Chapter 2:

"Skin Color Homogamy in Mexico"

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1. Introduction

Social stratification based on race and ethnicity in North America and the Americas has been widely recognized. Historically, it surged in the 16th century from ideas of European superiority and African inferiority adopted to justify the conquest of the New World and the subsequent domination of Europeans over Native Americans and blacks (Wade 1997). Today, North American and Latin American societies continue to organize their social hierarchies on a racially ranked stratification system inherited from the colonial era, founded in principles of white supremacy (Telles 2004; Wade 1997:51). Practices of discrimination based on skin color persist; evidence from the United States shows that light-skinned individuals have higher incomes and better occupations (Espino and Franz 2002; Hunter 1998), complete more years or schooling (Murguia and Telles 1996), and marry higher status individuals than darker-skinned individuals (Udry, Bauman and Chase 1971; Hunter 1998). Moreover, evidence from most Latin American countries shows that skin color predicts educational attainment (Telles and Steele 2012), and evidence from Brazil shows that intermarriage between persons at the extremes of the color spectrum is rare (Telles 1993). These findings imply that skin color may play an important role in the intergenerational transmission of inequality, since educational attainment and intermarriage are key elements in maintaining social inequality from one generation to the next (Mare 1995; Mare and Maralani 2006).

Even though skin color may have longstanding effects in the persistence of inequality, little is known about the role that skin color plays in social stratification in Latin America, due to lack of suitable data. The great level of miscegenation (or race mixture) in this region gave rise to the political ideology of *Mestizaje*, which is based on the notion that race mixture is desirable to improve the characteristics of the population. Based on this ideology, throughout the 19th century, most Latin American countries eliminated from national constitutions any distinctions based on race and ethnicity. Moreover, political elites and intellectuals avoided these types of distinctions in

all national discourses. By formally eliminating the caste system and by supporting the ideology of *Mestizaje*, Latin American elites assumed that racial discrimination would eventually disappear and a stratification system based only on class differences would emerge. The adoption of this ideology was so influential that, until recently, most of the research in Latin America only focused on the effect of socioeconomic class on different outcomes, and the effect of skin color was often neglected.

National identities in Latin America were founded on egalitarian principles, yet the ideology of *Mestizaje* used to build these identities was based on ideas of white supremacy. This ideology emphasized the possibility of improving the population through policies of `social hygiene' implemented to progressively whitening the population (Wade 1997:32; Telles 2004:28). *Mestizaje* conceives whiteness as a site of privilege in a context in which overt racism is not acknowledged (Moreno 2010). Ideas of white supremacy continue to exert an influence in these societies, not only in the political arena, but also in everyday life (Telles and Steele 2012; Moreno 2010).

Recently, social inequalities by race and ethnicity are beginning to be recognized. This recognition has been accompanied with new efforts to collect suitable data to study the phenomenon[1]. Recent findings show that skin color has an impact in the social reproduction of inequality. The evidence suggests that skin color plays a key role in the process of educational attainment. In particular, it shows that darker-skinned children are more likely to hold the lowest levels of educational attainment, placing them in a very disadvantaged position once they enter in the labor market (Flores and Telles 2012). Indeed, the effect of skin color in educational attainment is an important mechanism through which social inequality is produced and reproduced. Another key component in the intergenerational transmission of inequality is the process of marriage choice, since marriage guarantees the transmission of cultural and economic capital from one generation to

[1] PERLA, Discriminación de México, MIT 2006

the next (Bourdieu 1975). Marriage creates new ties between spouses and their families. These connections to a broader social network offer new opportunities for mobility (Lin 2001; Blossfeld 2009; Kalmijn 1998; Smits, Ultee and Lammers 1998). Just as skin color has consequences in educational attainment, it may also exert an important influence in the process of marriage choice. For example, evidence from the U.S. shows that lighter-skinned individuals marry higher status spouses (Udry, Bauman and Chase 1971; Hill 2002; Hunter 1998). However, evidence from Latin America is scant, and comes from a single country: Brazil (Telles 1993; 2004). As expected, intermarriage is more common in Brazil than in the U.S., which reflects that historically race mixture has been more widely accepted in Latin America than in North America. However, among the Brazilian exogamous unions, the large majority involves persons of proximate color indicating a wide social distance at the extreme of the color spectrum (Telles 1993; 2004).

Studies on assortative mating by race and ethnicity only exist for Brazil because it is one of the few countries in Latin America that collects race and ethnicity data of respondents and their partners in the Census. Other countries, like Mexico, only collect information on ethnic background, more specifically indigenous origin, but do not collect data on skin color or race. Additionally, recent efforts to collect data on skin color in Latin America do not collect information about skin color of spouses of the respondents. In this paper, I will expand understandings of assortative mating by race by investigating skin color homogamy in Mexico. I will use a novel dataset from the Mexican Marital Preference Pilot project (MxMPP) that will allow me to assess for the first time the role of skin color homogamy in this country. The MxMPP survey instrument includes two measures of skin color. First, respondents were asked to rate the skin color of their spouses according to a skin color palette. After the interview was over, interviewers rated the skin color of the respondent according to the same palette. The colors of the palette come from the New Immigrant Survey (NIS) skin color scale (Massey and Martin 2003) found in Figure 1. I will

investigate skin color homogamy using log-linear models to describe the association between partners' characteristics, net of marginal distributions.

The paper is organized as follows. In the next section, I present in more detail the historical context under which social stratification based on skin color emerged Mexico. I briefly introduce the caste system that was prevalent during colonial period. I also present an account of how race and ethnic relations evolved during the *Porfiriato* and after the Mexican Revolution, and how ideas of biological determinism gave rise to the *Mestizaje* ideology, which was central in the process of nation building after the Revolution. In section 3, I present recent ethnographic and statistical evidence of how a hierarchical social order based on skin color persists in Mexico, even though social distinctions based on race are not acknowledged. In section 4, I present my hypotheses. In section 5, I describe the data and methods. In section 6, I present the results, and finally I conclude in section 7.

2. Historical Background

Colonial Period

Skin color stratification in Mexico begins with the Spanish colonization of the New World, in the 16th century. The multiethnic nature of the population of New Spain, composed by white Europeans, Africans, and Indians gave rise to a social stratification system where whites were located at the top of the social hierarchy and blacks at the bottom. To justify the conquest, Spaniards arrived in the New World with ideas of white superiority that portrayed Europeans as civilized and morally superior compared to non-Europeans. To legitimize slavery Spaniards brought ideas of African inferiority that considered blackness as a physical expression of the sinner nature of Africans (Wade 1997, p. 8; Vinson III 2004, p.25). Based on European stereotypical views, in New Spain blacks were perceived as violent, untrustworthy, lacking morals, superstitious, cruel and

evil, lazy, and "people without reason" who needed white guidance to survive (Fischer 2009, p. 54; Vinson III 2004, p. 27). In contrast, Indians were perceived as "people of reason", based on the complex social systems that existed in pre-hispanic civilizations. Since Indians were considered "rational beings" their enslavement was questioned and banned (Wade 1997: 27).

As in other regions in Latin America, New Spain experienced a high degree of race mixture that gave rise to a caste system, mainly based on skin color, which formally existed until the 19th century. Two demographic factors influenced the development of the caste system: (1) the sex-ratio imbalance of whites and blacks, and (2) the collapse of the indigenous population. At the beginning of the 16th century, the large influx of male colonizers and black slaves to New Spain encouraged a large proportion of unions with Indian females (Carroll and Lamb 1995; Vinson III 2004, p. 30; Navarrete 2004, p. 52). At the same time, a decrease of about 90% among the indigenous population from death and disease prompted the importation of slaves to New Spain, which by 1640 hosted the second largest slave population in the New World (Proctor III 2009, p. 23). Black males were particularly likely to form exogamic unions, mainly with free Indians and *mestizas*, in order to ensure the freedom of their offspring (Caroll and Lamb 1995) [2]. Altogether, the result was an increase in the population heterogeneity in terms of skin color (Caroll and Lamb 1995).

To protect the Indian population from the total collapse, Spaniards implemented an apartheid type system that separated physically and legally Indians from Spaniards (Wade 1997, p. 28; Vinson III 2004, p. 30) through the creation of two Republics (i.e. the Indian Republic and the Hispanic Republic). However, the high degree of race mixture weakened the original purpose of the Republics (Wade 1997, p. 28), and gave rise to a social stratification system that was based on race or physical appearance. Skin color and descent was the principal designator of identity and social

[2] In Spanish colonies children inherited the legal status of their mother, so it was common that male slaves marry free women to free their offspring from slavery (Caroll and Lamb 1995). Most blacks in New Spain were freed during the 1700s, even though slavery persisted until 1829 (Vinson III, 2004).

status within the Hispanic Republic, while lifestyle (and not race) defined individuals' identity within the Indian Republic (Wade 1997, p. 29; Carroll 2009 p. 83).

Within the caste system, whites were at the top of the social hierarchy, Indians and blacks at the bottom, and the racially mixed population (or *castas)* in the middle. Spaniards were designated as whites (*blancos*), very dark-brown skinned persons were designated as blacks (*negros*), *pardo* denoted a skin tone that derived from black/Indian unions, *mulattoes* were persons with skin tones that derived from black/white unions, and Indian was represented by bronze or coffee colored skin tone (*de color aindiado).* The association between skin color and race was so accepted that from 1630 onwards, Spanish documents commonly used color terms to designate person's race (Caroll 2009, p. 88).

From the beginning of the 17th century to the end of the colonial era, Spaniards adopted ethnocentric and racists ideologies that limited exogamic intermarriages. In 1776 the Crown issued a Royal Pragmatic that allowed parents to petition for the nullification of undesirable marriages of their children, such as mixed race marriages, and mixed social-class marriages (Castillo 2000). While Spanish rules discouraged Africans from marrying outside their group (Love 1971), intermarriage between whites and Indians was socially accepted (Wade 1997). Historical evidence from specific regions in Mexico shows that the likelihood of marrying depended on race, especially for women. Moreover, race was a key determinant in the process of partner choice (McCaa 1984; McCaa et al. 1983; McCaa et al. 1979). These studies indicate that exogamy patterns in the 18th century reflected a social structure based on the caste system. For example, pairings between individuals in proximate groups in the socio-racial hierarchy were more common than those formed by individuals in more distant groups (McCaa 1984; McCaa et al. 1983).

Even though Spanish rules discouraged black intermarriage, *mulattoes* and black males showed a clear tendency to marry outside their social group, in particular to Indian and mestizo

women (Carroll & Lamb 1995; Castillo 2000). This strategy allowed blacks to free their progeny, and to improve the "quality" of the descendants by converting them into *pardos* or *mestizos*, which implied a higher status in the socio-racial hierarchy. In general, mixed races avoided being classified as Indians, blacks, *mulattoes, or pardos* to avoid social disgrace or fiscal obligations. In this way, the process of *mestizaje* offered individuals with African ancestry, a way to hide their lineage, as a strategy for upward mobility (Castillo 2000). The rapid assimilation of *Afro-castas* into Indian communities facilitated the process of *mestizaje*, since mixtures between Indians and Blacks were more frequently classified as *mestizo* rather than *pardo*. By the end of the 17th century, *mulattoes* and blacks disappeared, at the same time that the *mestizo* population increased. The exogamic behavior of blacks and *afro-castas* surged from the necessity of this population to be assimilated to the general population so that their black ancestry did not hinder their upward mobility.

By the end of the colonial era, Spaniards and Indians tended to form endogamic unions; however, some Spaniards continued to form unions with *mestizos* –particularly *mestizo* women. . *Mestizos* surged as a new social group, in the middle of the social hierarchy, with Spaniards at the top and Indians and *afro-castas* at the bottom (Carroll & Lamb 1995).

Independence and Revolution

During the colonial period, power and privilege were closely linked to caste; however, generations of intense miscegenation complicated racial categorizations in such a way, that through the 18th century, race became secondary to class as a form of social differentiation (Knight 1990, p. 72). Likewise, during the first half of the 19th century, the demolition of other structural mechanisms that maintained the racial order of the colonial era further debilitated the caste system. Two examples of these changes were: (1) the creation of a citizenry on the basis of equality before

the law established in the Mexican Constitution of 1814, and (2) the abolition of slavery in 1829 (Vinson III 2004, p. 34; Navarrete 2004, p 64).

Even though a society stratified by class emerged in this period, racism was strengthened by racial theories during the 19th century (Knight 1990). Policymakers during the dictatorship of Porfirio Díaz (1876-1911), a period referred to as *Porfiriato*, were convinced of the superiority of white Europeans and the inferiority of mixed-races. Henceforth, they encouraged "social hygiene" policies[3] to whiten the population (Wade 1997, p. 31; Telles 2004 p. 28), such as immigration policies that would attract white European immigrants and restrict the entry of blacks (Wade 1997, p.32). Through mixing, political elites envisioned the progressive whitening of the population, since white 'blood' would dominate other types (Wade 1997, p. 32; Telles 2004 p. 28). At the same time, since the *Porfirian* model of development required the dispossession of the Indian communities, political elites portrayed Indians who resisted assimilation as "lazy", "stubborn", "ignorant", and "uncivilized". By doing this, political elites justified the genocide of Indian communities that refused to give away their land. During this period, indigenous identity was destroyed and Indians were forced to assimilate to the new Western culture as *mestizos* (Navarrete 2004). These stereotypical views of Indians exist until today.

The expropriation of Indian land during the *Porfiriato* was one of the causes of the Mexican Revolution war, during the first half of the 20th century. The primary goal of this Revolution was to reinstate the land to the Indian communities, and to rehabilitate Indian history, customs, music, dance, and rituals (Knight 1990). Yet, Indian communities continued to constitute a challenge to the process of nation building. Integration of these communities was still a priority for the Mexican government, but during this time their integration was thought to be respectful of their culture,

[3] Policies like limiting black immigration, and fostering European immigration (Telles 2004); however, in Mexico migration policy during the time of Porfirio Díaz failed to attract Europeans to Mexico in a large scale (Lomnitz 2011).

rather than forcible, as it was before the Revolution. The Indian became the symbol of national identity in Mexico, while Afro-descendants were completely ignored (Wade 1997).

The Revolution transformed race and ethnic relations. The demolition of scientific racism (due to the surge of genetics) was extremely influential on the ideology adopted by post-revolutionary Mexican philosophers and politicians to build the nation. In particular, the notion that racial subordination and super-ordination was wrong, and that race mixture was desirable, was used by the elites to consolidate the *mestizo* as the prototypical "Mexican". Formulations about the "cosmic race", proposed by Vasconcelos (1925), suggest that the Mexican race that emerged from the process of *mestizaje* was ideally suited for the environment of Mexico (Lomnitz 2011). Furthermore, the de-emphasis of genetic determinism and the acknowledged of the influence of the environment on the existent social differences among groups, changed the way differences among Indians and *mestizos* were conceived. Now Indians were perceived as a group with "cultural" instead of "biological" differences. By late 20th century, ideas of biological determinism were substituted by ideas of psychological determinism. These new ideas assumed that due to centuries of oppression, Indians developed a collective psychology that lack the will to power, was passive, and anti-technological (Knight 1990). Today, psychological determinism implies subtler forms of racism, since perceptions of Indian inferiority remain.

The *Mestizaje* ideology

The *Mestizaje* ideology surged by the end of the 19th century as a racial and nationalist doctrine adopted by Mexican political elites to build national identity based on tenets of Western societies in order to emulate their progress (Navarrete 2004; Wade 1997). The ideology of *Mestizaje* was founded in two principles: (1) the identification of the *mestizo* with a glorious indigenous pre-hispanic history; and (2) the conviction about the superiority of Western culture (Navarrete 2004). The ideology was inclusive in the sense that Indians and afro-descendants who

assimilated to the new culture were able to become *mestizos* and citizens in the new nation. However, groups that refused to assimilate were treated as enemies of the nation and, in many cases, stereotyped as criminals (Navarrete 2004).

The ideology of *mestizaje* was originally nurtured by ideas of scientific racism that assumed that different races were biologically different in terms of intellectual abilities, personality and morals. Whites were considered as superior, stronger, and at the top of human evolution, Indians were conceived as inferior, stubborn and lazy, and blacks were considered immoral, violent, and carriers of disease. Discussing the incorporation of blacks was considered, by political elites, damaging for the image of the nation, so they completely ignored this group in the process of nation building (Vinson III et al. 2004; Wade 1997). The idea of *mestizaje* assumed that, through assimilation, Indians and blacks would be able to improve morally and socially.

Between 1808 and 1921, about 3 million people changed their ethnic category from Indian to *mestizo* (Navarrete 2004). The change in ethnic identity was accompanied by the adoption of Spanish as the native language, and the rejection of languages and costumes from other ethnic groups. Even though the process of *mestizaje* implied more racial tolerance, it was accompanied also by cultural intolerance of marginalized ethnic groups (Navarrete 2004).

After the 1910 revolution war, the cult of the *mestizo* blossomed. A *mestizo* in colonial times, defined as the racial mix of Spaniard and Indian, differed from a *mestizo* defined in this period, in which a *mestizo* was the result of the mix of different racial and ethnic groups; yet, the ideology of *mestizaje* assumed that *mestizos* constituted a homogenous group with a single ethnic and cultural identity (Knight 1990). At the beginning of the 20th century, the idea of a national race, the "Mexican race", appeared, and the nation became identified with that race (Lomnitz 2011).

Since the end of the revolution only two ethnic categories have been recognized in Mexico: *mestizos* and indigenous people. The difference between the two groups is defined in cultural and psychological terms rather than in terms of skin color or descent. This distinction is reflected in the national census, which identifies indigenous populations by asking individuals about their ability to speak an indigenous language. In 2010, about 5% were identified as indigenous and the rest as *mestizos*, including people from African descent.

During the second half of the 20th century, *Mestizaje* had an impact on academia, since social researchers began to examine social differences based on class or education, and often overlooked differences based on race. In Mexico, "the national discourse has produced a raceless social context where individuals are not recognized as racialized subjects, but experience and reproduce racist practices everyday" (Moreno 2010). In a context in which social distinctions based on race are not acknowledged, evidence from Latin America and Mexico shows that the hierarchical racial order is recreated through practices of whitening (Wade 1997; Moreno 2010).

3. Whitening and Mexican racism

Whitening is the major mechanism of racism in Latin America (Wade 1997). The process of homogenization envisioned by the ideology of *Mestizaje* implies the progressive whitening of the population. Today, *mestizo* represents the Mexican, with whiteness as the imminent ideal (Lewis 2012). *Mestizaje* enables whiteness as a site of legitimacy and privilege (Moreno 2010). Whiteness is a value in its own right that enters into people's social interactions. The practice of whitening is reinforced by stereotypes advertised in films, television, and other mass media.

Recent anthropological research provides some insights into how whiteness operates in Mexico, and how racism organizes everyday life. For example, based on focus groups and life-history interviews of 40 Mexican women, Moreno (2010) explores ideas and experiences about

racism, *mestizaje*, and national identity. She finds that in Mexico people do not recognize racism. In fact, they have difficulty discerning what racism is. Yet, people experience it everyday. For example, she finds that in discussions about who is a desirable partner, marriage is often seen as an opportunity "to improve race", since lighter-skinned women are perceived as better, more refined, and the archetype of beauty. Moreover, she finds that *mestizaje* enables the possibility of engaging in processes of whitening. In this context, "whiteness" is not necessarily attached to a white skin color, but to a site of privilege that individuals may sometimes occupy depending on the circumstances and the specific people involved in the interaction. This site of privilege is available but can easily be taken away. Moreno concludes that in Mexico being "white" is a complex relational process that is fluid and depends on the situation.

Consistent with the previous study, ethnographic evidence presented by Lewis (2012) from *Costa Chica*[4], Mexico, shows that "race is impossible to pin down" since people all consider themselves Mexican. However, hair and skin color are constantly signifiers of race in the region. According to Lewis, aesthetics of skin and hair do not favor whiteness, but the mixture. For example, women are preferred with long wavy hair (not straight as Indians, and not kinky as Blacks) and light skin color. However, whiteness is still associated with beauty, while dark skin is associated with rurality, manual labor, poverty, and backwardness. Marrying a lighter-skinned partner is considered desirable. In particular, marital unions between Indian women and Moreno men are favored. Parents complain when their children marry a dark-skinned partner, as do grandparents if their grand-children are "too dark". Social distance between *Costa Chicans* and whites is so wide that, for them, *mestizaje* only refers to mixing among blacks and Indians. Whites are represented by the government or by the rich, and this group is conceived as one that prevents

[4] This area spans the border between Oaxaca and Guerrero, the southwest coastal states of Mexico, and has one of the highest concentrations of black-Indians in Mexico.

non-whites from upward mobility. Yet, whiteness also represents modernity, wealth, and material acquisition.

In 2010, the National Survey of Discrimination (ENADIS 2010) implemented by the Mexican government, showed that discrimination based on skin color is a common practice in Mexico, since 40% of the population thinks that people are treated differently as a function of their skin tone, and 15% of the population thinks that their civil rights are not respected as a result of their skin tone. Moreover, recent evidence from Mexico shows that darker-skinned individuals are more likely to have lower educational levels, are more likely to live in poverty, and are less likely to be affluent compared to their lighter-skinned counterparts (Villareal 2010; Telles and Steele 2012).

In sum, the evidence indicates that in Mexico social hierarchies privilege lighter-skinned over darker-skinned individuals. Stereotypical views of dark and light-skinned individuals continue to have real consequences in their life chances until today. A social stratification system based on skin color has reproduced itself by the adoption of racist discourses that continue to have longstanding effects in Mexican society. Just as skin color has an impact in educational outcomes, it may also play an important role in determining *who* is a desirable partner. In this sense, skin color is likely to have important effects in processes leading to the social reproduction of inequality. In this paper, I explore the effect of skin color in the mate selection process.

4. Hypotheses

Based on economic and exchange theories, if skin color is considered a trait hierarchically ordered (such as education), I would predict that individuals would prefer to form a union with others with comparatively more desirable characteristics than their own, in this case to form a union with lighter-skinned individuals (South 2001; Mare 2008; Becker 1973). However, competition among potential partners in the marriage market would lead to skin color homogamy. Moreover, I would

also expect a decrease in the probability of forming a union the greater the distance in terms of skin color.

Moreover, based on "status exchange theory", which posits that lower status light-skinned females might exchange their higher racial status with higher social status dark-skinned men (Merton 1941), I would expect that women that marry darker-skinned males would tend to be educationally hypergamous. This theory implies that, for women, light skin may function as social capital that can be transformed into economic capital (Hunter 2002). Evidence from the U.S. shows that skin color of Mexican American women does not affect their choice of marriage partners, however, skin color of African American women does affect their choice; in particular, light-skinned women are more likely to marry high-status and well educated spouses (Hunter 2002).

5. Data and Methods

Data

I use data from the Mexican Marital Preference Pilot project (MxMPP), a pilot study designed to collect relevant information about the marriage selection process of adults in Mexico. These data represent the first effort, in Mexico, to collect information about skin color of respondents and their spouses. The survey instrument designed for the MxMPP was administered to a subsample of the third wave of Mexican Family Life Survey (MxFLS-3), an ongoing longitudinal survey that is nationally-representative of individuals, households, and communities in Mexico.

MxMPP – Sampling Design

The MxMPP sample was selected from a subsample of the third wave of MxFLS-3. This eligible sample included panel and new members of the MxFLS-3, and was selected in three steps. First, respondents were chosen based on the following characteristics: (i) within ages between 20 and 60 years old, and (ii) who were not dead, international migrant, individual not found, or refusal

in MxFLS-3. From the 23,792 age eligible respondents, 19.5% were eliminated from the age eligible sample because they were dead, international migrants, refusals, or lost to follow-up (see Appendix 1-Table 1). Second, since the MxMPP shared part of the resources of the MxFLS-3 (such as interviewers, and transportation resources), and the MxFLS-3 was still in the field when the MxMPP sample was selected, the MxMPP eligible sample excluded households who had already been completely interviewed by the MxFLS-3 teams. Hence, 34% of the eligible sample (that ideally should have been considered in the random sampling for the MxMPP) was excluded from the sampling frame. From a comparison of the demographic characteristics between the final eligible sample (that was used for random sampling) and the excluded age eligible sample (see Appendix 1 – Table 2), I found that compared to older individuals respondents between the ages of 20 to 29 are more likely to be in the final eligible sample. Moreover, individuals from rural origins are less likely to be in the final eligible sample. In terms of education, sex, and ever being in a union there are no significant differences between the two samples.

The MxMPP sample consists of 1,476 observations that were selected randomly from the 12,589 observations in the final eligible sample. From the 1,476 observations, 19% have never been in a union (i.e., marriage or consensual union), 77% have either been married or in a consensual union, and 4% are missing on this item. For this analysis, since I am interested in individuals who have been in a union at least once, I drop 280 cases of individuals who have never been in a union, which implies an eligible sample of 1,196. From these observations, 73% were interviewed, 17% were lost to follow-up, and 10% refused to answer the survey. Moreover, from the 870 respondents that completed the survey only 720 have no missing values on the relevant variables used in this analysis. To analyze possible mis-representativeness, due to missing data, I ran a logistic regression (N=1,196) of the odds of being in the analytical sample as a function of demographic characteristics. I find that individuals from rural origins are 1.8 times more likely to be in the analytical sample (p=0.000), and that females are 1.4 more likely to be in the sample (p=0.002); I

do not find significant differences in terms of education and age. Finally, I generate a couple's file that comprises 720 couples. My analysis focuses on first unions (marriages or consensual unions).

Variables

Respondents were asked to rate the skin color of their spouses according to a skin color palette (see Figure 1). After the interview was over, interviewers rated the skin color of the respondent according to the same palette. The colors of the palette come from the New Immigrant Survey (NIS) skin color scale (Massey and Martin 2003) (See Figure 1). The palette includes ten different skin tones where 1 is associated with the lightest skin color and 10 with the darkest; however, for the analysis skin color is collapsed in four ordered categories, 1 being the lightest and 4 the darkest. Skin colors 1 and 2 in the palette were collapsed into the first category, skin color 3 in the palette constitutes the second category, skin colors 4 and 5 were collapsed into the third category, and skin colors 6 to 10 into the fourth category. Homogamy is a dummy variable that indicates whether partners' skin color is the same as respondents' skin color or not. I construct a hypogamy dummy variable to explore whether females show a tendency to marry darker-skinned males, which is coded as follows:

Hypogamy

Male's Skin	Female's Skin Color			
	1-Lightest	2	3	4-Darkest
1-Lightest	0	0	0	0
2	1	0	0	0
3	1	1	0	0
4-Darkest	1	1	1	0

Finally, I generate distance variables to examine if the probability of forming a union decreases as the distance between different skin colors increases. The following matrices show how these variables are coded.

Distance 1

Male's Skin	Female's Education			
Color	0-Lightest	1	2	3-Darkest
0-Lightest	0	1	0	0
1	1	0	1	0
2	0	1	0	1
3-Darkest	0	0	1	0

Distrance 2

Male's	Female's Education			
Education	0-Lightest	1	2	3-Darkest
0-Lightest	0	0	1	0
1	0	0	0	1
2	1	0	0	0
3-Darkest	0	1	0	0

Distance 3

Male's	Female's Education			
Education	0-Lightest	1	2	3-Darkest
0-Lightest	0	0	0	1
1	0	0	0	0
2	0	0	0	0
3-Darkest	1	0	0	0

Educational attainment is a dummy variable that indicates if both spouses have more than elementary school.

Methods

The analysis is divided in two parts. In the first part, I analyze a two-way table that is produced by cross-classifying female's and male's skin color (1-Lightest, 2, 3, 4-Darkest), which results in a 4 X 4 = 8 cell table. I use log-linear models to analyze the type of association that exists between partners' characteristics controlling for marginal distributions. I begin with a "conditional independence" model (M F), which assumes no variation in the association between partners' skin color. The formal model can be written as follows.

$$\log(f_{ij}) = \mu + \mu_i^M + \mu_j^F$$

where M denotes male's skin education (i=1,…,4), F is female's skin color (j=1,…,4), and f_{ij} is the expected number of unions between males in skin color category i and females in skin color category j. I add homogamy, hypogamy, and distance terms to the baseline model and compare the models to examine which is the one that fits better the data. Model comparisons rely on the Bayesian Information Criterion (BIC).

Given that there is an association between educational attainment and skin color, in the second part of the analysis, I include controls for education. This implies the analysis of a three-way table that is produced by cross-classifying female's skin color (1-Lightest, 2, 3, 4-Darkest), male's skin color (1-Lightest, 2, 3, 4-Darkest), and education (0: at least one spouse with elementary school or less, 1: both spouses with more than elementary school) which results in a 4 X 4 X 2 = 32 cell table. I follow the same analytical strategy than before. I begin with a "conditional independence" model (ME FE), which assumes no variation in the association between partners' skin color by educational level. The formal model can be written as follows.

$$\log(f_{ijk}) = \mu + \mu_i^M + \mu_j^F + \mu_k^E + \mu_{ik}^{ME} + \mu_{jk}^{FE}$$

where M denotes male's skin education (i=1,…,4), F is female's skin color (j=1,…,4), E is couple's educational attainment (k=1,2), and f_{ijk} is the expected number of unions between males in skin color category i and females in skin color category j , and couple's educational attainment k. Then, I add to the baseline model interaction terms of: homogamyXeducation, hypogamyXeducation, and distanceXeducation, and I compare the fit of the models using the BIC. Finally, I estimate parameters from selected models.

6. Results

Descriptive Statistics

<Table 1>

Table 1 shows males' and females' skin color distribution, and couples' educational level. In general, the table reveals that individuals are evenly distributed across the first three skin tone categories, and that the group of individuals with darkest skin color comprehends the lowest proportion of the population (10% for men, and 6% for women). In terms education, this table indicates that 42% of the couples are formed by partners with more than 6 years of education.

<Table 2>

Table 2 shows the frequencies and distribution of females' skin color conditional on males' skin color. By looking at the conditional distributions it is not clear if the pattern that emerges is of skin color homogamy or skin color hypogamy. On the one hand, the table shows a tendency for skin color homogamy among the lightest skin color individuals and those in category 3. However, the table also reveals a pattern of skin color hypogamy among females in categories 1 and 3.

<Table 3>

Table 3 shows this conditional distribution stratified by education. Results for couples with less than 6 years of education are similar to those describe above. However, for couples with more than six years of education a tendency for skin color homogamy is more evident.

<Table 4>

Table 4 shows rates of intermarriage for the complete sample and stratified by education. About 37% of the sample marries with individuals of the same skin color. Skin color homogamy is more common among higher educated couples (34% vs. 42%). Moreover, about 36% of females marry darker-skinned partners. Hypogamous unions are more common among less educated couples (39% vs. 31%). Finally, about 46% of couples form unions with partners of adjacent skin color categories, 14% form unions with partners crossing two skin color categories, and 3% with partners crossing three skin color categories. After stratifying by education, the table shows less educated couples are more likely to cross skin color categories.

<Table 5>

To explore if the data are consistent with "status exchange theory", Table 5 shows the female's education distribution conditional male's education among the sample of skin color hypogamous couples[5]. For these couples, I find a pattern of educational homogamy, and not a pattern of educational hypergamy, as expected by this theory.

Next, I proceed with the log-linear analysis to examine the association between male's and female's skin color net of their marginal distributions.

Log-Linear Models

I estimate a series of log-linear models to explore skin color assortative mating. Model specifications and fit statistics of selected models are provided in Table 6 and parameter estimates of the selected models are provided in Table 7[6]. I provide BIC statistics to measure the goodness of fit of the models. A smaller value of BIC indicates that the reduced model fits the data better than the saturated model.

<Table 6>

Panel A of Table 6 shows models without controlling for education. Model 0 is the saturated model. Model 1 is the conditional independence model that assumes no association between partners' skin color. Models 2 to 6 add homogamy, distance, and hypogamy parameters to Model 1. Based on the BIC statistics all these models improve the fit of Model 1, however, Model 3, the distance model, is most likely to be the true model. Panel B of Table 6 shows the models controlling for education. After controlling for education, the table shows that Model 2, the homogamy model, is the one that fits better the data, followed by the distance model.

<Table 7>

[5] Couples in which a woman forms a union with a darker-skinned man, relative to the woman skin color.
[6] In Appendix 2, I estimate an alternative model with 6 categories of skin color without controlling for education and find similar results as the model with four categories without controlling for education.

Next, I estimate homogamy and distance parameters from Models 2 and 3. Table 7 shows parameter estimates and their *p*-values. Figures 2 and 3 shows these parameters graphically. The left side of these Figures shows bars that represent parameter estimates without controlling for education, while the right side show bars after controlling for education.

<Figure 2>

Figure 2 shows results from the homogamy models. Without controlling for education, Figure 2 shows that homogamous unions are 1.35 times more likely compared to non-homogamous unions ($p<.001$). After stratifying by education, homogamy is no longer significant for the less educated couples; however, it remains significant and becomes stronger for the more educated couples.

<Figure 3>

Figure 3 shows results for the distance models. Without controlling for education, this Figure shows that the log odds of crossing skin color categories are negative and significant. Crossing two skin color categories is 37% less likely than crossing adjacent categories {(1-exp(-0.60-(-0.14)) X 100}; and crossing three skin color categories is 40% less likely than crossing adjacent categories {(1-exp(-1.05-(-0.14)) X 100}. This is consistent with the hypothesis that the probability of forming a union decreases the larger the distance in terms of skin color. After stratifying by education, the parameter estimates for the less educated couples are no longer significant; however, for the more educated couples there is some evidence that forming a union is less likely the greater the difference between skin colors.

7. Discussion

Since colonial times, ideas of white supremacy continue to organize social hierarchies in Mexico. Even though the M*estizaje* ideology adopted in this country makes racism very difficult to recognize, recent ethnographic and statistical evidence shows that light-skinned individuals enjoy privileges that darker-skinned individuals do not. For example, in terms of educational attainment, the latter group is more likely to hold the lowest levels of education compared to the former (Telles

& Steele 2012). During the life course, skin color also exerts impacts in other processes that affect individual life chances. This paper investigates the influence of skin color in the process of partner choice. I examine assortative mating patterns by skin color using data from the MxMPP, a novel pilot study that collected, for the first time in Mexico, information about skin color of respondents and their spouses. The MxMPP instrument asks interviewers to rate respondent's skin color, and asks respondents to rate the skin color of their spouse, based on the NIS 10-scale color palette. I investigate skin color homogamy using log-linear models to describe the association between partners' skin color, net of marginal distributions.

I consider skin color as a trait hierarchically ordered in my analysis, where lighter skin is preferred to darker skin. This assumption is based on historical and ethnographic evidence from Mexico showing that whiteness is associated with beauty, while dark skin is associated with rurality, manual labor, poverty, and backwardness. Whiteness also represents modernity, wealth, and material acquisition. In this sense, marrying a lighter-skinned partner is considered desirable. Yet, even though lighter-skinned individuals may have an advantage in terms of attractiveness generally, other characteristics such as indigenous origin may offset this advantage, since Indians are usually discriminated based on stereotypical views that conceive them as lazy, stubborn, ignorant, and uncivilized. However, this analysis does not take into account indigenous origin due to sample size restrictions. If skin color is a trait hierarchically ordered, I hypothesized that individuals' preferences to form unions with lighter-skinned individuals combined with competition in the marriage market would lead to skin color homogamy. I find evidence that skin color homogamy exists in Mexico; in particular, the evidence shows there is skin color homogamy among couples in which both spouses attained more than elementary school. By contrast, skin color homogamy is not present among couples in which at least one of the partners had elementary school or less. This finding indicates that the least educated couples are more likely to mix. One

implication of this finding is that, as educational attainment improves in Mexico, skin color may play a more important role in the decision of whom to marry.

Moreover, I find that most of the exogamous unions involve persons of proximate skin tones, which indicates that there is still a wide social distance at the extremes of the skin tone spectrum. This is consistent with evidence from Brazil (Telles 2004). I also find evidence that indicates that the probability of forming a union decreases as the distance in terms of skin color increases, specifically for couples with more than elementary school. This finding is consistent with evidence from the colonial period in Mexico. I did not find evidence that supports "status exchange theory" which posits that light-skinned women interchange higher "racial" status for higher socio-economic status, when they form a union. By contrast, I find that women that marry darker men are, in general, educationally homogamous and not educationally hypergamous, as this theory suggests. This finding is consistent with a study from the U.S. that shows that skin color is not used as social capital by light-skinned Mexican American women to marry upwardly in terms of socio-economic status (Hunter 2002).

Skin color homogamy may be explained by two factors: (1) individual preferences, and (2) opportunities to meet partners of different skin colors (Kalmijn and Flap 2001; Kalmijn 1998). I argue in this paper that skin color preferences are shaped by stereotypes associated with certain ethnic groups. These stereotypes have been reinforced historically, since colonial times, by political discourses and religious ideas, and, nowadays, by television shows, soap operas, films and other mass media. Even though racism is not overt in Mexican society, stereotypical views of whites, blacks, and Indians persist. Skin color, hair texture, and facial features, are used as proxies for descent and origin. Based on these features, Mexicans commonly engage in discrimination practices as demonstrated in the National Survey of Discrimination 2010. Additionally, the close association between social class and skin color might also shape individual preferences for certain skin colors;

more specifically, since lighter-skinned individuals have economic advantages in the labor market they may become more desirable partners in the marriage market.

Even though whiteness is a site of privilege in Mexico, Moreno (2010) shows that this privilege is contextual. Consequently, it may be possible to argue that for the least educated groups in Mexico, whiteness might be more fluid compared to higher educated groups. Perhaps, this fluidity shortens the social distance that exists between different skin colors. This fluidity may explain why among the least educated groups, there is more mixing. In the case of more educated groups, whiteness may be less fluid, hence a more permanent state for those who experience it. This may reify the social distance that exists between different skin colors, which in turn might explain why among the higher educated individuals skin color homogamy is more likely. Interestingly, a similar situation occurred during the colonial era: among the lowest social classes that lived in the Indian Republic, lifestyle (as opposed to skin color or race) was used as the main designator of identity, while skin color was the main designator of identity among higher social classes that lived in the Hispanic Republic. Since social distance was not defined in terms of race or skin color within the Indian Republic, there was a high degree of race mixture among blacks and Indians. By contrast, within the Hispanic Republic skin color strongly defined social distance among different social groups which was reflected in the fact that unions between individuals in proximate groups in the socio-racial hierarchy were more common than those formed by individuals in more distant groups (McCaa 1984; McCaa et al. 1983).

Finally, an alternative explanation of the homogamy patterns observed may also be the result of other structural factors in the marriage market. In particular, the degree of contact with potential partners with different skin colors may constraint the choice set from whom individuals select their partners, which may explain why we observe skin color homogamy. Unfortunately, log-linear

models do not allow disentangling the effect of preferences and other structural factors that may be shaping the final equilibrium observed in the data.

Overall, this study shows evidence of the effect of skin color in the process of marriage choice in Mexico. Even though Mexican political elites assumed that by adopting the ideology of *Mestizaje* racial discrimination would eventually disappear and a stratification system based only on class differences would emerge, the evidence of this paper shows that skin color continues to have an impact in demographic processes that lead to the social reproduction of inequality.

Appendix 1

A1 Table 1: Selection of the sample

Age eligible respondents (within ages 20 to 60)	23,792	100%
Dead	328	1.4%
International Migrants	2,554	10.7%
Refusals	163	0.7%
Not found	1,615	6.8%
Eligible Sample	19,132	100%
Eligible Sample Excluded from Random Sampling	6,543	34%
Final Eligible Sample used for Random Sampling	12,589	66%

A1 Table 2: Odds of being in the final eligible sample compared to being in the eligible excluded sample

	OR	S.E.	p-value
Age			
20-29	Reference category		
30-39	0.754	0.033	0.000
40-49	0.772	0.035	0.000
50-60	0.847	0.042	0.001
Years of schooling			
0-6	Reference category		
7-9	1.062	0.043	0.133
10-11	0.991	0.067	0.896
12+	1.030	0.045	0.496
Rural	0.671	0.022	0.000
Male	1.053	0.033	0.097
Ever in a Union	1.040	0.046	0.309
N	18,113		

Appendix 2

A2 Table1: Goodness of Fit of Selected Models of Skin Color Assortative Mating (N=720 couples)

	Model	LL	G^2	df	p	BIC
Panel A: Models based in a 6 X 6 Contingency table (Male's skin color X Female's skin color)						
0	MF	-78.2	0.0	0	1.000	0
1	M_F	-112.1	67.8	25	0.000	-97
2	M_F_H	-107.6	58.7	24	0.000	-99
3	M_F_D	-89.9	23.2	21	0.331	-115
4	M_F_Hy	-111.6	66.7	24	0.000	-91

Source: Mexican Marital Preference Pilot Study 2011
Notes: 1_Lightest: Skin Color 1 in palette, 2: Skin Color 2 in palette; 3: Skin Color 3 in palette; 4: Skin Color 4 in palette; 5: Skin Color 5 in palette; 6_Darkest: Skin Color 6 to 10 in palette.

Table 1: Descriptive Statistics

	Unweighted	Weighted
N (couples)	720	
Males' Skin Color (%) [(1)]		
1_Lighest	30%	26%
2	32%	31%
3	31%	32%
4_Darkest	7%	10%
Females' Skin Color (%) [(2)]		
1_Lighest	36%	32%
2	31%	28%
3	28%	34%
4_Darkest	4%	6%
Education		
Both partner's with >6 yrs. Education	42%	42%

Source: Mexican Marital Preference Pilot Study and Mexican Family Life Survey 2002, 2005, 2009/2010.

(1) 1_Lightest: Skin Color 1 (6%) and 2 (20%); 2: Skin color 3 (31%); 3: Skin colors 4 (22%) and 5 (10%); Skin colors 6 (8%) 7(2%) 8 (0.15%) 9 (0.04%)

(2) 1_Lightest: Skin Color 1 (7%) and 2 (25%); 2: Skin color 3 (28%); 3: Skin colors 4 (27%) and 5 (7%); Skin colors 6 (4%) 7(2%) 8 (0.6%) 9 (0.02%)

Table 2: Frequency and conditional distribution of female's skin color given male's skin color

Panel A. Frequencies

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	98	68	44	5	215
2	90	76	62	3	231
3	63	70	80	11	224
4_Darkest	11	12	19	8	50
Total	262	226	205	27	720

Panel B. Conditional Distribution (weighted)

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	43%	32%	21%	4%	100%
2	38%	28%	32%	1%	100%
3	21%	30%	43%	6%	100%
4_Darkest	18%	12%	40%	31%	100%
Total	32%	28%	34%	6%	100%

Source: Mexican Marital Preference Pilot Study 2011

Table 3: Frequency and conditional distribution of female's skin color given male's skin color by education

Panel A. Frequencies

At least one partner with <=6 yrs. Education

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	51	37	27	3	118
2	50	33	36	2	121
3	43	42	44	9	138
4_Darkest	8	9	15	6	38
Total	152	121	122	20	415

Both partners with >6 yrs. Education

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	47	31	17	2	97
2	40	43	26	1	110
3	20	28	36	2	86
4_Darkest	3	3	4	2	12
Total	110	105	83	7	305

Panel B. Conditional Distribution (weighted)

At least one partner with <=6 yrs. Education

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	44%	26%	28%	2%	100%
2	40%	23%	36%	1%	100%
3	22%	31%	39%	8%	100%
4_Darkest	17%	12%	43%	28%	100%
Total	32%	25%	36%	7%	100%

Both partners with >6 yrs. Education

	Female's Skin Color				
	1_Lighest	2	3	4_Darkest	Total
Male's Skin Color					
1_Lighest	42%	39%	13%	7%	100%
2	36%	34%	29%	1%	100%
3	19%	28%	52%	1%	100%
4_Darkest	20%	10%	33%	38%	100%
Total	32%	32%	31%	6%	100%

Source: Mexican Family Life Survey 2002, 2005, 2009/2010.

Table 4. Homogamy, Hypogamy and Distance Rates by education (N=720)

	All		At least one partner with <=6 yrs. Education		Both partners with >6 yrs. Education	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Homogamy	36%	37%	32%	34%	42%	42%
Hypogamy	37%	36%	40%	39%	32%	31%
Unions by distance						
Crossing one category	44%	46%	46%	47%	43%	44%
Crossing two categories	17%	14%	20%	16%	13%	10%
Crossing three categories	2%	3%	3%	3%	2%	4%
N	720		415		305	

Source: Mexican Marital Preference Pilot Study 2011

Table 5: Female's educational distribution conditional on male's education for the sample of skin color hypogamous couples[(1)] (N=265)

	Female's Education			
Male's Education	0-6	7-11	12+	Total
0-6	50.9	42.9	6.3	100
7-11	29.8	57.0	13.2	100
12+	31.3	31.3	37.5	100
Total	38.9	47.9	13.2	100

(1) Skin color hypogamous couples refer to those couples in which a woman form a union with a darker man, based on their own skin color.

Table 6: Goodness of Fit of Selected Models of Skin Color Assortative Mating (N=720 couples)

	Model	LL	G^2	df	p	BIC
Panel A: Models based in a 4 X 4 Contingency table (Male's skin color X Female's skin color)						
0	MF	-41.5	0.0	0	1.000	0
1	M_F	-62.9	42.9	9	0.000	-16
2	M_F_H	-56.0	29.0	8	0.000	-24
3	M_F_D	-44.9	6.9	6	0.334	-33
4	M_F_Hy	-59.5	36.1	8	0.000	-16
Panel B: Models based in a 4 X 4 X 2 Contingency table (Male's skin color X Female's skin color X Education Couple)						
0	MFE	-71.0	59.1	0	1.000	59
1	ME_FE	-94.9	106.9	18	0.000	-11
2	ME_FE_HE	-86.5	90.0	16	0.000	-15
3	ME_FE_DE	-74.7	66.5	12	0.000	-12
4	ME_FE_HyE	-90.3	97.6	16	0.000	-8

Source: Mexican Marital Preference Pilot Study 2011
Notes: Model terms are as follows: M=Male partner's skin color F=Female partner's skin color; H=Homogamy; Hyp=Hypogamy; D=Distance; E: Education (Both partners > 6 yrs. Education; At least one partner with < =6 yrs. Education)

Table 7: Homogamy and Distance Parameters for Skin Color Assortative Mating (N=720)

	Log Odds		Odds
	b_M	p-value	$\exp(b_M)$
Panel A: Homogamy parameters			
Without Controlling for education (Model M_F_H)			
Homogamy	0.3	*0.000*	1.35
Controlling for education (ME_FE_HE)			
Homogamy <=6	0.2	*0.148*	1.17
Homogamy>6	0.5	*0.000*	1.59
Panel B: Distance parameters			
Without Controlling for education (Model M_F_D)			
Distance 1	-0.14	*0.097*	0.87
Distance 2	-0.60	*0.000*	0.55
Distance 3	-1.05	*0.000*	0.35
Controlling for education (ME_FE_DE)			
		<=6	
Distance 1	0.02	*0.120*	1.02
Distance 2	-0.42	*0.146*	0.66
Distance 3	-1.02	*0.353*	0.36
		>6	
Distance 1	-0.32	*0.041*	0.72
Distance 2	-0.84	*0.000*	0.43
Distance 3	-0.94	*0.003*	0.39

Figure 1

Scale of Skin Color

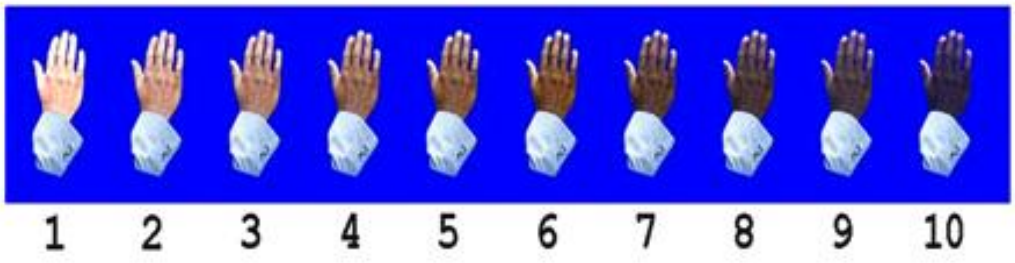


Figure 2

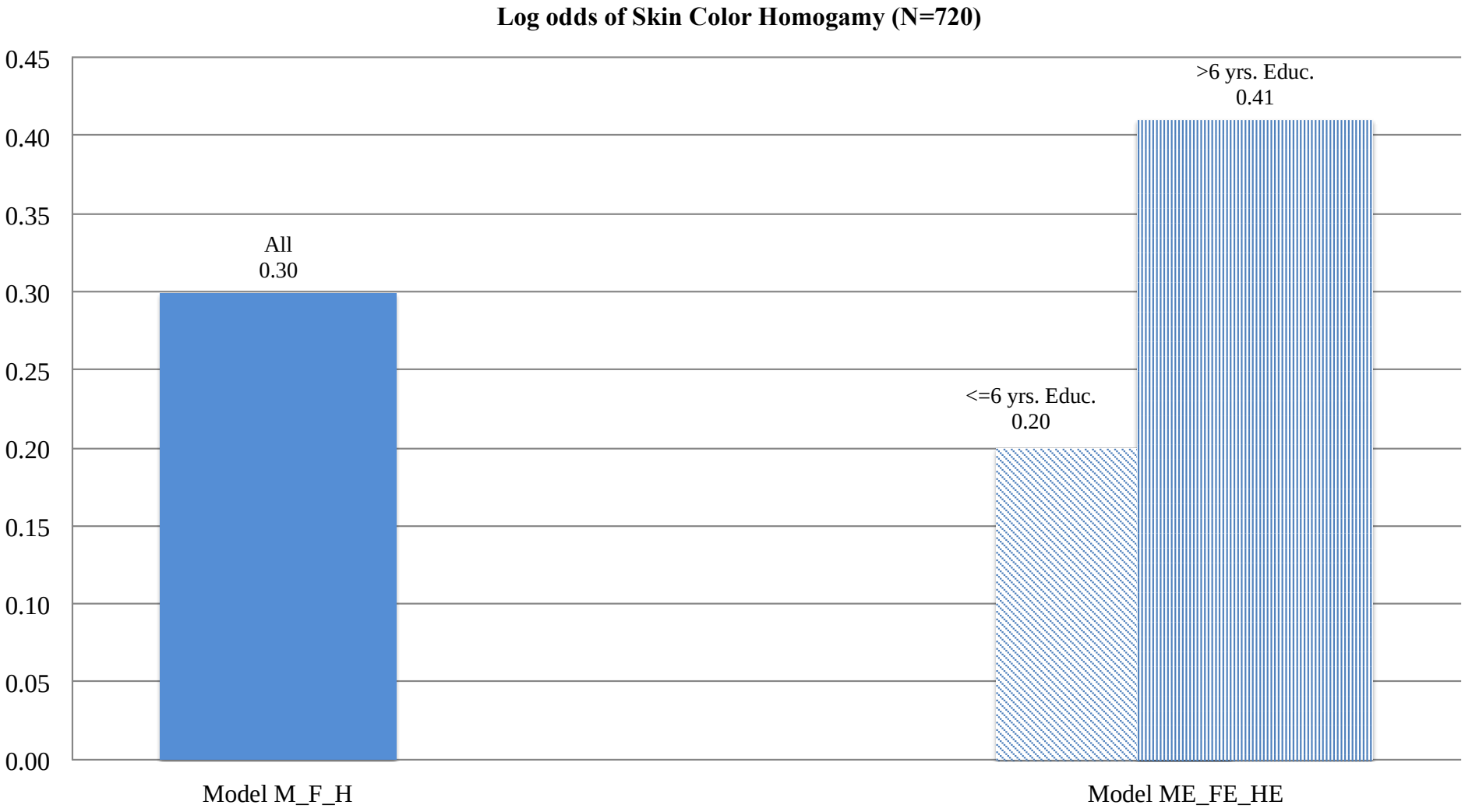
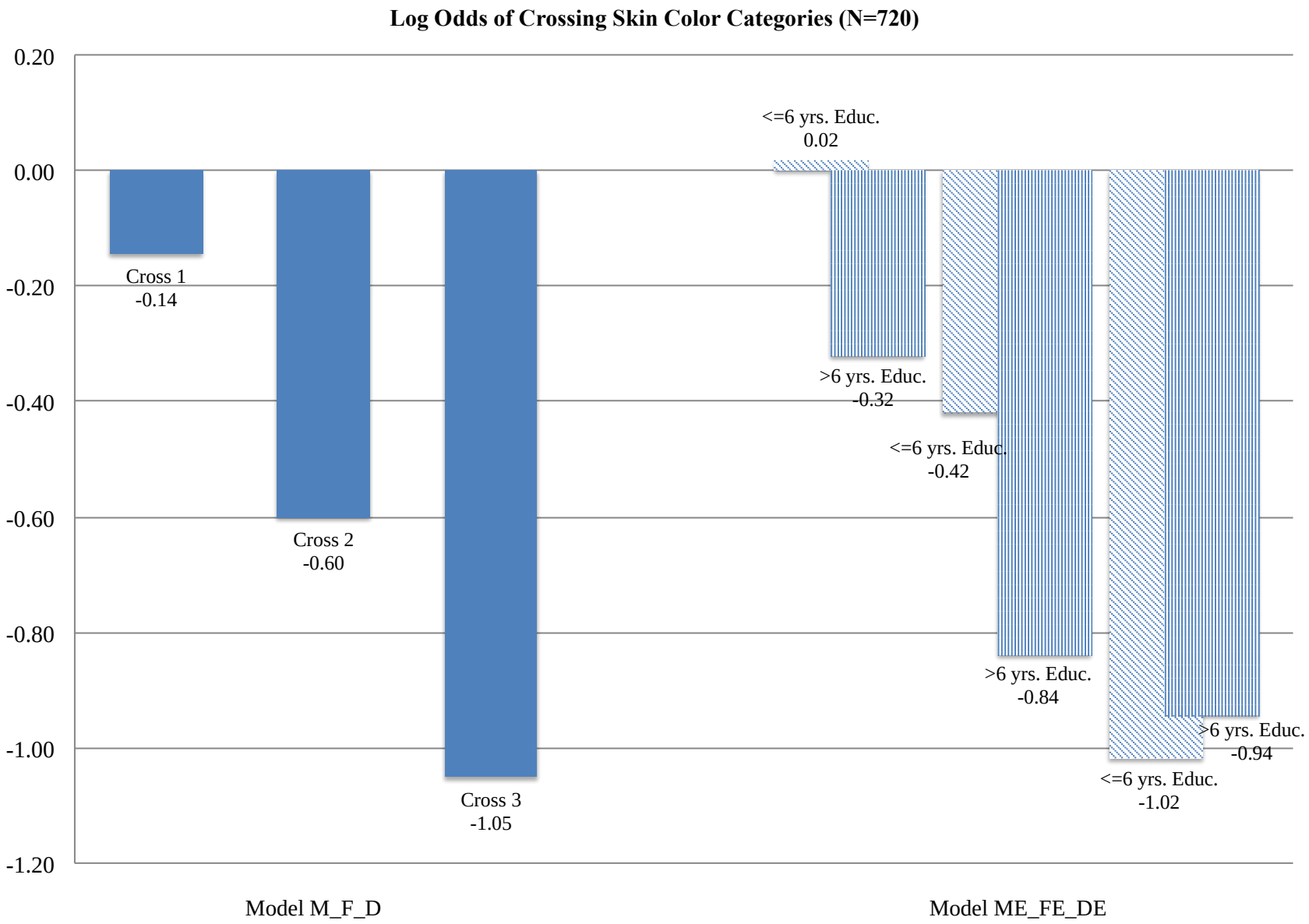

Log odds of Skin Color Homogamy (N=720)
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
All
0.30
<=6 yrs. Educ.
0.20
>6 yrs. Educ.
0.41
Model M_F_H
Model ME_FE_HE

Figure 3


Log Odds of Crossing Skin Color Categories (N=720)
0.20
0.00
-0.20
-0.40
-0.60
-0.80
-1.00
-1.20
Cross 1
-0.14
Cross 2
-0.60
Cross 3
-1.05
<=6 yrs. Educ.
0.02
>6 yrs. Educ.
-0.32
<=6 yrs. Educ.
-0.42
>6 yrs. Educ.
-0.84
<=6 yrs. Educ.
-1.02
>6 yrs. Educ.
-0.94
Model M_F_D
Model ME_FE_DE

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