriages will be less likely because of the opportunity to interact and affiliate with other racial group members. Finally, when only one or two Asian subgroups reside in the area, endogamous marriage will be more common than interracial and interethnic marriage.

Status differences measured at the boundaries of race and ethnicity can inhibit social affiliations between groups. If there is a gap in status between Asians and whites, this should have a significant effect on the likelihood of interracial contact and affinity. For example, if Asians earn, on average, more or less than whites, then this gap should increase the likelihood of marrying within rather than marrying outside of the category of Asian. The same logic applies to Asian national origin groups: a socioeconomic gap between ethnic groups may affect intermarriage patterns, such that a high level of status inequality between Asian ethnic groups will increase the likelihood of endogamous marriage and decrease the likelihood of interethnic marriage. Racial status differences

may also influence individuals to enter interethnic marriages: if the option of marrying across racial boundaries is impeded by status differences between whites and Asians, then ethnic group members may opt for interethnic marriage. Similarly, status differences between Asian ethnic groups might lead ethnic group members to participate in interracial instead of interethnic marriage.

Finally, spatial segregation at different boundary levels should affect the ways that ethnic group members relate to one another. Considering the broader boundary of race, when Asian Americans are segregated in residential communities and occupations, they should be less likely to marry outside of racial boundaries. In addition, Asian Americans may construct and experience commonalities based on economic position and shared interests due to their concentration in residential or occupational spaces, which may transcend national origin boundaries, leading to higher rates of interethnic marriage. Focusing on the smaller boundary of ethnicity, Asian ethnic group members should be more likely to marry their fellow co-ethnics when Asian national origin groups are residentially and occupationally segregated from one another. The separation of national origin groups from one another should lead to higher levels of ingroup interaction and the reaffirmation of ethnic boundaries, leading ethnic group members to marry within rather than outside the group.

Based on the shifting, layered notion of ethnic boundaries, the theoretical predictions emphasize the ways in which Asians are structured in relation to other racial groups, and Asian ethnic groups are structured in relation to one another. Racial and ethnic segregation, status inequality, heterogeneity, and group size all work to shape group members' opportunities for interacting with others inside or outside of group

boundaries, leading individuals to forge social networks within or outside the group which shape individuals' practices, preferences, and identities. In sum, this boundary approach provides a new way of understanding the conditions under which ethnic group members develop personal ties and integrate into American society. I now turn to a discussion of the data used to test the new hypotheses.

DATA

The data for this study was taken from the 2000 US Census, 5-Percent Public Use Micro Sample (PUMS) (US Census 2003). The PUMS not only provides information on the demographic, social, and economic characteristics for each spouse in the household, but it is the only nationally representative source that provides a large enough sample of all Asian subgroups to study interethnic marriage in all possible metropolitan areas.

Even though census data are useful for the purposes of this study, they are not without limitations. For example, census data measure the prevalence rather than the incidence of intermarriage. This means that any sample taken from the census does not reflect the total number of marriages, but only those that have survived divorces and deaths during that census year (Heer 1980). In addition, census data include foreign marriages, which can be particularly problematic since U.S. metropolitan-level variables are used to predict the likelihood of different types of marriage outcomes. Finally, a complete model of intermarriage would include information on individual and group preferences, as well as levels of contact in a variety of formal and informal settings (Lieberson and Waters 1988). However, such data are not available from the census, nor any other existing data source.

The sample used for this study included all married couples consisting of at least one Asian spouse in one of 106 metropolitan statistical areas.[7] Given the potential problems discussed above, I restricted the sample in several ways. To increase the likelihood that metropolitan area conditions were matched up accurately with marriage contraction, the sample was restricted to couples who had not moved in the last five years and individuals between the ages of 16 and 35.[8] This is a standard age restriction that also captures couples who are likely to be participating in their first marriage (Qian et al. 2001). Further restrictions were needed to ensure that immigrants who married in their home country and subsequently immigrated to the U.S. are not included in the sample (Hwang and Saenz 1990). One approach for removing couples who have married abroad is to limit the sample to marriages of native-born persons (Alba and Golden 1986). This approach works well in studies dealing with interethnic marriages among white European groups, but results in a biased sample when examining ethnic groups with large proportions of immigrants. Instead, I deleted couples whose children were older than the number of years since immigration. I assume that the couple was married abroad if the number of years since immigration is less than the age of the couple's children. This may not eliminate all couples married abroad, but it is preferable to eliminating all immigrants in the sample. Finally, men and women who belong to the six largest Asian American

[7] I extracted one file of married persons from the larger data set and then created a unique couple id, using household id, subfamily number, and subfamily relationship so that I was able to capture married couples in households with more than one married couple. Other researchers have extracted all married heads of households and spouses of heads of households to create a married couple data set, which misses those couples in multiple-couple households. I used this procedure for 359 metropolitan statistical areas (MSAs), but in only 106 MSAs did individuals fit the sample criteria.

[8] Since the census does not provide age at first (or subsequent) marriage, this is a standard strategy used to match marriage market conditions with marriage contraction. First used by Blau et al. (1982), this strategy increases the probability that individuals were married within the metropolitan area where they now reside.

groups – Asian Indian, Chinese, Filipino, Japanese, Korean, and Vietnamese – are used in the analysis. I use this restriction largely because the sizes of other Asian ethnic groups are relatively small, resulting in unreliable values for some of the independent variables.

ANALYTIC STRATEGY

The dependent variable in this analysis is coded into three categories: endogamous, interracial, and interethnic marriage. I define interracial marriage as a marital union between whites and Asians, endogamous marriage as between individuals of the same ethnic group, and interethnic marriage as any union that crosses ethnic but not racial boundaries.[9] I use multinomial logistic regression models to examine the effects of theoretically relevant variables on the likelihood of different types of marriages.[10] Because I include variables measured at individual and metropolitan levels, the observations within metropolitan areas may be correlated and non-independent. This can result in biased parameter estimates as well as biased standard errors. To deal with the problem of clustering, I estimate models with robust standard errors (see Williams 2000).

[9] In order to clearly test my hypotheses about integration and assimilation, I focus on Asian outmarriage with whites. In another paper, I examine the determinants of interracial marriages between Asians and other racial minority groups.

[10] Given that log linear models use marriage as the unit of analysis and control for relative group size, several studies have taken advantage of such models to analyze cross-tabulations of intermarriage data (Hout and Goldstein 1994; Kalmijn 1991, 1993; Mare 1991; Model and Fisher 2001; Qian 1997). This method is useful for providing estimates of intermarriage rates, but is not appropriate when examining structural and individual factors to account for variation in intermarriage outcomes (Kalmijn 1998; Harris and Ono 2005). In addition, I do not use multi-level models here because the central focus is on the effects of the metropolitan-level variables measured at both boundary levels, not the variation within and between metropolitan statistical areas.

I estimate separate models for men and women to examine the effects of metropolitan-level variables measured at different boundary levels.[11] Couples are not used as the unit of analysis because my hypotheses relate to the ways that the distribution and structuring of ethnic and racial groups in metropolitan areas influence *individual* affiliations, not couples per se. In addition, the innovation in this study is that when variables are measured at different boundary levels, they are predicted to have differing effects on intermarriage outcomes. For example, an ethnic-specific variable such as size of ethnic group should decrease the likelihood of interethnic marriage, while a race-specific variable such as racial group size should increase the likelihood of interethnic marriage. In short, ethnic-specific variables, such as ethnic group size and level of ethnic group segregation, are a central part of the analysis and are linked to individuals. If couples were the unit of analysis, there is no clear decision rule for which ethnic group variable should be merged onto the couple if each partner is from a different Asian-origin group. For instance, in a Japanese-Filipino marriage, should percent Filipino or percent Japanese be attached to the couple when measuring ethnic group size? As pointed out by Ono (2005), using separate models for men and women (where individuals are the unit of analysis) is sensible given that each model explains a distinct half of the marital union.

After implementing the sample restrictions described in the previous section, the non-weighted sample consists of 4,874 women and 4,651 men.

[11] As demonstrated by the frequencies of marriage outcomes in Table 1, men and women outmarry at different rates, which suggests that different variables may influence men's and women's marriage outcomes.

INDEPENDENT VARIABLES

Metropolitan-level variables

Since it was hypothesized that marriage outcomes are affected by the size, segregation, and heterogeneity of racial and ethnic populations in geographic locations, I include the following variables measured at the metropolitan statistical area level.

Group size. Group size at the larger boundary level is measured as percent Asian. This variable is merged on to individual records and does not vary within a metropolitan area. To measure group size for national origin groups, percent of a particular ethnic group (i.e. percent Chinese or percent Filipino) is merged on to individual records according to the national origin or ethnic background of the individual. In other words, group size at the "ethnic" level may be different from one individual to the next within the same metropolitan area.

Sex ratio. The sex ratio for each ethnic group was computed for non-institutionalized persons, aged 16-45, in each metropolitan area. Specifically, the sex ratio was calculated as the number of men per women, multiplied by 100 (Fossett and Kiecolt 1991; Passel and Robinson 1985). The sex ratio for Asians as a group was also computed. I do not use additional restrictions, such as whether men are unemployed or not, because broader sex ratios provide more reliability and are more effective than specific sex ratios in explaining marriage and family formation outcomes (Fossett and Kiecolt 1991).

Heterogeneity index. To measure the level of racial diversity in a metropolitan area, I constructed a heterogeneity index (Lieberson 1969) which is represented by the following equation,

$$A = 1 - \Sigma n_k^2 ,$$

where n = the proportion of k racial groups in the area. The index ranges from 0 to 1, where a score of 0 indicates that two randomly paired individuals in the geographic location share the same racial background. A score approaching 1 indicates that two randomly paired individuals in the geographic area have different racial backgrounds, and therefore racial diversity is high. I also constructed an Asian ethnic heterogeneity index that measures the extent to which a geographic location has an ethnically diverse Asian population. A score of 1 indicates that two randomly paired Asian individuals in the geographic area have different ethnic backgrounds (i.e. Filipino-Vietnamese) and therefore ethnic diversity is high.

Status inequality. To measure status inequality between groups, I constructed the mean household income for each group in each metropolitan area. To measure the levels of status inequality between Asian national origin groups, I calculated all combinations of comparison (i.e. Chinese/Filipino, Korean/Vietnamese), and constructed ratios comparing the mean household income for a particular national origin group compared to the mean household income for all other Asian-origin groups. To measure racial status inequality, I created a ratio comparing the mean household income between Asians and whites for each metropolitan area. If the value of the ratio is greater than 1, this indicates that whites have a higher average household income than Asians. Under such conditions, Asians will be more likely to marry within the category of Asian rather than outside of group boundaries.

Residential segregation. Residential segregation is measured using the index of dissimilarity, D*, and is represented by the following equation,

$$D_{xy} = .5 \, \Sigma \, |(x_i / X) - (y_i / Y)| \, ,$$

where x_i and y_i are the numbers of X and Y members in tract *i*, and X and Y are their metropolitan area totals. This index measures the degree to which Asians and whites are residentially segregated (Taeuber and Taeuber 1976; Massey and Denton 1987, 1992). The index is a measure of evenness, often defined as the proportion of minority group members that would have to move in order to achieve an even racial or ethnic distribution in a neighborhood. To measure the levels of residential segregation between Asian national origin groups, I calculated all pairwise combinations of Asian ethnic groups using SF1 (US Census 2001). I then calculated the mean residential segregation index for each national origin group. I also estimated models with each of the combinations of residential segregation between different Asian ethnic groups separately and found that the results are similar to models run with the means for each group.

Occupational segregation. The degree to which Asians are concentrated in particular occupations may affect intermarriage. To measure occupational segregation, I use a ratio index (Charles and Grusky 1992; Charles 1992) which measures the degree to which an ethnic group experiences occupational specialization. The index is represented by the following equation,

$$(1/ I) \times \Sigma_i \, | \ln (A_i / N_i) - [1/ I \times \Sigma_i \ln (A_i / N_i)]| ,$$

where A_i equals the number of Asian workers in occupation *i*, N_i is the number of non-Asian workers in occupation *i*, and *I* is the number of occupational categories. When the value of the index increases, Asians experience relatively high levels of occupational segregation from other racial groups. I also constructed ethnic occupational segregation indices to measure the degree to which each ethnic group is segregated relative to other Asian subgroups, where A_i equals the number of ethnic group workers in occupation *i*, N_i

is the number of all other Asian workers in occupation *i*. This index was attached to each individual, depending upon ethnic or national origin group. For example, the occupational segregation index for Chinese in New York is attached to all Chinese individuals in the sample who lived in New York in 2000. For all occupational segregation variables, thirteen broad occupational census categories were used in the calculations (see Okamoto 2003 for further details).

Control variables

As controls, I include individual-level variables that are often used to test assimilation theory. These variables include years of education, native-born (=1, foreign-born=0), English fluency (four-point scale with 4=speaks English well), and age. I also include a set of dummy variables measuring Asian ethnicity to control for the cultural differences that may influence intermarriage outcomes.[12] Finally, I include a logged measure for the size of the metropolitan area. Appendix A provides descriptive statistics regarding the independent and control variables.

RESULTS

The results of the multinomial regression analyses are threefold. The analyses show that: (1) not only do metropolitan-level variables improve the fit of models with only control variables included, but that the full model including ethnic and racial variables with controls provides the best fit; (2) the estimates of variables measured at both boundary

[12] While I acknowledge that intermarriage patterns differ by ethnicity, the focus of this paper is on the role of structural factors shared by different ethnic groups in predicting the likelihood of interracial and interethnic marriage. In other words, I am primarily interested in whether certain metropolitan-level variables influence outmarriage patterns among Asian Americans in general. By including the ethnicity dummies in the models, the different rates of outmarriage by ethnicity are controlled.

levels are highly significant and help to explain intermarriage outcomes; (3) there are different predictors for interracial and interethnic marriage relative to endogamous marriage, and racial variables are important in distinguishing interethnic from interracial marriage, suggesting that interethnic marriage will continue as a form of integration as long as Asians continue to face structured inequalities. I discuss these results in detail below.

[Table 2 about here]

Goodness of fit tests across models

I argue that metropolitan-level variables are important to consider when examining intermarriage outcomes among Asian Americans, and that the inclusion of variables measured along a larger, racial boundary *and* smaller, ethnic boundary provides a more complete understanding of the different types of marriage outcomes. It is of interest to find out if these statements can be supported in terms of improvement in fit of various models. Table 2 presents the chi-squares for model comparisons for men and women. To find out whether including metropolitan-level variables improves the fit of the models, I subtracted the -2 log-likelihood ratios for reduced models including only individual-level variables for men and women (M1) from full models including metropolitan-level variables measured at racial and ethnic boundary levels (M3).[13] The differences are chi-squares of 288.007 and 554.252 for men and women respectively. Both are statistically significant at the $p < .001$ level with twenty-four degrees of

[13] Reduced models are not shown here, but are available upon request. I do not use the pseudo-log likelihoods shown in Table 4 for the goodness-of-fit tests because they do not reflect the true distribution of the sample and are only used for the computation of point estimates (Sribney 1997). I use the *fitstat* command in STATA to generate test statistics for goodness of fit for comparing nested multinomial models with clustered maximum likelihood estimations (see Long and Freese 1997).

freedom. This indicates that including all metropolitan-level variables significantly improves the fit of the male and female models. I also estimated reduced models including only metropolitan-level variables measured at the racial boundary level and control variables for men and women (M2) and compared this to models including only control variables (M1). The chi-squares (215.145 and 362.611) are both statistically significant, which indicates that including racial boundary variables significantly improves the fit of both male and female models. Finally, the comparison between M2 and M3 shows that the differences between the -2 log-likelihood ratios for the reduced and full models are chi-squares of 75.861 and 188.868 for men and women respectively. Both are statistically significant at the $p < .001$ level with twelve degrees of freedom, clearly demonstrating that the inclusion of the ethnic variables significantly improves the fit of both male and female models, and that this is the best fitting model.

Effects of boundary variables

Table 3 shows the effects of metropolitan-level variables, net of controls, on the likelihood of intermarriage outcomes for Asian American men and women in 2000.[14] Specifically, the first two models display the effects of the independent variables on the likelihood of interracial compared to endogamous marriage. The results for men and women are largely parallel and suggest that demographic distributions and the ways in which groups are structured, influence marriage outcomes. For example, the estimates for racial heterogeneity indicate that higher levels of racial diversity in metropolitan areas

[14] Hausman tests failed to reject the assumption of the independence of irrelevant alternatives, and therefore multinomial logistic regression is an appropriate statistical method to use for these data. In addition, I estimated collinearity diagnostics for the full models for men and women, and for both models, the variation inflation factor for each variable is below 3.0, suggesting that multicollinearity is not a problem.

do not necessarily provide opportunities for interracial contact and affinity, as predicted, but instead they dampen the likelihood of interracial marriage. In this case, even when two randomly paired individuals in a metropolitan level are likely to have different racial backgrounds, this does not weaken, but tends to reinforce racial boundaries for Asian Americans.[15] The results also show that racial status inequality shapes intermarriage outcomes. In fact, as income inequality between Asians and whites increases, the odds of interracial compared to endogamous marriage decrease by 2 times for men ($e^{.750}$) and by 6 times for women ($e^{1.848}$). Group size also has a significant and negative effect on interracial compared to endogamous marriage for both men and women. This suggests that when the Asian population is high, individuals to search inside rather than outside the racial group for marriage partners, which supports predictions. The effect of Asian sex ratio is significant for men, indicating that when the number of Asian men to women increases in a metropolitan area, interracial marriage is less likely than endogamous marriage.

[Table 3 about here]

Turning to the variables measured at the ethnic boundary level, the estimates for ethnic residential and ethnic occupational segregation, as well as size of ethnic group are negative and significant for men and women. As predicted, when ethnic groups are segregated from one another in residential or occupational spaces, and when ethnic groups increase in size, ethnic group members are less likely to marry outside of racial

[15] In an additional model, I included percent white instead of the racial heterogeneity index since interracial marriage is defined as a marital union between Asians and whites. The estimate for percent white was significant and positive, suggesting that as the white non-Hispanic population increases as a proportion of the total population in a metropolitan area, the likelihood of interracial marriage increases for Asians.

boundaries, and are more likely to marry another co-ethnic. The coefficients for these variables are larger for women than men, which suggest that women's marriage outcomes are influenced to a larger degree by structural opportunities. For example, a one-unit increase in ethnic residential segregation decreases the odds of interracial compared to endogamous marriage by only about 2 times for men and by 6 times for women.

The results also show that when ethnic heterogeneity increases among Asian-origin groups in a metropolitan area, women are less likely to marry across racial boundaries and are more likely to marry within their own ethnic group. In addition, ethnic sex ratio is negative for women, suggesting that as the number of ethnic men relative to women increases, marriage across racial boundaries is less likely because of the availability of ethnic men in the metropolitan area.

The third and fourth columns in Table 3 show the effects of metropolitan-level variables on the likelihood of interethnic compared to endogamous marriage. Again, the results are largely parallel, as group size, sex ratios, and some of the segregation variables have strong and consistent effects. Racial residential segregation increases the likelihood of marrying within the racial category of Asian rather than marrying within one's ethnic group. Residential segregation not only provides opportunities for interaction between different Asian national origin groups, but ethnic group members may also forge a sense of commonality due to their shared structural position in the larger society. For women, occupational segregation between Asians and other racial groups also raises the odds of interethnic compared to endogamous marriage, but the effect is relatively weak.

Group size has a strong effect on interethnic compared to endogamous marriage. The results show that as the Asian population grows in a metropolitan area, this provides

opportunities for interaction between different ethnic group members and increases the likelihood of crossing national origin but not racial boundaries when entering into marriage. The coefficients for Asian sex ratio are negative and significant for both men and women. For men, this result is counter to predictions, and indicates that when men are less scarce than women in a metropolitan area, interethnic marriage is less likely than endogamous marriage. This could be due to the fact that men may be more traditional than women, or they may face more pressures by family and ethnic group members to marry within the group. In other words, preferences and pressures for ingroup marriage seem to be stronger than structural conditions. For women, an increase in the Asian sex ratio increases the likelihood of marriage within rather than outside of ethnic group, which is consistent with predictions. When there are more Asian men than women in a metropolitan area, women are more likely to marry across ethnic rather than racial boundaries.

The metropolitan-level variables measured at the ethnic level provide further understanding of interethnic and endogamous marriage. When Asian-origin groups are occupationally segregated from one another, this contributes to a lower likelihood of interethnic compared to endogamous marriage for men and women. The logic here is that common ties are not constructed when ethnic group members are separated from one another in occupational spaces. The results also show that as Asian-origin groups become more residentially segregated from one another, it is less likely that ethnic boundaries will be crossed when entering marriage. This effect was significant only for women.

Again, group size has significant effects on intermarriage outcomes for men and women. As predicted, when the size of the ethnic group increases, the likelihood of crossing ethnic or national origin boundaries decreases because there is a pool of potential partners to choose from within the ethnic group. Finally, as the ratio of men to women from the same national origin group rises, the likelihood of interethnic compared to endogamous marriage increases. When there are enough men within the ethnic group from which to choose, women do not cross ethnic boundaries when entering a marriage.

The control variables in Table 3 suggest that native-born men and women are more likely than foreign-born men and women to find marriage partners across ethnic and racial boundaries, which suggests that interethnic marriage is part of the assimilation process. In addition to being US-born, assimilation theory also predicts that individuals who have higher levels of education should be more acculturated to American society, and are more likely to interracially marry. The effect of education is only significant for men in predicting interracial compared to endogamous marriage. In addition, higher levels of education are associated with an increased likelihood of interethnic compared to endogamous marriage for both men and women. This indicates that crossing ethnic lines is associated with acculturation and may largely be a middle-class phenomenon. The effect of English fluency is significant only for men in predicting interracial marriage, suggesting that linguistic assimilation is a necessary precursor for crossing racial boundaries. Finally, the results show that older men are less likely to marry across ethnic and racial boundaries, while older women are more likely to cross racial boundaries and less likely to enter interethnic marriages.

Interethnic marriage as new form of integration

Table 3 clearly shows that some of the predictors for interracial and interethnic marriage are similar. Group size and sex ratios at both boundary levels, as well as ethnic occupational and residential segregation, have significant effects on interracial and interethnic relative to endogamous marriage. However, the magnitudes and directions of some of the estimates differ. For example, the coefficients for Asian group size are not only larger in magnitude when predicting interracial marriage for men and women (columns 1 and 2) compared to interethnic marriage (columns 3 and 4), but they are also negative. Making further comparisons between the estimates predicting interracial and interethnic marriage, racial heterogeneity and racial status inequality deter interracial marriage, while racial residential and occupational segregation dampen interethnic marriage. These differences confirm that these two types of marriage represent different forms of integration into American society that are facilitated by distinct processes.

Even though the multinomial models shown in Table 3 do not provide a direct comparison between interracial and interethnic marriage, we can calculate estimates from the existing table by subtracting the estimates for each variable in column 3 from column 1 (for men), and the estimates for each variable in column 4 from column 2 (for women).[16] One important reason to do this is to find out which variables differentiate interracial from interethnic marriage. This direct comparison indicates that racial residential segregation diminishes the likelihood of interracial compared to interethnic marriage. As Asians become increasingly segregated from whites, there may be greater proximity and interaction between different Asian ethnic groups, and less opportunity to

[16] To confirm which effects were significant, I estimated the models using interethnic marriage as the reference category. I discuss only the significant effects.

interact with whites, which increases the likelihood of interethnic marriage. In addition, racial status inequality and ethnic heterogeneity deter women from entering interracial compared to interethnic marriage.

An increase in Asian group size also decreases the likelihood of interracial marriage, and the magnitudes of the coefficients for men and women are large. The Asian sex ratio also raises the likelihood of interethnic marriage for women, but the magnitude of this effect is quite small. For men, an increase in the Asian sex ratio decreases the likelihood of interethnic compared to interracial marriage, suggesting that when there are more Asian men than women, crossing racial boundaries to find marriage partners is more likely. Finally, as ethnic group size increases, the odds of interracial marriage increases for men and decreases for women, indicating that men cross ethnic boundaries even when there may be co-ethnic partners available in the metropolitan area while women do not.

The comparison between interethnic and interracial marriage indicates that the ways in which Asian ethnic groups are structured in relation to one another do not affect interethnic marriage as much as the ways in which Asians and whites are structured in relation to one another. It was expected that when Asian ethnic groups are segregated from one another and experience status inequality in relation to one another, the likelihood of interethnic compared to interracial marriage would increase. However, these effects were not realized. In contrast, what the results show is that racial variables are important in distinguishing interethnic from interracial marriage.

DISCUSSION AND CONCLUSION

Past research on Asian Americans has focused primarily on individual-level variables to understand marital assimilation. Scholars have also paid less attention to panethnic unions, glossing over the diversity of ethnic groups that comprise racial categories, and overlooking an important form of integration into American society. To deal with these shortcomings in the literature, I introduce a new boundary approach that emphasizes the importance of structural conditions in shaping identities and draws upon the notion of panethnicity to understand marriage patterns among contemporary immigrant groups, such as Asian Americans.

Using intergroup association and structured inequality arguments about how ethnic group members will affiliate with others and express their identities given the structured contexts in which they find themselves, I constructed hypotheses about the conditions that facilitate or discourage the tranversing of ethnic group boundaries. I utilize ideas from Okamoto's (2003) theory of panethnicity to develop this new approach and explicitly recognize that ethnic boundaries can shift and change, creating structures that facilitate the salience of ethnic identities among certain group members and discourage the formation of relations between others. Specifically, I focus on the ways that groups are structured at the larger boundary of race *and* the smaller boundary of ethnicity, and how the structural contexts at both boundary levels influence the likelihood of interethnic, interracial, and endogamous unions among Asian Americans.

The analyses reveal that the predictions from the boundary approach were generally supported. The distribution of Asian Americans contributes to structural contexts within which marriage choices are made. Racial boundaries are quite salient

among Asian men and women because they tend to search within group boundaries for a partner when racial group size increases. Ethnic group size has a similar effect on interracial marriage: as ethnic groups become larger, there are enough partners within the group to marry and individuals do not cross national origin lines when entering marriage. Sex ratios also influence marriage outcomes, but the effects are quite small. For women, when racial and ethnic sex ratios increase (so that there are more Asian/ethnic men than Asian/ethnic women in a metropolitan area), this deters women from crossing national origin boundaries. Interestingly, for men, an increase in Asian sex ratios does not influence men to seek partners outside of ethnic boundaries; in fact, men are less likely to exogamously marry when men outnumber women.

The ways that Asians are structured at both boundary levels also influence intermarriage outcomes. As Asians experience racial residential and occupational segregation, different Asian-origin groups have greater opportunities to interact, and may even begin to see themselves as sharing common material and symbolic interests, leading to an increase in the likelihood of interethnic compared to endogamous marriage. In addition, occupational and residential segregation between Asian national origin groups hinders the ability to create and sustain ties among the different communities, and thus increases the likelihood of endogamous marriage. Racial status inequality also dampens the ability of both men and women to cross racial boundaries, suggesting that personal ties are difficult to develop when groups do not share the same class status.

Overall, the group size and segregation variables had large, consistent effects on marriage outcomes for both men and women, suggesting that the distribution of groups *and* the ways that groups are structured not only provide opportunities for interaction, but

influence how Asian Americans come to see other ethnic and racial groups as potential partners. These results resonate with recent research on interracial friendships and marriage partner preferences. For example, Joyner and Kao (2000) found that school racial composition structures opportunities for interracial friendships among Asian, Hispanic, and Native American adolescents. As the proportion of same-race students in the school context decreased, adolescents were more likely to report an interracial friendship. Beyond demographic distributions, Lee (2004a) concluded that partner preferences among 60 Korean Americans in New York were affected by residential, spatial, and social propinquity, leading to different patterns of preferences to emerge among middle- and working-class Asian Americans.

The results also clearly show that taking into account smaller boundary variables are important in understanding marriage outcomes. Several of the ethnic boundary variables are significant in the models comparing interethnic and interracial marriage to endogamous marriage. Simply focusing on the racial boundary would have masked these effects. However, when the likelihood of interethnic compared to interracial marriage was modeled, the ways in which Asian ethnic groups are structured in relation to one another do not affect interethnic marriage as much as *the ways in which Asians and whites are structured in relation to one another*. This indicates that the ethnic boundary variables work in similar ways for interethnic and interracial marriage relative to endogamous marriage, but what differentiates interethnic and interracial marriage from each other are factors such as racial residential segregation and racial status inequality. These results suggest that interethnic marriage will continue as a form of integration as long as Asians and whites are occupationally segregated and as long as Asians and whites

are not status equals. In other words, demographics play an important role in shaping interethnic marriage, but other social structures that keep Asians and whites from interacting and breaking down racial barriers are essential to consider.

A boundary approach would be useful for studying other new immigrant groups, such as Latinos, to understand how structural conditions measured at different boundary levels influence marriage patterns. But could this approach be applied to groups that have not experienced panethnicity in the contemporary US context? Thus far, African and Caribbean immigrants and US-born blacks have not forged a panethnic identity, even though, like Asians and Latinos, they have been racialized by the larger society so that distinctions between native-born and immigrant blacks are not often made by non-blacks (Waters 1999). It can be argued that a boundary approach would be useful for understanding marriage outcomes among blacks because ethnic boundaries are salient for black immigrants and will shape the ways that they associate and affiliate with others. In regards to whites, even though many different European ethnic groups comprise the racial category of white, it is questionable whether these contemporary groups are panethnic because they do not necessarily share a sense of peoplehood or feel like they are part of a larger collective that has been created to fend off discrimination and disadvantage (Doane 1997; Omi and Winant 1996; Okamoto 2003). Whites are a privileged racial group in the US, and with this privilege comes the ability to call upon ethnic identities when it is convenient (Waters 1990; Gans 1979). But for whites, it is unlikely that the boundaries of race *and* ethnicity are salient for the entire population. The integrated boundary approach rests on the assumptions that race and ethnicity are both salient boundaries for group members, and that the groups under study have not

experienced full integration into the larger society because in certain metropolitan areas, they remain occupationally and residentially segregated, and above all else, distinctive groups. Given this, a boundary approach may be useful to understand intermarriage patterns for groups such as Arab Americans, who are considered white by the US Census, but readily identify along ethnic or national origin boundaries (Kulczycki and Lobo 2002).

This paper contributes to a theoretical understanding of Asian American marriage outcomes, with an emphasis on boundary levels and structural effects, but has some limitations. It can be argued that the analyses presented here are one-sided because they model the structural conditions that influence the opportunities and preferences for men and women separately. Future research should attempt to take into account the different structural conditions faced by both partners *and* the extent to which partners experience status inequality relative to one another (see Fu 2001). In addition, this study is cross-sectional, and as already mentioned, captures only those couples whose marriages have survived during the census period. Intermarriage analyses that can model change over time will provide a dynamic view of the conditions that lead individuals to marry.

Given that the first step has been taken to understand how boundary variables shared by different ethnic groups influence intermarriage outcomes among Asian Americans, future research should attempt to gain a more complete understanding of different marriage patterns by ethnicity. Such research should continue to focus on how individual identities, racial and ethnic attitudes, and preferences, as well as structured relations and opportunities for contact play into intermarriage and broader integration processes.

REFERENCES

Alba, Richard and Victor Nee. 2003. Remaking the American Mainstream: Assimilation and Contemporary Immigration. Cambridge: Harvard University Press.

Alba, Richard and Reid M.Golden. 1986. "Patterns of Ethnic Intermarriage in the United States." Social Forces 65: 202-23.

Barnes, Jessica S. and Claudette E. Bennett. 2002. "The Asian Population: 2000, Census 2000 Brief." US Census Bureau.

Blau, Peter M. 1977. Inequality and Heterogeneity. New York: Free Press.

Blau, Peter M. and Joseph E. Schwartz. 1984. Crosscutting Social Circles: Testing a Macrostructural Theory of Intergroup Relations. New York: Academic Press.

Blau, Peter M., Terry C. Blum, and Joseph E. Schwartz. 1982. "Heterogeneity and Intermarriage." American Sociological Review 47: 45-62.

Bonacich, Edna. 1973. "A Theory of Middleman Minorities." American Sociological Review 37: 583-594.

Chan, Sucheng. 1991. Asian Americans: An Interpretive History. New York: Twayne Publishers.

Chang, Iris. 1997. The Rape of Nanking: The Forgotten Holocaust of World War II. New York: Basic Books.

Charles, Maria. 1992. "Cross-National Variation in Occupational Sex Segregation." American Sociological Review 57: 483-503.

Doane, Ashley W., Jr. 1997. "Dominant Group Ethnic Identity in the United States: The Role of 'Hidden' Ethnicity in Intergroup Relations." Sociological Quarterly 38: 375-97.

Eschbach, Karl. 1995. "Enduring and Vanishing American Indian: American Indian Population Growth and Intermarriage in 1990." Ethnic and Racial Studies 18: 89-108.

Espiritu, Yen Le. 1992. Asian American Panethnicity. Philadelphia: Temple University Press.

----. 1997. Asian American Women and Men: Labor, Laws, and Love. Thousand Oaks, CA: Sage.

Fisher, Maxine P. 1980. The Indians of New York City: A Study of Immigrants from India. New Delhi: Heritage Publishers.

Fitzpatrick, Joseph P. 1966. "Intermarriage of Puerto Ricans in New York City." American Journal of Sociology 71: 395-406.

Fong, Colleen and Judy Yung. 2004. "In Search of the Right Spouse: Interracial Marriage among Chinese and Japanese Americans." Pp. 589-605 in Contemporary Asian America: A Multidisciplinary Reader, edited by M. Zhou and James V. Gatewood.

Fu, Vincent Kang. 2001. "Racial Intermarriage Pairings." Demography 38: 147-59.

Gans, Herbert. 1979. "Symbolic Ethnicity: The Future of Ethnic Groups and Cultures in America." Ethnic and Racial Studies 2: 1-20.

Gilbertson, Greta A., Joseph P. Fitzpatrick, and Lijun Yang. 1996. "Hispanic Intermarriage in New York City: New Evidence from 1991." International Migration Review 2: 445-59.

Gordon, Milton. 1964. Assimilation in American Life. New York: Oxford University Press.

Gurak, Douglas T. and Joseph P. Fitzpatrick. 1982. "Intermarriage among Hispanic Ethnic Groups in New York City." American Journal of Sociology 87: 921-34.

Haines, David W. (ed). 1989. Refugees as Immigrants: Cambodians, Laotians, and Vietnamese in America. Totowa, NJ: Rowman and Littlefield.

Hechter, Michael. 1999. [1975]. Internal Colonialism: The Celtic Fringe in British National Development 1536-1966. Transaction Publishers.

----. 1978. "Group Formation and the Cultural Division of Labor." American Journal of Sociology 84: 293-318.

Hwang, Sean-Shong, and Rogelio Saenz. 1990. "Problems Posed by Immigrants Married Abroad on Intermarriage Research: The Case of Asian Americans." International Migration Review 24: 563-576.

Hwang, Sean-Shong, Rogelio Saenz, and Benigno E. Aguirre. 1994. "Structural and Individual Determinants of Outmarriage among Chinese-, Filipino-, and Japanese-Americans in California." Sociological Inquiry 64: 396-414.

----. 1997. "Structural and Assimilationist Explanations of Asian American Intermarriage." Journal of Marriage and the Family 59: 758-72.

Itzigsohn, Jose and C. Dore-Cabral. 2000. "Competing Identities? Race, Ethnicity, and Panethnicity among Dominicans in the United States." Sociological Forum 15: 225-47.

Joyner, Kara and Grace Kao. 2000. "School Racial Composition and Adolescent Racial Homophily." Social Science Quarterly 81: 810-25.

Kalmijn, Matthijs. 1991. "Shifting Boundaries: Trends in Religious and Educational Homogamy." American Sociological Review 56: 786-800.

----. 1993. "Trends in Black/White Intermarriage." Social Forces 72: 119-46.

----. 1998. "Intermarriage and Homogamy: Causes, Patterns, Trends." Annual Review of Sociology 24: 395-421.

Kao, Grace and Kara Joyner. 2002. "Do Hispanics and Asians Practice Panethnicity in Friendship Choices?" Presented at Annual Meetings of the Population Association of America, Atlanta, GA.

Kibria, Nazli. 1997. "The Construction of 'Asian American': Reflections on Intermarriage and Ethnic Identity among Second Generation Chinese and Korean Americans." Ethnic and Racial Studies 20(3): 522-44.

----. 2002. Becoming Asian American: Second-Generation Chinese and Korean American Identities. Baltimore, MD: Johns Hopkins University Press.

Kitano, Harry H.L. and Lynn Chai. 1982. "Korean Interracial Marriage." Pp. 75-90 in Intermarriage in the United States, G.A. Cretser and J.J. Leon (eds). New York: Hayworth Press.

Kitano Harry H.L. and Wai-Tsang Yeung. 1982. "Chinese Interracial Marriage." Marriage and Family Review 5: 35-47.

Kitano, Harry H.L., Wai-Tsang Yeung, Lynn Chai, and Hebert Hatanaka. 1984. "Asian-American Interracial Marriage." Journal of Marriage and the Family 46: 179-90.

Kulczycki, Andrzej and Arun Peter Lobo. 2002. "Patterns, Determinants, and Implications of Intermarriage among Arab Americans." Journal of Marriage and the Family 64: 202-10.

Lee, Sara S. 2004a. "Class Matters: Racial and Ethnic Identities of Working- and Middle-Class Second-Generation Korean Americans in New York City." Pp. 313-38 in Becoming New Yorkers (eds. P. Kasinitz, J.H. Mollenkopf, and M.C. Waters). New York: Russell Sage Foundation.

----. 2004b. "Marriage Dilemmas: Partner Choices and Constraints for Korean Americans in New York City." Pp. 285-98 in Asian American Youth: Culture, Identity, and Ethnicity, edited by J. Lee and M. Zhou.

Lee, Sharon M. and Keiko Yamanaka. 1990. "Patterns of Asian American Intermarriage and Marital Assimilation." Journal of Comparative Family Studies 26: 247-53.

Lee, Sharon M. and Marilyn Fernandez. 1998. "Trends in Asian American Racial/Ethnic Intermarriage: A Comparison of 1980 and 1990 Census Data." Sociological Perspectives 41: 323-42.

Liang, Zai and Naomi Ito. 1999. "Intermarriage of Asian Americans in the New York City Region: Contemporary Patterns and Future Prospects." International Migration Review 33: 876-900.

Lieberson, Stanley and Mary Waters. 1988. From Many Strands: Ethnic and Racial Groups in Contemporary America. New York: Russell Sage Foundation.

Lien Pei-te, Margaret M. Conway, and J. Wong. 2003. "The Contours and Sources of Ethnic Identity Choices among Asian Americans." Social Science Quarterly 84: 461-81.

Light, Ivan H. 1980. "Asian Enterprise in America: Chinese, Japanese, and Koreans in Small Business." Pp. 33-57 in Self-Help in Urban America: Patterns of Minority Business Enterprise, ed. S. Cummings. Port Washington, NY: Kennikat Press.

Long, J. Scott and Jeremy Freese. 2001. Regression Models for Categorical Dependent Variables using Stata. College Station, TX: Stata Corporation.

Mare, Richard D. 1991. "Five Decades of Educational Assortative Mating." American Sociological Review 56: 15-32.

Massey, Douglas S. and Nancy A. Denton. 1987. "Trends in the Residential Segregation of Blacks, Hispanics, and Asians." American Sociological Review 52: 802-825.

----. 1992. "Residential Segregation of Asian-Origin Groups in U.S. Metropolitan Areas." Sociology and Social Research 76: 170-177.

Min, Pyong Gap. 1991. "Cultural and Economic Boundaries of Korean Ethnicity: A Comparative Analysis." Ethnic and Racial Studies14: 225-41.

----. 1995. Asian Americans: Contemporary Trends and Issues. Thousand Oaks, CA: Sage Publications.

Min, Pyong Gap and Jung Ha Kim (eds). 2002. Religions in Asian America: Building Faith Communities. Walnut Creek, CA: Altamira Press.

Model, Suzanne and Gene Fisher. 2001. "Black-White Unions: West Indians and African Americans Compared." *Demography* 38: 177-85.

Morning, Ann. 2001. "The Racial Self-Identification of South Asians in the United States." Journal of Ethnic and Migration Studies 27: 61-79.

Nagel, Joane. 1995. "American Indian Ethnic Renewal: Politics and the Resurgence of Ethnicity." American Sociological Review 60: 947-965.

Okamoto, Dina G. 2003. "Toward a Theory of Panethnicity: Explaining Collective Action among Asian Americans." American Sociological Review 68: 811-42.

----. 2006. "Institutional Panethnicity: Boundary Formation in Asian American Organizing." *Social Forces*.

Omatsu, Glenn. 1994. The 'Four Prisons' and the Movements of Liberation: Asian American Activism from the 1960s to 1990s. Pp. 19-69 in The State of Asian America: Activism and Resistance in the 1990s, edited by K. Aguilar-San Juan. Boston, MA: South End.

Omi, Michael and Howard Winant. 1996. "Contesting the Meaning of Race in the Post-Civil Rights Movement Era." Pp. 470-478 in Origins and Destinies: Immigration, Race, and Ethnicity in America, ed. S. Pedraza and R. Rumbaut. Belmont, CA: Wadsworth.

Ono, Hiromi. 2005. "Marital History Homogamy between the Divorced and the Never Married among Non-Hispanic Whites." Social Science Research 34: 333-56.

Ong, Aihwa. 2003. Buddha is Hiding: Refugees, Citizenship, and the New America. Berkeley: University of California Press.

Pagnini, Deanna L. and S. Philip Morgan. 1990. "Intermarriage and Social Distance among US Immigrants at the Turn of the Century." American Journal of Sociology 96: 405-32.

Porterfield, E. 1982. "Black-American Intermarriage in the United States." Marriage and Family Review 5: 17-34.

Portes, Alejandro and Ruben G. Rumbaut. 2001. Legacies: The Story of the Immigrant Second Generation. New York: Russell Sage Foundation.

Qian, Zhenchao. 1997. "Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990." Demography 34: 23-76.

Qian, Zhenchao and Jose A. Cobas. 2004. "Latinos' Mate Selection: National Origin, Racial, and Nativity Differences." Social Science Research 33: 225-47.

Qian, Zhenchao, Sampson Blair Lee, and Stacey Ruf. 2001. "Asian American Interracial and Interethnic Marriages: Difference by Education and Nativity." International Migration Review 35: 557-86.

Rosenfeld, Michael. 2001. "The Salience of Pan-National Hispanic and Asian Identities in U.S. Marriage Markets." Demography 38: 161-75.

----. 2002. "Measures of Assimilation in the Marriage Market: Mexican Americans, 1970-1990." Journal of Marriage and the Family 64: 152-62.

Rytina, Steven, Peter M. Blau, Terry Blum, and Joseph Schwartz. 1988. "Inequality and Intermarriage: A Paradox of Motive and Constraint." Social Forces 66: 645-75.

Shinagawa, Larry Hajime and Gin Yong Pang. 1988. "Intraethnic, Interethnic, and Interracial Marriages among Asian Americans in California, 1980." Berkeley Journal of Sociology 33: 95-114.

South, Scott J. and Steven F. Messner. 1986. "Structural Determinants of Intergroup Association: Interracial Marriage and Crime." American Journal of Sociology 91: 1409-30.

Spickard, Paul R. 1989. Mixed Blood: Intermarriage and Ethnic Identity in Twentieth Century America. Madison, WI: University of Wisconsin Press.

Sribney, William. 1997. "Likelihood-ratio Test after Survey/Robust ML Estimation." Statacorp.

Sung, Betty L. 1990. "Chinese American Intermarriage." Journal of Comparative Family Studies 21: 337-352.

Takaki, Ronald. 1990. Strangers from a Different Shore: A History of Asian Americans. New York: Penguin Books.

Taeuber, Karl E. and Alma F. Taeuber. 1976. "A Practitioner's Perspective on the Index of Dissimilarity." American Sociological Review 41: 884-889.

U.S. Census Bureau. 2001. Census 2000 Summary File 1 [all states]. Prepared by U.S. Census Bureau.

U.S. Department of Commerce, Bureau of the Census. 2003. Census of Population and Housing: 2000 Public Use Microdata Sample: 5-Percent Sample [Computer file]. Washington, DC: US Department of Commerce, Bureau of the Census.

Williams, R. L. 2000. "A Note on Robust Variance Estimation for Cluster-Correlated Data." *Biometrics* 56: 645–646.

Yancey, William E., Eugene P. Erickson, and Richard N. Juliani. 1976. "Emergent Ethnicity: A Review and Reformulation." American Sociological Review 41: 391-403.

Table 1. Marriage Patterns of Asian American Men and Women, 18-64 Years Old, 1980, 1990, and 2000

Asian Men	1980	1990	2000
Endogamous	85.3	87.2	86.6
Exogamous	14.7	12.8	13.4
Interracial*	78.8	77.5	76.6
Interethnic*	**21.2**	**22.4**	**23.3**
Asian Women	**1980**	**1990**	**2000**
Endogamous	70.7	75.5	75.3
Exogamous	29.3	24.5	24.7
Interracial*	91.1	89.9	89.1
Interethnic*	**8.9**	**10.1**	**10.9**

*Percentage of all exogamous marriages.

Note: Percentages include six largest Asian American groups: Chinese, Filipino, Japanese, Asian Indian, Korean, and Vietnamese.

Source: US Census 5-Percent PUMS 1980, 1990, 2000.

Table 2. Goodness of Fit Tests for Nested Multinomial Logistic Regression Models Estimating Types of Marriage among Asian American Men and Women, 2000

Model	Variables Included	
M1	Control variables	
M2	Control + racial metropolitan-level variables	
M3	Control + racial and ethnic metropolitan-level variables	
Male Model Comparisons	**Chi-square**	**(df)**
M1 v M3	288.007***	(24)
M1 v M2	215.145***	(12)
M2 v M3	75.861***	(12)
Female Model Comparisons	**Chi-square**	**(df)**
M1 v M3	554.252***	(24)
M1 v M2	362.611***	(12)
M2 v M3	188.868***	(12)

***$p \leq .001$

Table 3. Multinomial Logistic Regression Models Estimating Boundary Variables on the Likelihood of Types of Marriage among Asian Americans, 16-35 Years Old, 2000

Independent variable	Type of Marriage[a]			
	Men	Women	Men	Women
	Interracial		**Interethnic**	
Metropolitan-level variables				
Racial boundary variables				
Asian res. segregation	- 0.368	0.628	2.769†	2.858†
	(1.43)	(1.21)	(1.79)	(1.70)
Asian occ. segregation	0.215	0.490	0.204	0.872†
	(.428)	(.420)	(.703)	(.588)
Racial heterogeneity	- 1.660**	- 1.111	0.372	- 0.343
	(.661)	(.955)	(1.53)	(1.16)
Racial status inequality	- 0.750*	- 1.848***	- 0.223	- 0.098
	(.435)	(.576)	(.705)	(.902)
Asian group size	- 2.808***	- 3.747***	1.551***	0.943*
	(.630)	(1.20)	(.480)	(.556)
Asian sex ratio	- 0.013†	- 0.009	- 0.053***	- 0.048***
	(.010)	(.006)	(.015)	(.016)
Ethnic boundary variables				
Ethnic res. segregation	- 1.685*	- 2.419*	- 0.738	- 1.066
	(.853)	(1.06)	(1.58)	(1.44)
Ethnic occ. segregation	- 0.876**	- 1.678***	- 0.642**	- 1.687***
	(.293)	(.180)	(.274)	(.278)
Ethnic heterogeneity	- 0.572	- 0.342	0.024	2.494*
	(.857)	(.897)	(.921)	(1.50)
Ethnic status inequality	- 0.083	- 0.167	- 0.036	- 0.127
	(.357)	(.350)	(.649)	(.648)
Ethnic group size	- 1.446***	- 3.575***	- 3.347***	- 1.902*
	(.567)	(.539)	(.959)	(1.01)
Ethnic sex ratio	0.002	- 0.024***	0.003	- 0.027**
	(.004)	(.006)	(.007)	(.009)

Table 3 continued. Multinomial Logistic Regression Models Estimating Boundary Variables on the Likelihood of Types of Marriage among Asian Americans, 16-35 Years Old, 2000

	Type of Marriage[a]			
Independent variable	Men	Women	Men	Women
	Interracial		**Interethnic**	
Control variables				
Native-born	1.537***	1.637***	1.102***	1.225***
	(.130)	(.114)	(.156)	(.225)
Years of education	0.066***	- 0.020	0.048*	0.060*
	(.019)	(.025)	(.029)	(.029)
English fluency	- 0.724***	- 0.093	- 0.065	- 0.147
	(.087)	(.070)	(.097)	(.122)
Age	- 0.098***	0.049***	- 0.104***	- 0.044*
	(.017)	(.013)	(.025)	(.026)
MSA population size (logged)	0.004	- 0.328**	0.103	- 0.225*
	(.096)	(.110)	(.129)	(.139)
Intercept	6.349***	7.307***	4.384*	2.956
	(1.75)	(1.74)	(2.16)	(2.96)
Log pseudo-likelihood	2552.91	2837.59		
Pseudo R2	.2140	.2128		

† p < .10 * p ≤ .05 ** p ≤ .01 ***p ≤ .001

[a] Endogamous marriage is the reference category.

Note: N=4,651 for men, N=4,874 for women. Tests are one-tailed for hypothesized effects, and two-tailed for control variables. Numbers in parentheses are robust standard errors corrected for clustering at the metropolitan area level. Ethnicity dummies are included in the models above, but not shown here to simplify the table. Full models are available from author.

Appendix A. Means and Standard Deviations for Independent Variables, 2000

Independent Variables	Men Mean	Men S.D.	Women Mean	Women S.D.
Residential segregation				
Asian	.4172	.063	.4167	.063
Asian ethnic [a]	.4572	.085	.4562	.083
Chinese	.4230	.081	.4221	.080
Filipino	.4505	.069	.4493	.068
Japanese	.4489	.090	.4479	.089
Asian Indian	.4275	.063	.4265	.062
Korean	.4396	.081	.4381	.079
Vietnamese	.5254	.073	.5247	.073
Occupational segregation				
Asian	.4222	.121	.4258	.127
Asian ethnic [a]	1.691	.354	1.675	.326
Chinese	1.631	.228	1.629	.228
Filipino	1.623	.234	1.620	.235
Japanese	2.563	.518	2.553	.513
Asian Indian	1.540	.259	1.541	.256
Korean	1.518	.264	1.516	.262
Vietnamese	1.524	.247	1.525	.248
Status inequality				
Asian	1.177	.131	1.173	.131
Asian ethnic [a]	1.040	.168	1.036	.166
Chinese	1.066	.134	1.069	.139
Filipino	1.107	.144	1.105	.145
Japanese	1.140	.158	1.136	.160
Asian Indian	1.173	.160	1.178	.161
Korean	0.873	.130	0.875	.134
Vietnamese	0.875	.137	0.876	.135
Group size				
% Asian	11.85	11.3	11.42	10.6
% Asian ethnic	2.67	3.1	2.61	3.1
% Chinese	3.12	3.3	3.00	3.2
% Filipino	2.62	3.4	2.50	3.2
% Japanese	1.73	2.3	1.66	2.1
% Asian Indian	1.42	1.2	1.40	1.2
% Korean	0.72	0.6	0.70	0.6
% Vietnamese	1.32	1.7	1.31	1.7

Appendix A continued. Means and Standard Deviations for Independent Variables, 2000

Sex ratio				
Asian	92.81	6.03	92.76	5.95
Asian ethnic [a]	94.34	15.9	92.78	16.4
Chinese	91.99	8.56	92.10	8.91
Filipino	79.57	10.7	79.37	10.7
Japanese	86.27	17.0	85.79	16.4
Asian Indian	115.9	13.8	115.96	14.4
Korean	79.10	14.3	78.88	14.2
Vietnamese	98.86	13.4	98.72	13.1
Heterogeneity index				
Asian ethnic	.7995	.082	.7994	.083
Racial	.4360	.105	.4350	.104
Control variables				
Native-born	.1957	.397	.1723	.378
Education	11.67	2.71	11.44	2.63
English fluency	2.401	.626	2.350	.670
Age	31.48	3.04	29.95	3.32
Chinese	.2298	.421	.2230	.416
Filipino	.2204	.415	.2539	.435
Japanese	.0606	.239	.0447	.206
Asian Indian	.2111	.408	.1955	.397
Korean	.1140	.318	.1270	.333
Vietnamese	.1646	.370	.1559	.363

Note: Data are based on 5-percent 2000 PUMS.

[a] This value represents the mean level of the variable of interest based on the aggregate of individuals from the different Asian ethnic groups in the sample.