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## Parent's and Child's Interracial Marriage in Brazil: An Analysis of Intermarriage as an Intergenerational Transmission Process<sup>1</sup>

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### Abstract

This article investigates interracial marriage as part of a social reproduction process, looking at to what extent parental endogamy influences the endogamy of a child and how parental race affects the race of a child's spouse. Data from the Brazilian Social Survey (PESB) for the year 2002 and logit models are used. The characteristics of parental union may influence the choice of a child's partner through different mechanisms: i) socialization, ii) structural aspects of the individual's marriage market, and iii) direct parental influence regarding partner choice. The results show that, on average, children of racially endogamous couples are about 78.8% more likely to be in an endogamous union themselves than in a racially exogamous marriage. Parental education is also significant. This means that higher parental education leads to an increased probability of an endogamous union. The results by type of parental union show that parental race matters only for exogamous couples, and an individual's own race is more relevant among children of endogamous parents. The results for the analysis of parental race and the race of a child's spouse show that having nonwhite parents decreases the probability of a child marrying a white spouse. For this specific case, parental education is not statistically significant. These results reinforce the race hierarchy in the process of racial assortative mating, when considering an individual's own race and the race of their parents. The aspect of the intergenerational transmission of racial endogamy, as it relates to partner choice, is also clarified.

### Keywords

Parental race, endogamy, interracial marriage, Brazil

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## 1. Introduction

Different researchers have discussed intermarriage in terms of social closure and racial boundaries in Brazil (Berquó 1987; Silva 1987; Petruccelli 2001; Telles 2004; Ribeiro and Silva 2009; Longo 2011; Gullickson and Torche 2014). It is agreed that there is an important hierarchy based on skin color that influences partner's choice. In this hierarchy, browns are more likely to marry whites than blacks, especially brown women, and black women are the least likely to marry a white spouse. However, there is a lack of discussion about how having a white or a nonwhite parent influences the probability of marrying a white spouse. Moreover, we do not know if endogamy is intergenerationally influenced, as is the choice between marriage and cohabitation (Thornton et al. 2007), and the decision to divorce (Wolfinger 2011). In this sense, the paper focuses on partner's choice as part of an intergenerational process and recognizes the importance of understanding it as a social reproduction phenomenon. Therefore, the main questions are: 1) whether parental endogamy affects the probability of a child's endogamy, and 2) whether parental race influences the race of a child's spouse. The analysis considers gender differences in terms of probability of being in an interracial marriage (see for instance, Berquó 1987; Silva 1987) and other factors, such as age, schooling and place of residence. The analysis also includes the differences between being children of interracial parents or same race parents, in order to better assess the role of parental race on partner choice.

One motivation for this study is the fact that interracial marriage is a result of three factors, according to Kalmijn (1998): 1) the preference of marrying candidates with certain desired characteristics; 2) the interference of "third parties" during the selection process, such as family and, 3) the constraints of the marriage market. Parental characteristics are important factors for better understanding the process of selecting a spouse because they may influence their child's partner choice through three mechanisms. *First*, socialization influences an individual's preferences. *Second*, parental characteristics influence where children live and go to school, which affects their potential spouses' characteristics – in sum parental characteristics influence the social networks of their children, and therefore have an impact on the marriage market of their children. Another issue is racial segregation. For example, white people might live in different neighborhoods and go to different schools than nonwhites. They may even have more white friends. *Third*, direct parental influence or control on who children decide to marry influence children's partner choice. Therefore, the discussion about parental characteristics helps to elucidate the process of partner choice and reinforces the previous findings that assortative mating is not a random process and part of an intergenerational transmission process.

Another motivation for this work, which drives the main argument on social reproduction, is to contribute a different aspect to the discussion about marriage and social stratification in Brazil. Endogamy level is an indicator of group closure, which serves to explain how different groups (educational, religious, or racial groups) interact and have more or less fluid boundaries. Assortative mating also affects the family background of the next generation of children, because having two parents from the same social origin does not have the same effect on the outcome of children if they have parents from two different social groups (Mare and Maralani 2006; Mare and Schwartz 2006; Mare 2008). Social stratification studies have shown that parental characteristics are important for a variety of a child's outcomes, such as,

health, education and occupational attainment. For this reason, assortative mating is important for understanding the intergenerational transmission of inequality, because if there is a strong relationship between parental and children's endogamy, inequality might be reinforced over time. In the case of race, a strong relationship between the endogamy of parents and children is very important because it may indicate how a group's social boundaries are reinforced over time within the family, as opposed to previous studies that only focused on the whole society. This is very important for understanding why it is harder for some groups, such as blacks, to have upward social mobility.

The paper has five sections, which includes this brief introduction. The second section discusses interracial marriage in Brazil and how parental characteristics influence the characteristics of a child's spouse and union, utilizing potential mechanisms such as, i) socialization, ii) definition of children's marriage market (including neighborhood, school, social networks) and iii) direct parental influence. The third section presents the data and methods for the analysis and the fourth section discusses the findings. The last section of the paper presents some conclusions with suggestions for future research.

## **2. Interracial marriage and social reproduction**

Marriage is considered as part of a set of characteristics and decisions that influences social reproduction, since it has an important role in status intergenerational transmission. Therefore, the choice of whom to marry can be perceived as a way to maintain one's own social status and the caste or status group boundaries. Endogamy, in this perspective, is considered to be a fundamental part of social stratification in which the elite group uses marriage strategies to preserve its privileges. Status does not necessarily mean economic status. Weber (1978) showed that society is stratified into different groups, for example, status groups and parties, which represent social and political powers that are different from economic power. Status groups are not determined by their economic situation, but by a specific positive or negative social estimation of honor, which can be linked to a class situation. Status groups are expressed by life status and consist of a group of people that claim a special social esteem.

Ethnic groups are variants of status groups and are different from castes, because blood relations do not define ethnic groups. Racial groups are created not because race is an inherited trait, but because race is subjectively perceived of as a common trait among some people that splits the population into different groups. Because race has very visible characteristics, it is easier to translate these traits into social repulsion or attraction, which creates the sense of group membership. In this sense, family and social networks play an important role in reinforcing and reproducing this sense of group membership. As highlighted by Weber, almost all types of similar or contrasting physical characteristic can induce the belief of affinity or disaffinity. Because of this belief group, boundaries are created and based on the fact that “[t]he conventional connubium is far less impeded by anthropological differences than by status differences (...)” (931). In this sense, marriage is regulated in order to keep only those individuals in one's group who have a specific style of life (Weber 1978).

In this sense, intermarriage has been seen as an ultimate stage for social crossing boundaries (Park and Burgess 1921; Gordon 1964). Different studies focused on education or occupation as creating a family's status, and the importance of these characteristics for assortative mating, the influence of family in partner's choice can be through preferences given

socialization or exposure (Mare 2008) or due to the desire of family status maintenance (Blackwell 1998). However, race can also be considered when defining family status and is also a resource that can be traded within the marriage market. One of the main theories for explaining the mechanism for racial assortative mating is the status exchange theory, proposed by Davis (1941) and Merton (1941), which states that the white spouse would trade his/ her whiteness for a higher social economic position (usually measured through education) provided by the nonwhite spouse. In relation to Brazil, it seems that this explanation only applies to unions between a white man and a black woman (Silva 1987; Telles 2004; Ribeiro and Silva 2009). However, this does not mean that people are not considering race or skin color as an asset when choosing his/ her partner. It is known that there is a racial hierarchy for explaining racial assortative mating because racial homogamy-heterogamy rates in Brazil are not random and are not totally explained by the racial composition of the marriage market (Tomás 2017; Telles 1993). Moreover, people involved in interracial unions, especially the white spouse, seem to have different opinions about gender relations (Tomás 2012), which is an indicator of the possible differences in values and preferences.

It is worth noting that racial relations in Brazil have different cultural and historical backgrounds from racial relations in the United States of America. Interracial unions have always existed in Brazil, and they were encouraged by the whitening perspective – there has never been formal sanctions against this practice since the abolition of slavery (Heaton 2010) as it has in the US, where interracial marriage was illegal until 1967<sup>2</sup> (Moran 2003; Romano 2003). Another difference is that, intermarriage in Brazil created not only a racial mixed category in the biological sense, but specially an intermediary social position between whites and blacks. In Brazil, there are three main categories for race: black, white, and brown (*pardo*), the latter is the intermediary position. This categorization is quite different from the black-white one in the US, although an intermediary position (or a mixed-race category) could be considered in the US, the meaning would be different from brown, since it would include other categories, such as Hispanics and Asians. Moreover, the representation of the brown category as an intermediate status position is very important for understanding how preferences may shape intermarriage in Brazil (Telles and Esteve 2019).

Intermarriage in Brazil increased between 1960 to 2010, from 8.2% to 30.7% (Beltrão, Sugahara and Teixeira 2012). Most of these marriages were between browns and whites. Although endogamy is preferred, the levels of interracial unions are higher than in the US, where it is about 10% of all marriages and has also increased from 3% since 1967 (Bialik 2017). The high levels of race mixture produced the idea that Brazil was a racial democracy (Freyre 2006). However, other authors (i.e. Burdick 1998; Twine 1998) have claimed that this mixing has been used to reinforce racism and to inhibit the advancement of the black movement and to make specific actions by the government in reference to race more difficult. Telles (2004) and Telles and Sue (2009) discuss that racial mixture comfortably coexists in Brazil with a racial hierarchy and ideologies of whitening. The authors consider two types of relationships – the vertical one, meaning inequality and discrimination, and the horizontal, which refers to sociability, including interracial marriage. Because horizontal relationships are

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<sup>2</sup> Interracial unions were forbidden during different periods in the US, and 10 states have never made this kind of union illegal, they are: Alaska, Connecticut, Hawaii, Minnesota, New Hampshire, New Jersey, New York, Vermont, Wisconsin, and the District of Columbia (source: [www.lovingday.org](http://www.lovingday.org)).

quite common, which include racially mixed friendships and marriage, racial mixture has been central to the meaning of the nation. Therefore, Brazil has many challenges regarding its racial inequality, education and income levels are lower for blacks and browns, and the upper class is almost entirely white, for instance, whites receive in 2019, 77% and 74% more than blacks and browns, respectively, according to the National Household Survey (*Pesquisa Nacional por Amostra de Domicílios Contínua*). In this sense, Brazil and the US have similar racial inequality problems with different levels.

In summation, social rules constrain marriage choice and homogamy is perceived of as something fundamental for the process of the intergenerational transmission of status. Therefore, different from the economic theory, which focus on explaining the motivation for heterogamy based on the household labor division (Becker 1981), the social reproduction theory better explains homogamy because of the evidence of social group closure (Blackwell 1998). In both perspectives, the marriage market is a social space for the competition of limited and valued resources. Empirical evidence favors the social reproduction perspective because homogamy is preferred. However, it is unclear whether:

- competition exists for the best potential partner (whites in the case of race) or high status partner,
- lower status groups (blacks, for instance) are denied access to higher status groups in order to maintain social privileges,
- or the observed outcome is just a result of people's preference to marry within their same status group.

Previous researches have focused on partner's characteristics, however, it is important to add parental characteristics to explain interracial marriage, because they are important determinants of children's social background. It is worth noting that parental race is the biological and social determinant of an individual's race. Therefore, it is necessary to investigate whether the effect of parental race manifests through the race of children, meaning that an independent effect does not exist. Finally, researchers have found that racial endogamy is stronger than educational homogamy (Blackwell and Lichter 2004; Ribeiro and Silva 2009). Racial endogamy is considered to be a more cultural aspect of the process of assortative mating and educational homogamy is thought of as being a more economic characteristic. Because of this, one can conclude that the cultural component of the partner-choice process might be more important than the economic one, as highlighted by Kalmijn (1998). On the other hand, we cannot exclude the intimate connection between parental race, socioeconomic characteristics, and the geographical location of their children out of the discussion. All of these factors influence the marriage market of children and their potential spouses' characteristics. The relationships between these factors are explored in the next section.

## **2.1. Potential mechanisms of the influence of parental characteristics**

Parental characteristics are important for explaining a series of outcomes for children, such as, health, education and occupation. Some studies have shown that family formation and dissolution are influenced by parental characteristics (Mare 2008; Thornton et al. 2007; Wolfinger 2011). The potential mechanisms noting that parental characteristics may influence the partner choice of children are based on Kalmijn's (1998) discussion about the factors that influence assortative mating. These factors include: 1) individual preferences; 2) marriage market characteristics (representing a structural aspect of the assortative mating), and 3) the influence of third parties. Family is directly related to all three of these factors through: i) socialization, ii) direct influence/control and through the indirect effect, and iii) through the local marriage market (place of residence and social networks).

In terms of socialization, there are two ways of explaining its influence on partner choice. First, Mare (2008) states that parents may prefer to socialize their offspring with mates similar to themselves. In this sense, socialization would build a preference for endogamy, and would be even greater among children of racially endogamous couples. The author highlights that “[t]he significance of this effect lies in the capacity for socioeconomic clustering and inequality in one generation to reinforce the same tendency in a subsequent generation” (Mare 2008). This means that marriage is a way of maintaining social group boundaries and privileges. Therefore, people would prefer to marry equals in order to maintain their socioeconomic clustering. In this sense, other groups would be excluded from the children's preferences.

The second way of approaching the relationship between socialization and preferences and their effect on intermarriage refers to Kalmijn (1998) who highlights that “[c]hildren are typically brought up with a sense of group identification”(p.400). If both parents are from the same racial group, a preference for marrying someone from the same group might be created. The opposite might also be true. This means that parents with different characteristics might make the children more tolerant and open to racial differences, which influences their openness of marrying someone from a different group. This may occur even if individuals perceive of themselves as being part of one specific group, but they may also consider themselves and their family as a part of more than one group. This view is quite similar to the one expressed by Grossbard-Shechtman (1981) about the internalization of social norms. She highlights the fact that price and market theory takes a “micro” approach, and, therefore, what matters is the extent to which group norms regarding intermarriage have been internalized by individual men and women (Grossbard-Shechtman 1981:175). This occurs in order for them to align themselves accordingly to their individual preferences and to know to what extent women from different (racial) groups are substitutable or not.

The second mechanism (direct family influence) is related to the first one (socialization), but they are not the same. Direct influence means the acceptance or rejection of a potential spouse and the clear intervention of the parents during the partner choice process. Even if a child wants to marry someone, the parents may try to convince or obligate the child to choose an alternative partner. This is different from the influence of socialization because the preference that is established by this process is not forced, but learned as being something “normal or natural” and thus expected. Therefore, direct family influence takes the form of conversations,

including advice and even threats, with parents and/ or other relatives about the potential spouse (Hordge-Freeman 2015). When one is getting married the individual might be worried about societal and familial support. Parents worried about their children's choices may clearly express the type of person they want or expect to become a part of the family. Moreover, parents might be worried about the acceptance of their potential daughter-in-law or son-in-law into their social networks and the kind of support these friends may be able to provide to the young couple.

Another way parental characteristics may influence the choice of a child's partner is through the marriage market. It is worth noting that it is hard to define one's marriage market. A marriage market usually includes the places where people would potentially find a spouse, such as, in a neighborhood, school and workplace. These are all environments where people build their social networks. Considering the marriage market as a social space, in which people potentially find their partners, children of endogamous parents may be more exposed to a more racially homogenous group because of their parent's social networks and because of the places they used to attend, such as neighborhoods, schools and work spaces. Considering the racial inequality in Brazil, it is worth mentioning that these spaces are marked by racial segregation, since middle and upper classes are majority white and at the end of the social spectrum are mainly nonwhites. Marriage markets represent the opportunities and constraints of finding a spouse with certain characteristics. In this sense, socialization and the locations frequented by individuals also influence their social networks. In these environments, individuals may find their potential partners and these networks may be more homogeneous if the parents are from the same racial group. The presence or absence of people from different racial groups in one's social networks can also influence a person's perceived support of his/her relationship. In addition, it is widely discussed that characteristics of the marriage market influence partner choice, such as, racial distribution (Telles 1993; Tomás, 2017), gender ratio (Angrist 2002; Freiden 1974; Queiroz 2004) and differences in male/ female earnings (Freiden 1974), among others.

Another aspect that should be considered is whether parental characteristics have a different influence on partner choice when parents are in endogamy or exogamy situations, especially when the child is white or nonwhite. Studies about the outcomes of mixed-race children are limited in the US, and are practically nonexistent in Brazil. In the US, most work focuses on socioeconomic and psychological outcomes of school-aged children, and little is known about the outcomes of adult children. However, there are some studies on socioeconomic status (see for instance, Gullickson 2003; Harris and Thomas 2002; Okun and Khait-Marely 2006). In general, the results of these studies suggest an in-between outcome for mixed race children. Fryer et al. (2012) showed that mixed race adolescents are more likely to become involved in risky behavior. On the other hand, very few studies have focused on other types of outcomes. One example is Okun and Khait-Marely (2008) who studied the demographic behavior of mixed religion ethnic Jews. They found that as opposed to the studies on socioeconomic outcomes, the marriage and fertility behavior of multi-ethnic individuals is nearly identical to that of the more socially advantageous ethnic group and quite distinct from that of the less advantageous one. In Brazil, Tomas and Fazito (2012) analyzed the fertility outcomes of same race and interracial couples in Brazil in a different manner than Okun and Khait-Marely's (2008) study of Jews. They found that fertility for interracial couples is in-between the two racial groups, which is a result that is similar to socioeconomic outcomes in the US.

Therefore, this paper discusses an underexplored topic regarding this area – the influence of the characteristics of a parental union on the characteristics of an adult child’s union.

## **2.2. Empirical evidence**

Although, the mechanisms that parental characteristics influence the characteristics of a child’s spouse are very important for a better assessment of how people are choosing their partners, it is the subject of very few analyses. Historically, Johansson (1987) shows how the European elite were concerned with protecting themselves from downward mobility. According to him, “It was through restricting the access of their surviving offspring to marriage that elite couples first practiced a ‘traditional’ version of the modern two-child family,” (Johansson 1987:449). The author also discusses the role of dowries and professional career decisions. Dowries are highlighted in some economic literature because the process involves a transfer to a daughter at the time of her marriage with a clear objective within the marriage market. In other words, when one sex was scarce the potential spouses of the opposite sex would pay bride prices or dowries. This practice would also protect the incentive of brothers to continue to increase parental wealth because of their heritage. Nowadays, this practice has ended in most countries, but the change is due to a change in the environment for producing bridal wealth and not due to a change in the relative price of brides and grooms. Transfers are now more conducted through investments in human capital (Siow 2003).

Part of this parental control may not be present in modern Western societies. However, as Kalmijn (1998) points out there are still ways in which parents can interfere. They can set up meetings with potential spouses, play the role of matchmaker, give advice and opinions about the candidates, and may withdraw support in the early years of a child’s marriage. Nevertheless, they generally don’t have strong sanctions when children decide contrary to their recommendations (Kalmijn 1998: 401). In this sense, Rosenfeld (2007) suggested that the elevated number of children that leave home to pursue higher education opportunities in the US is one of the explanations for the increase in interracial and homosexual unions, as a result of a decrease in parental control over the partner choice of their children. Although direct parental control seems to be losing its strength, other possible mechanisms may be continuing to have an impact. Some studies have shown that characteristics of a parental union influence the union formation (i.e. Thornton, 2007) and dissolution of their children (i.e. Wolfinger, 2011).

Parental influence may be even stronger than would be expected, because its influence does not only occur through direct control. Thornton et al. (2007) show that events that occur in a parent’s life, even before children are born, influence a child’s decision about whether to marry or cohabit. These events could include whether the parents had a religious wedding ceremony or not, and if the mother had a premarital pregnancy. An interesting finding is the influence of both the maternal and paternal grandmother’s religion, which reinforces the importance of not only the parents, but also the influence of other family members and how family formation characteristics may be intergenerationally transmitted. Marital dissolution is also influenced by the parents. Wolfinger (2011) concludes that divorce is also intergenerationally influenced, meaning that having divorced parents increases the probability that children will also get divorced.



Another significant reason for analyzing parental influence in marital choices is the social reproduction process. Mare (2008) considers the intergenerational transmission of endogamy as an instance of socioeconomic reproduction at the family level. This serves as a mechanism for explaining the increase in the aggregate trends in educational assortative mating due to the strong relationship between the educational homogamy of the parents' and children's generations. The results indicate that having parents with the same level of education increases the probability of educational homogamy. For Blackwell (1998), a father's educational level is a family resource traded within the marriage market. Her findings show that paternal education has a positive effect on the endogamy of children. This suggests that children, whose parents have a higher level of education, are more likely to marry at this same educational level. This reinforces the concept of group's social status maintenance, which suggests that people in higher status groups may be the ones more concerned with the process of assortative mating. The effect varies by gender, in such a way that wives appear to benefit more from the added input of paternal education than do husbands. Finally, the author argues that inherited educational status may play a more important role in determining a daughter's eventual marital outcome. From these two studies on educational assortative mating, we learned that there is an intergenerational component to partner choice that seems to vary based on a child's gender.

Blau and Duncan (1967) present a different perspective and explore the question of how much of the variation in the occupational achievement of a man may be attributed to the difference in the status of the woman he marries, especially in relation to the occupational status of the woman's father. They included information on the educational achievement of each spouse, the husband's occupational status, and the occupational status of the father of both the husband and wife in order to analyze whether the father-in-law influences an individual's occupational status. The main result concluded that "(...) a man's occupational status is about as much related to that of his father-in-law as to that of this own father" (343).

Lam and Schoeni (1993, 1994) also explored the characteristics of a father-in-law by analyzing how the schooling of both the father and father-in-law influences earnings and schooling. In regards to Brazil, they found that the schooling of a father-in-law has a greater effect than the father's schooling due to strong assortative mating, and not because of work and family relations. It is important to highlight the fact that these effects are modest in comparison to those of the worker's own schooling, which is largely influenced by the father's education. In the US, the father's education has a stronger association with a child's income than does the father in-law's education. This is probably because of weaker assortative mating and because of the greater significance of unherited income in a wife's lifetime.

### 3. Data and method

I used data from the Brazilian Social Survey (PESB - *Pesquisa Social Brasileira*) for the year 2002. The reference period is from July 7, 2002 to September 5, 2002.<sup>3</sup> This is a nationally representative household survey and has a sample size of 2,364 individuals. Only one person above age 18 in each household answered the questionnaire. Consequently, there is information about the parents of only one spouse, which impedes an analysis that considers the characteristics of parents and parents-in-law in the same model and the analysis of whether both spouses have the same racial background.

The selected variables for the analyses are: (i) the individual's race, which is represented by three categories in the first model (white, brown and black) and two categories in the second model (white/ nonwhite), (ii) type of parental union (endogamy/ exogamy), (iii) mother's race, and (iv) father's race. The racial categories I used are: white (*branco*), brown (*pardo*), and black (*preto*), I excluded Asian (*amarelo*) and Indigenous (*indígena*) from the analysis due to sample size; they are only 3.35% and 5.92%, respectively. It is worth mentioning that the three analyzed categories are representative of the country's population. In 2018, these three groups represented 99% of the total population, according to the National Household Survey (*Pesquisa Nacional por Amostra de Domicílios Contínua*).

Any combination among blacks, browns and whites is considered interracial marriage when analyzing the relationship between parental and child endogamy. In the second part of the analysis, I used only white and nonwhite as racial categories, due to small sample size when combining the parents' race and children's race or instance, it is rare for white parents to have black children, therefore in order to make sure the combinations would be representative I used white/ nonwhite for classifying individuals and parents. However, the parental interracial marriage variable is constructed using the original race variable, considering the combination of browns and blacks as exogamy, as well as unions between browns and whites, and blacks and whites, so these combinations are aggregated in the exogamy category.

Other potential effects/ variables are: 1) *gender*, given the differences in the probability of being in an interracial union (Berquó, 1987; Silva, 1987); 2) *individual's race*; 3) years of education (schooling), which are very important because of the association of race, socioeconomic status and intermarriage; 4) *age*, due to the lack of information on marriage order and marriage timing in the database, age helps capture part of the timing of marriage<sup>4</sup>; 5) *region*, which is the lowest geographical level of representativeness in the survey<sup>5</sup>; 6) *state's capital*, which indicates whether or not the individual lives in the capital of the state; 7)

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<sup>3</sup> Although it is an outdated data, it is the only national representative research that has parental racial classification.

<sup>4</sup> Educational homogamy and age have an inverted U-shaped relationship: the odds of homogamy may be lower among those who marry at older ages because of the changing nature of the partner choice pattern as people age and also because of the shrinking availability of potential partners (Lewis and Oppenheimer 2000; Lichter 1990; Mare 1991);

<sup>5</sup> Controlling for a geographic area is necessary because of potential differences between areas, such as racial composition, racial tolerance, and racial classification (Silveira, 2019). Preliminary analyses have shown that whether or not you are located in the Northeast is what really matters in terms of regional differences. Therefore, I also explored the interaction between the Northeast and an individual's own race

*parental education*, in order to get the net effect of parental race and not a confounding effect of parents' social background – considering the education of the parents is also important because racially homogenous unions tend to be educationally homogenous and vice versa (Blackwell and Lichter 2000).

In order to deal with multicollinearity between parental characteristics and a child's (individual's) characteristics, I constrained their coefficients to be equal, which eliminates multicollinearity between an individual's characteristics and those of their parents, as suggested by Hout and Janus (2011). In addition, previous analyses showed that the race of both the father and mother have the same effect, as does the educational background of the father and mother.

Retrospective questions about parental characteristics usually have a considerable amount of missing data, as reflected by answers such as, "I do not know" or "I do not remember." For parental race, I combined these two answers with Asian and indigenous parents into one category, called "not reported", and included it in the equation in order to control for selectivity. For mother's race, 1.09% of the individuals reported that their mother's race was other and 1.93% did not report it. For father's race, 0.47% of the individuals reported other race and 3.72% did not report any race. A very small percentage of individuals, only 0.007% (9 individuals among 1,254), did not report the race of both parents or reported as other race.

There is more missing information for parental education than for parental race: 17.62% of the sample did not report father's education and 11.4% did not report mother's education, and 0.07% did not report either parent's level of education (91 interviewees among 1,254). In order to deal with this problem, I used a multiple imputation method to construct 20 independent data sets composed of all observed data and an imputation for each missing case (Rubin 2004; Treiman 2008). I used the command *mi* in the statistical software Stata, which assumes that missing data are missing at random; that is, missing values do not carry any extra information about why they are missing than what is already available in the observed data. The command *mi impute* creates imputations by simulating from an (approximate) Bayesian posterior predictive distribution of the missing data, following Rubin's recommendation (Marchenko 2009).

**Table 1 - Selected Variables**

	<b>Variable</b>	<b>Description</b>	<b>Type</b>	<b>Categories</b>
Dependent Variables	Endogamy	Individual's type of union	Dummy	1= Endogamy 0= Exogamy
	Spouse's race	Spouse's race classification	Dummy	1= White 0= Nonwhite (black and brown)
Test variables	Parental endogamy	Parents' type of union	Dummy	1= Endogamy 0= Exogamy
	Parents's race	Parent's racial classification	Categorical	1= White 2= Nonwhite (black and brown) 3= Not reported
	Race	Individual's racial classification	Categorical	1= White (reference) 2= Brown 3=Black
Control Variables	Male	Individual's Sex	Dummy	1= Male 0 = Female
	Age	Number of completed years of age	Continuous	
	Schooling	Number of completed years of education	Continuous	
	Northeast	Region of individual's residence	Dummy	1= Northeast 0 = Other region
	Capital	Whether the individual lives in the State's Capital or not	Dummy	1 = Capital 0 = Noncapital
	Parental education	Sum of mother's and father's years of education	Continuous	

Finally, it is worth mentioning other data limitations. First, the analysis only includes successful marriages at the time of the survey, and if intermarriage is associated with more instability and dissolution, (see, for instance, Ho and Johnson 1990; Kreider 2000; Bratter and King 2008) same race unions are more likely to be better represented. Another problem is the interpretation of only one time period, hence no conclusions about changes over time can be made. Finally, there is no information on whether the relationships are formal or informal, and as Longo (2011) showed, cohabitation unions tend to have higher levels of racial exogamy. Moreover, parents involved in formal unions might be more concerned about their child's union and encourage them to have formal unions rather than cohabiting relationships. In the absence of the differentiation between the varying types of union, I use the terms marriage and union interchangeably throughout the text.

### **3.1. Logistic regression model**

I used logistic regression models for analyzing i) the influence of parental endogamy on the endogamy of children and ii) the relationship between parental race and the child's decision about the race of their spouse, because both dependent variables are dichotomous. The first analysis includes type of union (endogamy=1 and exogamy= 0) as the dependent variable, and in the second analysis, the dependent variable is the race of the child's spouse, meaning white (1) or nonwhite (0). I'm using the classification of white and nonwhite for the race of a child's spouse, and not white, black, and brown, because of the sample size, as explained in the previous section. This limitation does not substantively affect the analysis because the main interest is to answer the question of whether having a white father or mother increases the probability that a nonwhite marries a white person. However, as already discussed, it is worth highlighting that blacks and browns have different social positions within the marriage market (see for example, Silva 1987; Telles 2004; Ribeiro and Silva 2009), so it would be interesting to investigate whether a white mother or a white father has a different impact on the race of their child's spouse. I also included parents for whom race information was missing (not answered or did not know, as shown in Table 1) to control for selectivity.

There are two main models in the analysis. One model has the endogamy of the children as the dependent variable and the second model represents the race of a child's spouse. Both models aim to answer how parental race influences the choice of the race of a child's spouse. The first difference between the models that should be noticed is how a spouse's race is incorporated into the dependent variable. In the first equation, a spouse's race is incorporated into the odds of both spouses having the same race (endogamy) in contrast to the odds of both spouses having a different race (exogamy). In this situation, the model explains whether both spouses are from the same racial group or not and the fact that they are white or nonwhite does not matter, but the equation expresses the individual's own race as an independent variable. In the second equation, the dependent variable is the race of a child's spouse, so the individual's race (in other words, its relationship to his/ her spouse's race) is only considered as an independent variable. Therefore, the influence of the independent variables might be different, especially for the individual's own race, since it is part of the dependent variable of the first equation. Moreover, it is important to think about the kind of information each equation provides. In general, people are more likely to marry equals, when comparing religious, education, age and racial groups; therefore, the first equation just points out which variables are significant to explaining this overall pattern and whether endogamy can be understood as an intergenerational transmission process. In the second analysis, the focus is on the variables associated to the possibility of marrying someone who is from a different racial group. For both analyses, I compared the models for parental endogamy and exogamy in order to discuss whether the variables have an association considering parental type of union, when it is the case the comparison considered the coefficient's confidence intervals.

## **4. Findings for racial assortative mating**

### **4.1. Descriptive analysis**

After selecting only adults who were 20 years-of-age or older and people from the three more expressive racial groups: white, black, and brown<sup>6</sup>; the final total sample size includes 1,254 individuals. As presented in Table 2, 48.80% are men and 51.20% are women. The ages range from 20 to 86 years-of-age, with an average age of 41.12 years-of-age. In the sample, 48.01% are white; 40.43% are brown, and 11.56% are black. The racial distribution of the fathers is 50.50% are white; 34.02% are brown; 11.19% are black, and 4.20% were classified as other racial group or not reported. The mother's race is distributed as 60.82% being white; 30% brown; 6.16% black, and 3.02% reported as other or no reported racial group (see Table 2). The proportion of homogamous marriage is quite similar for both parents and children; 52.23% and 55.58%, respectively (see Table 3). It is worth highlighting that studies have shown that homogamy has been decreasing and that interracial marriage was at about 33% in 2000 (Silva and Ribeiro 2009). Previous research, however, usually utilized census data and had a different sample represented by couples between 20 and 34 years-of-age. In addition, as Duncan (1966) discussed regarding social mobility, parental information does not represent the sample of the previous generation, because when using retrospective data we do not have full access to information on the previous generation, which means that inter-annual data changes are not necessarily generational changes. In this case, the fact that a parent had more than one child may inflate parental information. Another way to interpret this information is by considering that 62.70% of endogamous couples have parents in endogamy situations. In Table 4, the relationship between the union of the parents and the union of their children is clear, since children tend to have the same kind of marriage as their parents.

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<sup>6</sup> This selection is due to sample size, there are very few cases of Asians and Indigenous and an inexpressive number of intermarriage among these groups. There are also few married people under age 20. This age range includes different cohorts and different marriage orders, which means that people probably experienced different influences in their partner choice process, therefore, in order to minimize this problem, I controlled by age and also ran models for age groups.

**Table 2 - Descriptive Statistics – Brazil, 2002**

<b>Individual's characteristics</b>		
<b>Variables</b>	<b>Mean</b>	<b>Std Dev</b>
Age	41.12	14.09
Schooling	6.51	3.98
<b>Variables</b>	<b>N</b>	<b>%</b>
Female	642	51.20
Male	612	48.80
Northeast	344	27.43
Capital	293	23.37
White	602	48.01
Brown	507	40.43
Black	145	11.56
<b>Mother's characteristics</b>		
<b>Variables</b>	<b>N</b>	<b>%</b>
White	738	58.85
Brown	393	31.34
Black	083	6.62
Other race or not reported	040	3.19
No schooling	420	33.49
1 to 4 years of schooling	505	40.27
5 to 8 years of schooling	104	8.29
Some HS or more	082	6.54
Not reported	143	11.40
<b>Father's characteristics</b>		
<b>Variables</b>	<b>N</b>	<b>%</b>
White	611	48.72
Brown	444	35.41
Black	146	11.64
Other race or not reported	053	4.23
No schooling	373	29.74
1 to 4 years of schooling	468	37.32
5 to 8 years of schooling	103	8.21
Some HS or more	089	7.10
Not reported	221	17.62
<b>Total</b>	<b>1254</b>	

Data source: PESB, 2002.

**Table 3 - Distribution of parents' and children's type of union - Brazil, 2002**

	N	%
<b>Parental Endogamy</b>	<b>655</b>	<b>52.23</b>
White/White	435	34.69
Brown/Brown	189	15.07
Black/Black	31	2.47
<b>Endogamy</b>	<b>697</b>	<b>55.58</b>
White/White	413	32.93
Brown/Brown	249	19.86
Black/Black	35	2.79
<b>Mixed</b>	<b>557</b>	<b>44.42</b>
<b>Total</b>	<b>1254</b>	

Data source: PESB, 2002.

**Table 4 - Distribution of parents' and children's type of union - Brazil, 2002**

		Parent's union type		Total
		Exogamy	Endogamy	
Children's type of union	Exogamy	339	218	557
		60.86%	39.14%	100%
	Endogamy	260	437	697
		37.30%	62.70%	100%
Total		599	655	1.254

Data source: PESB, 2002.

Analyzing the crude odds ratio, we observe that racial endogamy is 161.37% more likely to happen among children of parents in endogamous relationships than among children of parents in exogamous unions. This result shows a strong intergenerational process in partner choice, in which children tend to have the same pattern as their parents. The Spearman correlation between spousal race is actually low, only 0.3, and is about the same as the correlation between the race of a spouse and parental race. The correlation between parental education is 0.46 in this sample and the correlation between the sum of the years of education for both parents and the individual's years of education is 0.49 (0.3925 from the father and 0.4923 from the mother).

#### 4.2. Analysis of the endogamy of parents and children

The main question of this analysis is whether marital preferences such as partner's race is part of the social reproduction intergenerational process. In this sense, one way to look at this issue is analyzing whether parental endogamy affects the probability of their children being in an endogamous union.

I report the results in Table 5. In order to select the best model and to consider the role of parental endogamy, the race of the parents and an individual's own race are considered separately. The first model only includes parental endogamy, which is significant to explaining the children's union type. In the second model I added parental race and, although



they are both significant, when adding the children's race the parental race loses significance (Model 4). In Model 3, I tested parental endogamy and the individual's own race. Both elements are important to explaining the dependent variable, and in the following model I used all three variables: parental endogamy, parental race and the respondent's race. The main conclusion is that Model 3 and Model 4 do not differ (the difference of the Wald test is 0.83 and the chi-squared test for 2 degrees of freedom is 5.99, and is statistically significant at the 95% confidence level). Therefore, I excluded parental race from the subsequent models, remembering that parental race is included in the parental endogamy variable. This inclusion in the parental endogamy variable may be the reason that parental race is not statistically significant, as well as the fact that what really matters is the type of parental union. In Model 5, I included the control variables and, in Model 6, I included the interaction terms between the Northeast and the individual's own race. Considering the Wald Test, Model 6 adjusts better to the data. The Wald test for the difference between Model 5 and Model 6 is 20.17. Considering 2 degrees of freedom, the chi-squared test is 9.21, and is statistically significant at the 99% confidence level (see Table 4). Therefore, I interpret Model 6 and reported the results in the table as percentages.

Considering Model 6 in Table 5, the main conclusion is that, on average, children of parents in endogamous unions are about 78.8% more likely to also be in same race unions. Compared to the crude odds ratio of 161.37, calculated in the descriptive analysis, there is a decrease of 82.6 percentage points, since the model controls for a variety of variables. The individual's own race is important, and the region where one lives is intimately related when analyzing the probability of a person being in a homogenous or heterogenous relationship. This is because of the different characteristics of the local marriage market, such as, racial and gender distributions, and variations in racial relations. Whites in the Northeast are 75.5% less likely to have a white partner than whites outside of the Northeast, whereas interaction term is not significant for blacks and browns are 45% more likely to be in an endogamous marriage in the Northeast. The Northeast is the region where nonwhites are mainly concentrated. Because of this, whites in this region are more exposed to nonwhites and racial relations tend to have more fluidity than in areas like the Southeast and South. Parental education is also important, and the higher it is the more likely that children are in racial homogenous unions. Other variables, such as, gender, schooling, and whether an individual lives in the state's capital are not important for explaining endogamy. Thus, the first lesson is the fact that endogamy has an important intergenerational component potentially explained by socialization and preferences or through direct parental influence. Hence, this first set of results reinforces the argument of social process in partner choice, which is influenced by parental type of union.

**Table 5 -Results from Logistic Regression Models for Endogamy - Brazil, 2002 (%)**

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Parental endogamy	171.01***	124.12***	112.76***	121.00***	96.40***	78.78***
Parent's race						
Nonwhite parents		-42.36***		-12.54		
Not reported		-4.50		44.63		
Individual's race						
Brown			-55.87***	-51.13***	-44.90***	-66.24***
Black			-85.63***	-83.98***	-82.13***	-84.79***
Male					-5.541	-7.78
Age					0.904 <sup>+</sup>	1.00 <sup>+</sup>
Schooling					0.904	1.00
Northeast					-31.408*	-75.51***
Capital					-27.021 <sup>+</sup>	-20.47
Parental education (SUM)					5.760***	5.23**
Interactive Terms						
Northeast*Brown						451.24***
Northeast*Black						135.37
Constant	0.431***	0.57**	0.60***	0.60***	0.460	0.53
Wald test	57.18	84.71	129.33	130.16	143.63	163.80
Degrees of freedom	1	3	3	5	9	11
Pseudo R-squared	0.043	0.071	0.101	0.105	0.119	0.137

Data source: PESB, 2002.

Notes: The dependent variable is the children's racial endogamy, meaning 1=endogamy and 0 = exogamy

n=1254

<sup>+</sup> p<0.1; \* p<0.05; \*\* p<0.01; \*\*\*p<0.001

#### 4.2.1. Comparing the influence of parental race by type of parental union

Children may have different choices depending on the type of union shared by their parents. Because of this fact, I analyzed the same models by type of parental union (endogamy and exogamy). For children of same-race couples, I included parental race and the individual's race in the analysis. For children of interracial couples, I used only their own race, because all of them have a white parent and a nonwhite parent. It is worth noting that although one would expect all children of mixed-race unions to be brown, about 49% of them are not. There are 33.22% who self-declared as white, 51.08% as brown, and 15.7% as black. This distribution contributes to the argument about the fluidity present within the racial classification system in Brazil, thus emphasizing the importance of reporting a respondent's race. Hence, the main objective of this comparison is to analyze the possible differences of people from the same racial group (or more precisely, self-declaring the same racial category)<sup>7</sup> and their probability of marrying endogamously or exogamously based on type of parental union.

When analyzing the relationship between parental and an individual's own race on the probability of their marrying endogamously or exogamously based on the situation of their parents' union (see Table 6), one observes that considering the Wald test, the best model for children of same race couples is Model 4. Model 1 is the best model for children of interracial couples. However, it is worth highlighting that although Model 2 does not differ in statistical significance from Model 1 (the difference of the Wald test is 4.97 with 6 degrees of freedom, the chi-squared test is 12.59 with a confidence level of 95%), parental education is statistically significant and has the same effect on both groups. For the comparisons between the models, I used the coefficient's confidence interval, when necessary, because many variables are not even significant for both groups.

The results for children of parents in racially endogamous couples show that having nonwhite parents has a negative effect and is significant only when not controlling for an individual's own race. The explanation may be the fact that parental race and an individual's own race among children of same race couples is the same. An individual's own race drives the process of children of racially endogamous couples, meaning that browns and blacks have a lower probability of being in an endogamous union. Brown children of exogamous couples have a 45% less chance of marrying endogamously than white children. Blacks, basically, have the same result in both cases (-84.5% and -82.8%, interracial parents and same race parents respectively). Whites are the ones with the highest probability of having a same race union; this result may indicate a strong preference among whites to marry whites. The difference between browns who are children of interracial couples and those who are children of same race couples, may demonstrate the fact that having one white parent may help them marry a white spouse. Thus, the probability of their marrying a brown spouse is lower than that of children of exogamous parents. The other variables have similar behavior for both groups. The results demonstrate the racial hierarchy in the assortative mating process and corroborate with the argument of social boundaries and closure in the marriage market.

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<sup>7</sup> If we consider descent rule as an essential part of racial group membership, people who have two parents of the same race and people who have parents from two different racial groups, may not be considered in the same racial group even if they self-declare themselves in the same category. A great example of this is whites whose parents are both white, and the ones who have one white and one nonwhite parent.

**Table 6 - Results from Logistic Regression Models for Endogamy by Type of Parental Union - Brazil, 2002 (%)**

Variables	Parents's type of union						
	Endogamous				Exogamous		
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3
Parent's race							
Nonwhite parents	-46.74***	-5.82	0.90	5.23			
Individual's race							
Brown		-72.34***	-59.95**	-77.93***	-21.47	-17.14	-45.06*
Black		-85.13***	-80.17**	-82.83***	-82.43***	-81.38***	-84.54***
Male			5.13	3.77		-13.50	-16.05
Age			1.01	1.11		0.40	0.40
Schooling			2.22	2.74		-1.39	-1.39
Northeast			-52.72**	-86.21***		-0.60	-54.02*
Capital			-28.89	-17.80		-28.54	-25.32
Interactive Terms							
Northeast*Brown				734.78***			251.03**
Northeast*Black				164.85			94.26
Parental education (SUM)			5.55 <sup>+</sup>	4.60*		5.44*	5.13*
Constant	0.76***	0.80***	0.64	0.76	0.52	0.48	0.54
n		655				599	
Wald test	41.47	62.80	77.88	93.30	24.99	29.96	37.87
Degrees of freedom	1	3	9	11	2	8	10
Pseudo R-squared	0.062	0.095	0.130	0.153	0.047	0.057	0.069

Data source: PESB, 2002.

Notes: The dependent variable is the children's racial endogamy, meaning 1=endogamy and 0 = exogamy

<sup>+</sup> p<0.1; \* p<0.05; \*\* p<0.01; \*\*\*p<0.001

† there is no case of not reported or other racial category among parents who were in a racially endogamous union.

### 4.3. The relationship between parental race and the race of a child's spouse

The main objective of the second part of the analysis is to discuss whether parental race influences a child's choice of their spouse's race. Particularly of note is whether having a white parent influences the probability that a nonwhite individual will marry a white spouse and vice-versa. The results of this analysis are in Table 7. There are five models and the fifth one adjusted better to the data compared to the fourth model without other variables (Wald test = 185.99-144.39=41.6 with 5 degrees of freedom; the chi-squared test with 5 degrees of freedom is 11.070). In this analysis, I did not explore the interaction terms between an individual's race and whether they lived in the Northeast because an individual's race is not statistically significant. The first model includes the parental endogamy, then I added the individual's race and/or the parental race in order to assess whether the parental race effect is only a reflection of an individual's own race or whether it is associated with endogamy. When

parental race and parental endogamy are in the same model, the latter loses its significance. When an individual's race and parental race are in the model, they are both statistically significant with the same sign as when they are by themselves (Model 4) and the coefficient for an individual's own race decreases significantly. This decrease indicates that part of the influence of the individual's own race is due to parental race.

Unlike the analysis of the endogamy of children, other variables besides an individual's own race seem to be more important when explaining a child's decision about the race of their spouse. This result is very interesting because it indicates that people may consider a set of different characteristics during the process of partner choice. The main conclusions are: a) parental endogamy is not important for explaining the probability of a child marrying a white or a nonwhite spouse, and b) nonwhite parents decrease the probability of their child marrying a white spouse by about 56.4% (Model 5). The second reinforces the intergenerational cycle. When analyzing the effect of other variables, one can observe that being a male, of an older age, with a higher level of education, can increase the probability of marrying a white person as opposed to a nonwhite. More educated people tend to marry at an older age than less educated people. Whites tend to have later marriages and be more educated, and it is known that later marriages (also represented by the positive effect of age) tend to have a positive assortative mating (Mare 1991). Moreover, schools also represent one aspect of the marriage market, meaning that the longer a person remains in school the higher the probability of their marrying someone with a higher level of education, who would most likely be white (Mare 1991).

Being in the Northeast and in the state's capital decreases the probability of marrying a white spouse. As was discussed previously, living in the Northeast increases the probability of a person's exposure to more nonwhites. The main difference between this analysis and the previous one, in which the dependent variable is the endogamy of children, is the effect of being a man; here the effect is positive and in the other equation the effect is negative (see Table 7). This result is very meaningful because previous studies have found that nonwhite women are more likely to marry a white spouse than the opposite (Berquó 1987; Silva 1987; Telles 2004). Results in this study indicate that when controlling for an individual's own race, men are more likely to marry a white person. One possible explanation is that previous works utilized a different kind of analysis that only used loglinear models without control variables and the gender difference may be explained by other variables, as the present discussion demonstrates. Another explanation could be the age group of the sample and the period that was analyzed.

**Table 7 - Results from Logistic Regression Models for the Race of a Child's Spouse, Brazil, 2002 (%)**

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Parental endogamy	93.67***	45.50***	20.93	17.94	
Parent's race					
Nonwhite parents			-65.08***	-56.67***	-56.35***
Not reported			-54.98***	-50.04**	-46.10*
White		216.77***		44.48*	23.12
Male					127.05***
Age					1.82***
Schooling					8.98***
Capital					-41.90**
Northeast					-53.51***
Parental education (SUM)					1.01
Interaction term					
Northeast*White					
Constant	0.47	0.37***	0.75***	0.70***	0.37
Wald test	26.09	95.27	133.54	144.39	185.99
Degrees of freedom	1	2	3	4	9
Pseudo R-squared	0.019	0.072	0.115	0.118	0.165

Data source: PESB, 2002.

Notes: The dependent variable is the race of a child's spouse, meaning 1=white and 0=nonwhite  
n=1254

+ p<0.1; \* p<0.05; \*\* p<0.01; \*\*\*p<0.001

#### 4.3.1. Comparing the effect of parent's race by type of parental union

It is also interesting to analyze the race of a child's spouse by type of parental union. For children of racially endogamous parents, the best model is the fourth one (including the interaction terms), and for children of interracial couples the second model is the best one (without the interaction terms), according to the Wald tests. The models have a higher explicative power (almost double) in order to explain the race of a child's spouse for children of same race couples (see the Pseudo-R squared). It seems that for children of heterogamous couples, other variables that are not included in the model may better explain their partner choice. These factors may be more related to structural characteristics of the marriage market, personal preferences, and social norms that are not expressed by the selected variables (see Table 8).

Among children of same race couples, having nonwhite parents decreases their probability of marrying endogamously, reinforcing the preference for whites. For children of exogamous couples, his/ her own race is not as important as for children of endogamous couples. For this group, being white increases the probability of marrying a white person on average 105% (Model 3). On the other hand, being white has no effect among children of interracial couples. Parental education is not as statistically significant as it was in the previous analysis of endogamy, reinforcing the importance of the parental cultural aspect in contrast to the

socioeconomic one. Being a man and having more education also translates into a higher probability of marrying a white. Age is also important for children of interracial couples (the probability of having a relationship with a white person increases by 2.9% with the addition of each year). This is very interesting because it may indicate, together with the results regarding education, that older people and more educated people are more likely to be selected by a white in the case of having parents from different racial groups. They may have more time and attend different environments to socialize, decreasing the family influence. This result is also related to the social exchange theory (David 1941; Merton 1941), in which intermarriage is explained by status trading, in the case of race, a person from a lower racial status group would trade higher education in exchange with a person from a higher racial status.

**Table 8 - Results from Logistic Regression Models for the Race of a Child's Spouse by Type of Parental Union - Brazil, 2002 (%)**

Variables	Parents' type of union						
	Endogamous				Exogamous		
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3
Parent's race							
Nonwhite parents	-62.66***	-41.43***	-41.90***	-39.41***			
White		222.52***	105.65*	198.02**	32.45	21.896	38.85
Male			117.93***	115.33***		144.73***	143.03***
Age			0.803	0.90		3.05***	2.94***
Schooling			11.52***	12.41***		7.90*	7.68*
Northeast			-68.93***	-46.26 <sup>†</sup>		-35.08*	-24.37
Capital			-54.62**	-50.89**		-32.97 <sup>+</sup>	-33.03 <sup>+</sup>
Interaction terms							
Northeast*White				-73.32**			-35.98
Parental education (SUM)			-0.80	-1.39		2.020	2.33
Constant	-1.41***	-4.721	1.59	0.78	4.17*	0.14***	0.13***
n			655			599	
Wald test	91.41	103.11	117.00	128.76	2.05	46.31	47.23
Degrees of freedom	1	2	8	9	1	7	8
Pseudo R-squared	0.142	0.164	0.238	0.247	0.003	0.075	0.077

Data source: PESB, 2002.

Notes: The dependent variable is the children's racial endogamy, meaning 1=endogamy and 0 = exogamy

<sup>+</sup> p<0.1; \* p<0.05; \*\* p<0.01; \*\*\*p<0.001

<sup>†</sup> there is no case of not reported or other racial category among parents who were in a racially endogamous union.

## 5. Conclusions

Parental characteristics influence a series of children's outcomes, such as health, education and occupation (see for instance, Bianchi 2000; Gable and Lutz 2000; Gullickson 2003; Kalmijn 1994; Lareau 2003; McLanahan and Sandefur 1997). It is also known that events in the parents' lives and parental characteristics also affect the union formation of children. This includes union type (cohabitation or marriage) (Thornton et al. 2007) and divorce (Wolfinger 2011). Although interracial marriage has been widely studied, there is a lack of discussion about the relationship between parental characteristics and racial endogamy and the race of a child's spouse. Previous studies that analyzed the effect of parental characteristics on the characteristics of a child's spouse have focused on educational assortative mating (Blackwell 1998; Mare 2008) and occupational status (Blau and Duncan 1967) in the US.

This article analyzed one aspect that has not been explored in previous analyses of interracial marriage in Brazil – whether parental characteristics influence their children's choice of partner. First, I analyzed the relationship between parental racial endogamy and the racial endogamy of the children, meaning to what extent having same race parents influences the probability of marrying someone from the same racial group. The second part of the analysis focused on the relationship between parental race and the race of a child's spouse. One of my objectives was to investigate whether the fact that a nonwhite person with a white father or mother would increase his/ her probability of marrying a white spouse.

Endogamy unions represent the majority and the results suggest a strong intergenerational influence. First, having parents in an endogamous union increases by about 78.8% the probability of being in a same race relationship, controlling for a variety of other characteristics. This is bigger effect than was observed for the US where children of educationally homogamous parents are between 5% to 10% more likely to be in homogamous unions themselves (Mare 2008). Although Mare's results are for the American marriage market, Heaton (2010) showed that American educational homogamy rates are similar to Brazilian rates. In addition, other studies have also discussed the greater effect race has on the pairing process than that of education (see for instance Ribeiro and Silva 2009 for Brazil ; Blackwell and Lichter 2004 for the U.S.).

Parental education is also significant, meaning that the higher the parental education the higher the probability is of their children being in an endogamous union. Second, the results by type of parental union show that parental race matters only for exogamous couples, and an individual's own race is more relevant among children of endogamous parents. Third, the results for the analysis of parental race and the race of a child's spouse show that having nonwhite parents decreases the probability of marrying a white spouse and that parental education is insignificant for explaining the race of a child's spouse. In the second part of the analysis, parental endogamy has no effect when controlling by parental race and individual race has no effect when considering a series of control variables. These results are similar to the ones noted by Hout and Janus (2011): “[a] common observation in inequality studies is that "like goes with like" across generations. The most important family factor in a study of income inequality is the parents' incomes, the most important family factor in a jobs study is



the parents' jobs, and the most important family factor in an educational study like this one is the parents' education.”

Considering this result, some people may think that the racial groups have loosing boundaries because of the big presence of nonwhites in the population and a higher rate of interracial marriage than in other countries. However, the strong relationship between family racial origin and race of a child's spouse reflects how racial groups are closed. The results also make clear the rigid aspect of the racial hierarchy in the process of choosing a spouse. Therefore, this paper contributes to the discussion about racial intermarriage and concludes that marital preferences and outcomes are important aspects of the intergenerational status and inequality transmission.

Unfortunately, there is little evidence for specifying which mechanism is most important as to whether the lower status group (nonwhite, especially black) is denied access to spouses from the higher status group (whites) or if people in general just prefer to marry endogamously. On the other hand, there are some hints that indicate a general preference for whites and the importance of parental race over parental education, thus in general, there is no strong evidence for an exchange at the parental level. Individual characteristics also play a relevant role, especially among children of interracial couples. Finally, it is worth highlighting that it seems having the race of a child's spouse as the dependent variable is a better way to associate the effect of individual parental characteristics on who people marry, and the models presented here have a higher explicative power for children of racially endogamous parents.

In the end, it is important to state that the addition of other variables would help to better understand the intergenerational relationship between parents' and their children's union formation, including the type of union for both parents and both spouses. The exploration of potential interactions between parental characteristics and child's marriage market characteristics (gender ratio, racial distribution, etc.) would also be interesting. Another issue related to this interaction is the place where spouses meet. These locations could include the gym, school or work and may differ according to parental characteristics, since they are related to class and childbearing style. A final aspect to be considered in future research about interracial union is the use of skin color gradation, such as Telles et al (2015) did for analyzing educational inequality. This would be significant to allow for better capturing the nuances of racial boundaries and, especially, to linking this information to the racial classification based on the official categories. Therefore, there are multiple research questions to be investigated to better elucidate the process of interracial marriage and how different factors influence it and to better understand how demographic patterns may help to explain social inequality.

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