Horizontal inequality, status optimization, and interethnic marriage in a conflict-affected society

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Horizontal inequality, status optimization, and interethnic marriage in a conflict-affected society

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Abstract: Although several theories of interethnic conflict emphasize ties across group boundaries as conducive to ethnic coexistence, little is known about how such ties are formed. Given their integrative potential, I examine the establishment of cross-ethnic marital ties in a deeply divided society and ask what drives individuals to defy powerful social norms and sanctions and to choose life-partners from across the divide. I theorize such choices as the outcome of a struggle between social forces and individual autonomy in society. I identify two channels through which social forces weaken and individual autonomy increases to allow ethnic group members to establish ties independently of group pressures: elite autonomy and status equalization. I find, first, that as an individual's educational status increases, and second, as between-group inequality declines, individuals enjoy greater freedom in the choice of their social ties. However, I also find that in an ethnically ranked society this enhanced autonomy is exercised by members of high-ranked and low-ranked groups differently. Members from high-ranked groups become more likely to inmarry; low-ranked group members to outmarry. I suggest a status-optimization logic lies behind this divergent behaviour. Ethnic elites from high-ranked groups cannot improve their status through outmarriage and their coethnics, threatened by the rising status of the lower-ranked group, seek to maintain the distinctiveness of their status superiority through inmarriage. In contrast, as their own individual status or their group's relative status improves, members of low-ranked groups take advantage of the opportunity to upmarry into the higher-ranked group. I establish these findings in the context of Mindanao, a conflict-affected society in the Philippines, using a combination of census micro-data on over two million marriages and in-depth interview data with inmarried and outmarried couples.

Keywords: horizontal inequality, ethnic conflict, social status, ranked groups, intermarriage, Philippines
JEL classification: D74, Z13, I24

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> The deepest problems of modern life flow from the attempt of the individual to maintain the independence and individuality of his existence against the sovereign powers of society, against the weight of the historical heritage and the external culture and technique of life.
>
> (*The Metropolis and Modern Life*, Georg Simmel, 1903)

In societies divided by violence framed in ethnic or religious terms, what encourages an individual to defy powerful social norms and sanctions and cross group lines to marry someone from across the divide? Intermarriage is widely seen as a positive, integrative force in diverse and divided societies. Cross-ethnic unions, through marriage or cohabitation, hold the potential to close social distances and to strengthen social cohesion by creating durable ties at the interpersonal level across socially proscribed boundaries. The institution of marriage in particular, when across ethnic boundaries, brings together not only two individuals but also, potentially, two social networks or communities that may otherwise rarely interact. Furthermore, the children from mixed unions may weaken identity boundaries and help preserve the integrative potential of the union for the next generation.

Although several prominent theories of interethnic conflict emphasize interethnic ties as conducive to coexistence and cooperation (Fearon & Laitin, 1996; Varshney, 2001), there has been surprisingly little research on how such ties are formed in the first place. Furthermore, despite their integrative potential, even less is known about the determinants of cross-ethnic *marital* ties in conflict-affected societies. In societies polarized by ethnic or religious violence, the social forces acting against the formation of such ties are powerful. Ethnic and religious groups socialize their members through norms they internalize, or else control members through sanctions their coethnics or coreligionists enforce. As boundaries sharpen, these forces may drive an ever-increasing number of decisions in members' lives regarding the ties they establish: in what neighbourhood to live; with whom to do business; which political party to join; and who to choose as a life-partner.

Classical sociological theory explains such decisions as the outcome of a struggle between individual autonomy and social forces (Simmel & Levine, 1971). As the normative and sanctioning power of an ethnic or religious group declines, an individual's freedom to choose her associations independently of these social forces rises. An individual becomes freer to privilege characteristics other than ethnicity or religion in their choice of partner. One such non-ascriptive characteristic is class. When social forces are weak and individual autonomy is strong, an individual is free to attach as much or as little importance to the ethnicity and class of her partner as she wishes.

I examine how these social and individualist forces affect intermarriage in a deeply divided society and identify two channels through which ethnic boundaries weaken and individual autonomy strengthens to allow interethnic unions to arise. Even in a society deeply divided by ethno-religious violence, individuals still choose to cross boundaries, risk ostracization, and marry members of the 'enemy' group. The first channel through which such intermarriages arise results from variation in the relative socioeconomic status of ethnic *groups*. I term this mechanism *status equalization*. The second channel results from variation in the relative socioeconomic status of ethnic *individuals*. I call this mechanism *elite autonomy*.

First, in ranked societies where ethnicity and class coincide, the social forces discouraging cross-ethnic ties are more powerful than in unranked societies where they do not. Ethnic inequality is high and the social distance between the two groups is consequently large. Conversely, when the socioeconomic status between ethnic groups equalizes and the social distance decreases in a given locality, the inequality becomes less pronounced and the social forces separating ethnic groups

weaken. In turn, the autonomy of an individual to choose a partner from within or outside their ethnic group strengthens. However, I find this enhanced autonomy is exercised by members of high-ranked and low-ranked ethnic groups differently. In localities where ethnic inequality is low, the chances of individuals from the lower-ranked group choosing partners from across the ethnic divide increase. However, members of the higher-ranked group move in the opposite direction and become more likely to marry within their group.

Second, the social forces acting on an individual also weaken when that individual's socioeconomic status relative to the average status of her group increases. Ethnic elites—those who belong to the upper class within their group—enjoy greater autonomy in the establishment of their ties. However, I again find a difference in how this freedom of choice is exercised by the elite of high-ranked and the elite of low-ranked groups. High personal, high group status individuals are more likely to inmarry. However, high personal, low group status individuals are more likely to outmarry.

One explanation of these divergent behaviours lies in a common desire to optimize status. In respect of the first channel, status equalization, members of the superordinate group feel threatened by the rising status of the otherwise subordinate group in their locality and seek to maintain their status superiority by marrying within their group. In contrast, members of low-ranked groups aspire to improve their status by up-marrying into the higher-ranked group. A similar optimization logic applies to the second channel: elite autonomy. The optimal decision for high personal, high group status individuals is again to inmarry. They already possess the highest status in society and outmarriage cannot improve it. In contrast, high personal, low group status individuals have an incentive to outmarry. Marriage into a higher status group is a means of upward mobility.

The evidence for these findings come from a study of the deeply divided society of Mindanao in the southern Philippines. Mindanao is home to an ethnically diverse population whose principal societal cleavages reflect three ranked ethno-religious groups: Christian settlers; Muslim Moro; and the Lumad. The region has been divided by a long-running insurgency waged by rebel groups resentful of the minoritization and dispossession of the native population by settlers. The study draws on an analysis of over two million marriages from unusually comprehensive census micro-data and extensive interviews with unmarried and married individuals. The paper is structured as follows. Section 1 frames the study theoretically; Section 2 describes the research design including the case of Mindanao, and the data and techniques used; Section 3 presents the qualitative and quantitative findings; and Section 4 discusses the results and presents conclusions.

1 Theoretical framework

1.1 Intergroup conflict and cross-group ties

Empirical work on intermarriage and conflict is rare. When research has examined the issue explicitly, it has treated intermarriage primarily as an explanatory variable rather than as an explanandum. For instance, research in the former Yugoslavia found that intermarriage patterns reflected violence patterns, occurring more frequently between Serbs, Hungarians, and Montenegrins than between Serbs, Bosniaks, and Slovenes (Smits, 2010). In Northern Ireland, Protestants who married Catholics were found to exhibit more tolerant, less sectarian attitudes (Lloyd & Robinson, 2011). In Rwanda, southern communities with stronger Hutu–Tutsi ties, including marital ties, resisted the longest against the pro-genocide forces seeking to divide them (Des Forges, 1999; McDoom, 2014). Within the conflict literature, then, intermarriage is generally believed to have positive effects. In contrast, most of what we know about the *determinants* of

intermarriage derives from studies of peaceful and prosperous societies often in North America and Western Europe (Osanami Törngren et al., 2016). Much less is known about how intermarriages arise in societies divided by violence along group boundaries.

This paucity of empirical work is surprising as several prominent theories of intergroup conflict emphasize ties between groups as conducive to cooperation and productive of peace. Fearon and Laitin's (1996) well-known game-theoretic model of intergroup cooperation implies that as interethnic interactions increase, the incentive for social stability grows. Peace is maintained because a 'defection' by an outgroup member would require an indiscriminate and costly reprisal by all ingroup members against all outgroup members due to the former's inability to identify and punish the defector. Varshney (2001) identified pre-existing interethnic associational ties as the reason why, following the destruction of the Babri Masjid in 1992, certain Indian cities resisted violence, but others with weaker Hindu–Muslim ties did not. The cross-group ties countervailed the ingroup ties that would otherwise bring and bind individuals together in an isolating and exclusionary form of solidarity. Putnam (2000) expanded his concept of social capital to distinguish between 'bonding' and 'bridging' varieties. Bridging social capital, resulting from ties across groups, builds trust and strengthens social cohesion, and has led to the claim that it may also reduce violent conflict (World Bank et al., 2000).

Although their causal logics differ, these theories all recognize the importance of cross-group ties to communal coexistence. I suggest interethnic unions represent a form of cross-group tie whose potential for promoting ethnic coexistence is particularly powerful for three reasons: (1) they are, in intention, enduring ties; (2) they can, especially if institutionalized as marriages, bring together two social networks, not just two individuals; and (3) if children are produced from the union, their mixed identities may blur group boundaries. A significant body of sociological research has argued for intermarriage's integrative potential through the process of assimilation (Alba & Nee, 2003; Gordon, 1964). While recent research has suggested its integrative effect is more contingent than commonly believed (Song, 2009), assimilation theory, along with empirical work in conflict studies, generally views intermarriages as a positive force to be promoted in society.

1.2 Social forces and individual autonomy

Classical sociological theory characterizes an individual's freedom—for instance the freedom to choose marital or other social ties within or outside of their group—as constrained by social norms and sanctions. Social theorists have long predicted an eventual decline in traditional social structures and closed communities and the rise of more individualist and open societies. Durkheim (1960) first distinguished mechanical from organic solidarity in his theory of social evolution where the former referred to social cohesion based on members' similar characteristics, such as the cultural beliefs, values, and norms shared by coethnics, and the latter to a social order based on individual differences and interdependence. As societies evolve and become more complex, the need for a division of labour to sustain this complexity increases and individuals become able to choose more specialized roles for themselves and to join and leave societies at will.

Following Durkheim, subsequent theorists described this transition in terms of a trend towards modernity and modernization. The notions of *Gemeinschaft* and *Gesselschaft*, first employed by Tönnies (1940) and later adapted by Weber (1978), described the shift from social ties based on affectivity and loyalty, common in traditional communities, to those based on rationality and mutual consent, found in more modern societies. A well-known prediction of modernization theory was that as its concomitants progressed—economic development, industrialization, urbanization, rising education, and geographic mobility—secularization and a decline in ethnic identification would follow. The core idea was that as societies evolved, ascriptive characteristics such as ethnicity, race, and caste would decline in significance while characteristics based on

achievement such as education and experience would become more important (Weber & Parsons, 1947).

Modernization theory has since been widely critiqued on both normative and empirical grounds. Nonetheless, one of its theoretical contributions that has persisted is the notion of a dialectical tension between socializing and individualizing forces within societies. Groups, particularly those based on ascriptive identities such as ethnicity and religion (in so far as religious identities are acquired at birth), socialize members through internalized norms and enforced sanctions. When this social control weakens, whether through modernization or not, individual autonomy rises. Individuals become freer to choose their associations, identifications, and ties. Extending this logic to intermarriage, endogamy is indicative of the social power of the group. It reflects the strength of ingroup identity, loyalty, cohesion, and ties. By contrast, outmarriage suggests the extent of individual autonomy and indicates the relative weakness of ethnic and religious norms and sanctions.

1.3 Assortative mating: homogamy and endogamy

The interaction of these social and individualist forces may produce observable marriage patterns in society. Assortative mating describes a pattern of partner selection that arises more frequently than it would were selection random. Positive assortative mating—or homogamy—arises when an individual partners with a person with similar characteristics to themselves such as education, ethnicity, personality, or physique. Negative assortative mating—or heterogamy—arises when an individual enters a union with a person whose characteristics are different to their own. Sociological research provides strong empirical support for the existence of positive assortative selection among humans. This happens either through a 'matching' mechanism where individuals seek out partners similar to themselves; or else through a 'competition' mechanism where individuals seek partners who possess superlative characteristics, but given that few individuals wish to marry 'down' and most want to marry 'up', they end up partnering with individuals who possess attributes to a similar degree to themselves (Schwartz, 2013).

Endogamy (marriage within one's ethnic group) and educational homogamy (marriage to someone with similar educational status) are two empirically regular expressions of positive assortative mating among humans (Blossfeld, 2009). One observable implication in a society where traditional social forces are weakening is that one would expect to see fewer marriages matched on ethnicity and more marriages matched on non-ascriptive characteristics such as education.

1.4 Education, elite autonomy, and ranked groups

Education, then, is associated with stronger individual autonomy and weaker ethnic forces in society. Theory suggests at least three reasons why more highly educated individuals would enjoy greater independence in their life choices in general and in their choice of life-partner in particular. First, higher educational levels may reflect stronger beliefs in the meritocratic ideal within society that emphasizes individual achievement over social connections in securing opportunities (Blossfeld, 2009). Individuals depend more on their personal abilities and less on their membership of particular social groups to advance within society. Second, education improves an individual's opportunity set by expanding the scope of the labour market (Furtado, 2012). Superior skills and knowledge increase geographic mobility and individuals may relocate to areas where there are fewer coethnics and contact with non-coethnics is more likely. Third, education, particularly tertiary education, often involves leaving one's local community to pursue a course of study where, again, contact with a more diverse social milieu is more likely. The second and third mechanisms operate not only by increasing an individual's exposure to ethnic others, but also by allowing them to escape the social constraints of their local communities.

Notwithstanding which of the three theorized reasons for why education improves individual choice is correct, I term the overall mechanism *elite autonomy*. Education is a powerful class marker and I hypothesize it is the upper classes who enjoy higher autonomy in many aspects of their lives, including their choice of marital ties.

> H1. *Individuals with higher educational status enjoy higher autonomy in their selection of marital partner.*

Individual status or rank, however, is not the only determinant of marital autonomy. The choice of marital partner is also contingent on the *group's* status or rank. Ranking reflects social hierarchies that are often the legacies of colonial, imperialist, feudal, caste-, or slave-based societies where one group had a superior and another an inferior social status (Horowitz, 1985). A group's social dominance may coincide with its economic and political ascendance, but material advantages based on income, wealth, education, or state control are distinct endowments from social rank in the Weberian sense in which status is based on prestige, esteem, and worth in society (Weber, 1978). In ranked societies, where there are clear superordinate and subordinate ethnic groups, a desire to optimize one's overall status in society through marriage would dictate that the enhanced autonomy enjoyed by the elite classes would be exercised differently by elites of high- and low-ranked groups differently.

> H1a. *As the educational status of an individual from a high-ranked ethnic group increases, their chances of inmarrying also increases.*

> H1b. *As the educational status of an individual from a low-ranked ethnic group increases, their chances of outmarrying also increases.*

1.5 Ethnic inequality, social distance, and status threat

Although ethnic inequality—sometimes used interchangeably with the terms between-group or horizontal inequality—has been increasingly explored in relation to political and economic outcomes such as violent conflict (Cederman et al., 2011; Østby, 2008), public goods provision (Baldwin & Huber, 2010), and underdevelopment (Stewart, 2002), there has been less empirical work on its impact in the social realm. Yet theoretical logic would suggest that when ethnicity coincides with class (or some material endowment indicative of socioeconomic status such as income, education, or occupation), the social distance between ethnic groups will be higher than when it does not. Bogardus (1947), who originated the concept of social distance, defined it as the 'feeling reactions of persons toward other persons and toward groups of people'. In his measurement scale, zero social distance between groups exists when a member of one ethnic group would be willing to accept a non-coethnic as a close relative through marriage.

Ethnic inequality, by increasing social distance, then may affect social outcomes such as trust, friendship, and marriage across groups. Ethnic norms and sanctions against outmarriage would be stronger in ethnically unequal societies. We would expect intermarriage to be less common in localities where one ethnic group is, on average, socioeconomically worse off than another. Conversely, as groups equalize in socioeconomic status and the social distance decreases, the social forces against intermarriage again weaken, and individual autonomy again rises.

> H2. *As ethnic inequality declines, that is the socioeconomic distance between ethnic groups decreases, the chances of intermarriage will increase.*

In ranked societies the logic of status optimization would once again dictate that members of low-ranked and high-ranked groups behave differently. Members of high-ranked groups feel

threatened by the rising status of the lower-ranked group as it weakens the social hierarchy in their locality. They respond by seeking to maintain the distinctiveness of the group boundary and the group's status superiority by choosing to inmarry. In contrast, members of low-ranked groups no longer feel constrained by the social status quo and take advantage of the opportunity to upmarry by choosing a partner from the higher-ranked group. The idea of status threat as a motivational force originates in psychosocial theory on intergroup relations and has been extended to ethnic conflict (Horowitz, 1985). When a symbolic threat such as a perceived change in a group's worth or position in the social hierarchy intensifies, it creates anxiety within the highly ranked group and strengthens ingroup feelings such as loyalty, solidarity, and favouritism. I theorize it is these feelings that explain the divergent responses of high- and low-ranked group members to status equalization.

> H2a. *As ethnic inequality declines, the chances of individuals from high-ranked groups inmarrying increase.*
>
> H2b. *As ethnic inequality declines, the chances of individuals from low-ranked groups outmarrying increase.*

2 Research design

2.1 Case selection: Mindanao, Philippines

I examine these hypotheses in the context of Mindanao, the southernmost of the three main island groups that make up the Philippines. Although Mindanao is a linguistically diverse society, three ethno-religious cleavages dominate and divide its 22 million inhabitants, creating three broad groups: Christian settlers; indigenous Muslim Moro; and the Lumad, a term collectively describing Mindanao's indigenous peoples who do not identify as Moro. These groups are also socially ranked. Christian settlers from the two northern island groups, Visayas and Luzon, hold the highest rank. Their dominant position is derived in large part from Spanish colonial conquest that established a Catholic majority in the archipelago that would become strongly associated with the Filipino national identity. As the nation's core 'ethnie' (Smith, 1986), this group achieved dominance in state institutions and a higher average socioeconomic status. In contrast, the Muslim Moro and Lumad occupy subordinate positions in the social hierarchy. They represent numerical minorities unassimilated to the Filipino national identity. The Moro possess an intermediate rank, having successfully resisted Spanish colonization and maintained their own political institutions for a historically significant period of time. The Lumad occupy the bottom rank, with the weakest political organization and lowest socioeconomic status of the three groups.

Early contact with Islam in the fifteenth century provided Mindanao with a historical trajectory and regional identity distinct from those of the two northern island groups, Luzon and Visayas, which in contrast encountered Christianity in the sixteenth century as a result of Spanish colonial conquest (Majul, 1973). Islamic influence manifested itself through the conversion of much, though not all, of the indigenous population and through the establishment of sultanates, most notably those of Sulu, Maguindanao, and Buayan. Spanish attempts to annex the region were resisted by the Moro, the identity constructed to collectively describe Mindanao's Muslim ethnic groups, in a series of wars spanning nearly 300 years. Following Spain's loss of the colony to the United States in 1898, a period of relative stability ensued in large part through accommodations reached between prominent local Muslim elites and the new American colonial administration (Abinales, 2010). However, resistance re-surfaced after independence in 1946 in the face of

attempts to incorporate Mindanao into a modern Filipino nation-state. Unlike the Moro, however, the Lumad as a smaller, less-cohesive minority did not engage in armed rebellion.

At the root of the post-independence conflict lay the mass migration of Filipino Christian settlers from Luzon and Visayas to Mindanao. The resettlement programme, initiated under American rule and expanded after independence, resulted in the minoritization and contributed to the dispossession of the native population. Mindanao's Muslim population, today numbering nearly five million, dwindled between 1903 and 2010 from 76 to 22 per cent. The Lumad, who presently number over three million individuals, experienced an even greater diminution in demographic significance. The transfer of much ancestral land into foreign, often settler, hands as a result of the American policy of mandatory land registration compounded the sense of dispossession among Mindanao's native population. Their marginalization is reflected in some of the lowest education, health, and poverty scores for all of the Philippines in the provinces and municipalities where Moro and Lumad are concentrated (McKenna, 1998).

The historical injustice and contemporary disadvantage of the indigenous population inspired several armed Moro separatist movements after independence. The Moro National Liberation Front (MNLF) waged an insurgency seeking an independent Bangsamoro (Moro Land). The war, peaking between 1972 and 1976, claimed, by one estimate, 50,000–100,000 lives and displaced one million more (Kaufman, 2011) before an initial agreement was reached to create the Autonomous Region of Muslim Mindanao (ARMM) that would be established in 1991. This agreement, however, was rejected by the MNLF's principal breakaway rival, the Moro Islamic Liberation Front (MILF), who continued to fight. A later peace treaty with the MILF, in 2014, to replace ARMM with the 'Bangsamoro Political Entity', in turn angered members of the MNLF, who launched an armed attack again in 2015. At the time of writing, a comprehensive peace deal remains elusive.

2.2 Data sources

I rely on two principal types of evidence: (1) semi-structured and focused group interviews with unmarried individuals and inmarried and outmarried couples; and (2) individual-level census data. The latter come from the 2000 and 2010 censuses for the Philippines. Unusually for a national census, the Philippines National Statistics Office released individual-level records for *all* households in Mindanao, providing me with an extraordinarily rich source of information: the 2010 dataset contains detailed information on 21.9 million individuals. Reliance on the population rather than on a sample eliminated the risk of undersampling potentially rare events such as intermarriages. As there had been administrative boundary changes in the 10-year interval, I realigned the 2010 data to make them comparable with the 2000 data. The Philippines' territorial organization comprises four administrative levels, and in 2000 Mindanao was composed of six regions, 25 provinces, 430 municipalities, and 10,019 barangays.

2.3 Empirical strategy

I draw on four techniques both to probe and to test the hypotheses. First, I conducted a series of interviews with Mindanaoans with questions designed to elicit how individuals understood and explained the selection of life-partners within and across group boundaries. The objective was not to test the hypotheses but to justify the paper's central theoretical frame, the distinction between social and individualist forces, and their role in the creation of inmarriages and outmarriages. The interviews comprised: (1) 38 in-depth, semi-structured interviews with inmarried and outmarried couples within one municipality, Davao City; and (2) 30 unmarried individuals through six focus-group interviews, each comprising five participants, and separately for Christian settlers and Muslim Moro, across three demographically important municipalities in Mindanao: Zamboanga

City, Cotabato City, and Davao City. I relied primarily on 'gatekeepers' in each community to identify interviewees. Given the number, selection, and location of respondents, the interviews were intended to be illustrative, not representative of views on intermarriage in Mindanao.

Second, as exploratory probes I report simple descriptive statistics and conduct *t*-tests comparing the means of the independent variables for endogamously and non-endogamously married individuals. I also present a cross-tabulation examining marriages along two dimensions: ethnicity and class. Each cell represents a distinct marriage combination—for example, a high-class Muslim Moro male married to a low-class Christian settler female. I calculate a simple measure of behavioural tendencies, derived from the Chi-square statistic, capturing how many more or how many fewer marriages of each possible combination occur than expected using the following formula:

$$\text{Behavioural tendency} = \frac{(O-E)}{E} \quad (1)$$

where O refers to the observed number of marriages in a given cell and E refers to the expected number in that cell. A negative number indicates there are fewer marriages in a particular cell than expected; a positive number indicates more marriages than expected.

Third, I calculate odds ratios for cross-group unions. Odds ratios, which are commonly reported in intermarriage studies, indicate the odds of inmarrying (or cohabiting) relative to the odds of outmarrying. They have a distinct advantage over other descriptive statistics as they take into account the relative sizes of the groups. This is important as members of minority groups, faced with a smaller within-group marriage market, would be more likely to have to outmarry. These intermarriages would appear larger in proportional terms for the smaller group than for the larger group, reflecting a greater number of different opportunities between groups than different preferences. Odds ratios are calculated as follows:

$$\text{Odds ratio} = \left[\left(\frac{p_1}{1-p_1}\right) / \left(\frac{p_2}{1-p_2}\right) \right] \quad (2)$$

where p_1 is the probability of an individual from group$_1$ outmarrying and p_2 is the probability of an individual from group$_2$ outmarrying. An odds ratio of 1 indicates members of the group are as likely to inmarry as to outmarry. Odds ratios above 1 indicate the extent of endogamy within the group.

Fourth, to test the hypotheses more rigorously, I use logistic regression with an outcome variable of whether a married individual partnered with someone from their own group or not. I describe the independent and control variables in more detail below, but the model specification reflects the theoretical model of intermarriage widely accepted in sociology, capturing individual preferences, social norms, and opportunities in the marriage market. As I was interested in whether the determinants differed between groups and across gender, I constructed six separate individual-level datasets for married males and females of each of the three ethnic groups. Furthermore, to allow meaningful comparison of the relative substantive importance of each explanatory variable both within and across regression models, I also report results having standardized both the dependent and independent variables. Although log-linear models are commonly used in sociology for analysing intermarriage, I employ logit models as they offer three advantages: Specifically, the ability (1) to specify a larger number of co-variates without any sacrifice of interpretability; (2) to distinguish between each partner's decision in a marriage, instead of treating marriage as an indivisible unit of analysis; and (3) to assess the substantive and statistical significance of each co-variate individually and to use continuous as well as categorical variables.

2.4 Model specification

The classic sociological model theorizes intermarriage as a function of individual preferences, social norms, and opportunities in the marriage market (Kalmijn, 1998). Preferences commonly specified are for the cultural or socioeconomic resources possessed by one's life-partner. Social norms reflect both an individual's identification with their group such that they marry within it and the sanctions imposed by the group for marrying outside of it. Opportunities in the marriage market reflect the relative sizes of groups and their spatial organization in relation to each other.

2.5 Dependent variable

The dependent variable is simply whether a married individual has married within (0) or outside (1) of his or her group. As community-level determinants of intermarriage are constructed for the year 2000, to ensure they are temporally antecedent in their effect I examine only those marriages that occurred between 2000 and 2010. The census micro-data do not indicate the year of union, so I follow a common practice in studies of intermarriage and examine married individuals from a particular age cohort. In this case I examined individuals aged 15–34 years old in the year 2010, given that the median age of first marriage in the Philippines in 2011 was 25.3 years for women and 28.0 for men.

Individualizing forces

(a) Elite autonomy. Education is a powerful marker of socioeconomic status or class and I build a simple five-point variable (EDUC) from the census categories to capture an individual's educational level. The scale was chosen to reflect meaningful differences in educational levels, and broadly corresponds to: (1) no education; (2) some or completed primary education; (3) some or completed secondary education; (4) some or completed post-secondary or vocational education; and (5) some or completed college education or higher academic degree.

(b) Status equalization. To capture the extent to which groups differ or match in socioeconomic status, I construct a measure of between-group inequality (INEQUAL) at the community level for the year 2000. I use the group-weighted coefficient of variation (GCOV) given its straightforward interpretation and its suitability for use as an explanatory variable (Mancini et al., 2008). It compares the difference between each group's mean with the population mean on the quantity of interest and takes into account the size of each group. It is given by the following formula.

$$\text{Horizontal inequality (GCOV)} = \frac{1}{\bar{y}}\left(\sum_r^R p_r((\bar{y}_r - \bar{y})^2)\right)^{\frac{1}{2}} \quad (3)$$

where y is the quantity of the variable of interest (education level here); $\bar{y}_r$ is the mean value of y for group r; $\bar{y}$ is the mean value of y for the population, R is the number of groups; and p_r is group r's population share. The measure is scaled from 0 to 1 where 0 represents perfect equality between groups. To facilitate a clean interpretation I construct separate GCOV variables for each ethnic group. Thus there would be separate variables capturing inequality between Christian settlers and all who are not Christian settlers; between Muslim Moro and all who are not Muslim Moro; and Lumad and non-Lumad.

Socializing forces

I construct two variables to capture the role of social norms. First, I examine the number of endogamous marriages as a proportion of all marriages within an individual's particular group for the year 2000 within their community (NORMII). It is intended to capture the strength of the

expectation, within the community, that an individual choosing a life-partner *after* 2000 would marry someone within his group: the higher the proportion, the stronger the norm to inmarry. Second, I examine the total number of unions across ethnic boundaries—both marriages and cohabitations—for *all* groups as a proportion of all unions within the individual's community for the year 2000 (NORMI). The variable is intended to capture a social norm operating in the reverse direction—the tolerance within the community or the willingness among individuals, shared across all groups, to marry or cohabit with members of other groups in existence *before or at the time* an individual chooses their life-partner: the higher the proportion; the stronger the tolerance or willingness to partner outside the group. While the two variables are conceptually distinct, they may be empirically correlated and I consequently specify them as alternates.

Control variables

(a) Opportunities in the marriage market. I construct two variables to capture the characteristics of the marriage market on intermarriages. First, to capture the size of the pool of available life-partners from different groups, I use the number of adults who do not belong to the individual's group as a proportion of all adults in the community in the year 2000 (POOL): the larger the proportion, the greater the opportunity to outmarry. Second, to capture the importance of geography in the marriage market I construct a measure of social segregation in the year 2000 (SEGREG). Specifically, I use the index of dissimilarity commonly used in sociological studies of racial segregation in US cities (Massey & Denton, 1988). Conceptually, it is the percentage of one group who would have to change their geographic subdivision (Filipino *barangay*) in order to create an even distribution throughout the larger geographical unit (Filipino *municipality*). It is given by the formula:

$$\text{Segregation (dissimilarity)} = \sum_{i=1}^{n}[t_i|p_i - P|/2TP(1-P)] \quad (4)$$

where t_i and p_i are the total population and group proportion of the geographic subdivision (barangay) i, and T and P are the population size and group proportion of the larger geographical unit (municipality) under comparison. The index is scaled from 0 to 1 where a higher score indicates a higher level of segregation.

As it is possible that settlement patterns, which define opportunities in the marriage market, also reflect the preferences of individuals to live in areas with their coethnics or in places where intermarriage is common, I also control for migration. I construct a binary variable (MIGRATION) from the census data indicating whether the individual had migrated into a community within the last five years or not. Although this is not a perfect means of disentangling opportunity from preference, it goes some way to isolating the distinctive effects of each.

(b) Other controls. I also include in the model specification an individual's age (AGE), the age difference with their partner measured in years (AGEPTR), a binary variable indicating the household's poverty status based on the Philippines National Household Poverty Survey, where 1 indicates a household in poverty (POOR), and the population density of the community (POPDEN).

2.6 Robustness checks

I construct several alternate variables and run 36 alternate model specifications in the regression analysis for inclusion in an online appendix. First, as there is no clear theory on the appropriate spatial level at which to construct aggregate predictor variables such as horizontal inequality, social norms, or opportunities on the marriage market, I built and tested them at both the municipality and barangay levels (Table A1). Second, to ensure the elite autonomy variable is insensitive to the

choice of scale, I also built and tested a 10-point educational variable (Table A2). Third, I constructed alternate variables to capture the strength of social norms and the extent of spatial segregation (Tables A3 and A4). Fourth, I report the models with clustered and unclustered standard errors, given the possibility of intra-municipality correlation among individuals (Table A5). Fifth, given the possibility that the 15–34-year-old marriage cohort has distinctive characteristics and also that some cohort members may have married before 2000, I also run the models for marriages of *all* age cohorts together (Table A6). Lastly, I check for collinearity between the predictor variables using variance inflation factors that measure how much the variance of an estimated regression coefficient is inflated relative to the situation where it is not linearly related to other predictor variables (Table A7).

3 Results

3.1 Qualitative evidence

The interviews were conducted to establish the central theoretical distinction drawn in the paper between socializing and individualist forces and their role in life-partner selection in Mindanao. Table 1 contains a list of the most frequent examples of how these forces expressed themselves in respondent narratives. Social forces manifested themselves, for instance, through references to arranged marriages; mandatory religious conversion; elopement; ostracization for cohabiting outside of marriage; and payment of bride-wealth. Individualist forces expressed themselves through responses citing love or a characteristic other than ethnicity or religion as the reason for partner choice; individual indifference to community views; and parental recognition of the right of children to choose their partner, for example.

Several other inferences from the interviews merit mention. First, conspicuous by their absence are responses linking partner choice to the political violence in Mindanao. Although there were strongly differing views between groups on the war, the political boundary did not explicitly feature in the responses relating to partner choice. One explanation may be that these historical group divisions are a factor at the community level and individuals who seek the approval of their community and accept its role in their marriage bring the political boundary into play in this manner. Second, although the assortative behaviour is consistent with a status-optimization logic, status was not an explicit consideration in the attitudinal data. Status optimization then either (1) operates unconsciously; (2) is difficult to measure using self-reported data because of socially desirability bias; or (3) is not the mechanism at work. Third, the social forces governing marriage were significantly stronger among the Muslim Moro than among Christian settlers or Lumad. Moro respondents stated, for instance, that the social sanctions for cohabitation outside of marriage or for conversion away from Islam included the possibility of offending individuals being killed by families shamed by their behaviour. It takes only one group to be socially 'closed' to reduce intermarriage in society. Lastly, the responses point strongly to religion as the origin of the social forces at work. Among Muslim respondents in particular, the requirement of non-Muslims to convert, the solemnization and registration of marriages religiously rather than civilly, the enforcement of 'mahr' or bride-price, and the strong preference of parents for their children to marry Muslims all reflect the importance of Islam as a governing force in marriage decisions.

Table 1: Examples of how social and individualist forces expressed themselves in interviewee responses

Social forces
1. Religious conversion required before marriage solemnized
2. Marriage arranged by family or other third party
3. Enforcement of bride-wealth payment
4. Ostracization by family and/or community for religious conversion
5. Ostracization by family and/or community for cohabitation outside of marriage
6. Parental ethno-religious preference for marital partner of children
7. Registration of marriage with religious rather than state institutions
8. High incidence of elopement
9. Stronger sexual policing of women than men
Individualist forces
1. Love as stated reason for marriage
2. Personal, non-ascriptive characteristic of partner as stated reason for marriage
3. Ability to support partner materially more important than ethnicity or religion
4. Indifference to views of community on marriage
5. Parental recognition of children's freedom to choose their own partner

Source: interviews by the author.

3.2 Quantitative analysis

Intermarriage patterns

Table 4 summarizes intermarriage patterns in Mindanao based on ethnicity and education using a simple descriptive statistic indicating how many more or how many fewer marriages than expected were in existence in 2010, taking into account the number of individuals of each ethnicity, education level, and gender. The statistic takes the value 0 when the expectation that ethnicity and education have no determining role at all in the choice of marriage partner is true; a positive number such as 2 means there are twice as many more marriages between individuals of a given ethnicity and a given education level than expected; a negative number of −0.5 means half as many fewer marriages than expected. Three noteworthy patterns appear. First, there are strong tendencies to marry someone of the same ethnicity and someone of the same educational level. However, ethnic endogamy is a stronger tendency than educational homogamy. This is consistent with the theoretical prediction that in a deeply divided society the social norms and sanctions resulting from ethnic group membership are stronger than the individualistic forces permitting someone to choose a partner on a non-ascriptive characteristic such as education. Second, while all cross-ethnic marriages are underrepresented in Mindanao, those between two highly educated individuals are less unlikely than those between two lowly educated individuals. This supports the hypothesis that elite autonomy facilitates outmarriage. Third, while cross-ethnic, cross-educational marriages are even more underrepresented in Mindanao, the social rank or status of the ethnic group mediates the outcome. Such marriages are most unlikely between low personal, low group status individuals and high personal, high group status individuals. Marriages between highly educated Christian settlers and lowly educated Lumad are thus very rare. In contrast, they are least unlikely between high personal, low group status individuals and low personal, high group status individuals. Marriages between lowly educated Christian settlers and highly educated Lumad then are less rare. This is consistent with the idea that the overall social distance between two individuals is determined by both their personal education level and their group rank.

Socializing forces

Unions between Muslim Moro, Christian settlers, and the Lumad are rare events in Mindanao. Table 2 provides descriptive statistics on marriages and cohabitations in 2010 and it is apparent that across all three groups the percentage of cross-group unions is very low in Mindanao. In so far as such unions indicate social cohesion, Mindanao is clearly a deeply divided society. However, there is important variation. First, there is a significant difference between marriages and cohabitations. Individuals are unsurprisingly far more likely to cohabit with a partner from a different group than they are to marry one. For all three groups, the endogamy odds ratios, which take into account the relative size of groups, are lower for marriages than for cohabitations. One evident interpretation of this difference is that marriages are more likely to involve the approval of third parties such as families, communities, and religious establishments because they are socially significant institutions. Cohabitations, in contrast, are more private arrangements likely to engage only the two individuals concerned. The difference then is likely indicative of social forces, either norms or sanctions, that govern partner decisions in Mindanao.

Second, there is significant variation in endogamy between the three groups. Muslim Moro are by far the most socially closed group: 3.0 per cent of Muslim Moro males have outmarried; their endogamy odds ratios is high at 5,733. By contrast, the Lumad are by far the most socially open group: 14.3 per cent of adult Lumad have outmarried and the odds ratio is 212. Christian settlers fall between the two groups with 4.0 per cent having outmarried and an odds ratio of 336. Why do the Lumad and Muslim Moro, who are both marginalized and similarly sized minority groups in Mindanao, behave so differently in their partner decisions? One possible interpretation is the role of religious institutions in marriage decisions. The Muslim Moro have a single and more formalized set of religious institutions. Their religious leadership (*ulama*), religious establishments (mosques), and religious schools (madrassahs) all represent powerful forces that operate to control or otherwise socialize group members. Muslim marriages (*nikah*) are religiously solemnized. In Mindanao, Islam is also overwhelmingly Sunni, with very few adherents of other denominations such as Shia, Sufi, or Ahmadiyya. By contrast, the Lumad have a more diverse set of religions and consequently religious institutions. They identify as Christians, Muslims, and also with tribal religions. Furthermore, Christian Lumad come from a wide variety of denominations, both Catholic and numerous Protestant sub-denominations. Lumad who practise tribal beliefs also lack the more formal set of religious institutions common to Christianity and Islam. The difference in socializing powers of Moro and Lumad is also reflected in the within-group differences between marriage and cohabitation. The endogamy odds ratio for Muslim Moro marriages within the 15–34-year-old cohort is far higher (3,878) than the endogamy odds ratio for Muslim Moro cohabitations (54). In contrast, the marriage (176) and cohabitation (60) odds ratios for the Lumad are much closer in magnitude. It makes little difference whether a Lumad marries or cohabits with a non-Lumad because the socializing effect of group membership is much weaker.

Table 2: Descriptive statistics on marriages and cohabitations in Mindanao in 2010

Group	Christian settler male	Christian settler female	Muslim Moro male	Muslim Moro female	Lumad male	Lumad female
Frequencies						
Number of adults	4,772,515	4,597,727	1,383,880	1,419,941	936,674	882,579
All unions	2,489,247	2,474,619	759,549	751,630	492,787	515,534
All exogamous unions	104,939	90,311	24,161	16,242	72,722	95,469
All exogamous marriages	90,570	79,713	22,297	14,700	63,507	82,158
All exogamous cohabitations	14,369	10,598	1,864	1,542	9,215	13,311
Exogamous unions (15–34 years)	49,225	41,594	11,976	7,686	32,940	44,943
Exogamous marriages (15–34 years)	38,883	34,050	10,667	6,634	26,366	35,313
Exogamous cohabitations (15–34 years)	10,342	7,544	1,309	1,052	6,574	9,630
Percentages						
Percentage of all unions of that gender	66.5	66.1	20.3	20.1	13.2	13.8
Exogamous unions as percentage of all unions within group	4.2	3.7	3.2	2.2	14.8	18.5
Exogamous marriages as percentage of all marriages within group	4.0	3.5	3.0	2.0	14.3	17.8
Exogamous cohabitations as percentage of all cohabitations. within group	6.5	4.9	71.5	67.4	18.4	24.6
Exogamous unions as percentage of all unions within group (15–34 years)	2.0	1.7	1.6	1.0	6.7	8.7
Exogamous marriages as percentage of all marriages within group (15–34 years)	1.7	1.5	1.4	0.9	6.0	7.7
Exogamous cohabitations as percentage of all cohabitations within group (15–34 years)	4.7	3.5	50.2	46.0	13.1	17.8
Odds ratios (higher number signifies higher endogamy)						
Endogamous odds ratio for all unions	291	291	5255	5255	189	189
Endogamous odds ratio for all marriages	336	336	5733	5733	212	212
Endogamous odds ratio for all cohabitations	56	56	64	64	69	69
Endogamous odds ratio for unions (15–34 years)	208	208	3562	3562	147	147
Endogamous odds ratio for marriages (15–34 years)	254	254	3878	3878	176	176
Endogamous odds ratio for cohabitations (15–34 years)	49	49	54	54	60	60

Source: author's calculations based on census data.

Table 3: *T*-test comparisons of means

	Christian settler male		Christian settler female		Muslim Moro male		Muslim Moro female		Lumad male		Lumad female	
	Inmarry	Outmarry	Inmarry	Outmarry	Inmarry	Outmarry	Inmarry	Outmarry	Inmarry	Outmarry	Inmarry	Outmarry
AGE	28.73	28.80**	27.43	27.31***	28.27	28.16*	27.46	27.02***	27.75	28.77***	26.18	27.30***
EDUC	2.68	2.36***	2.85	2.70***	2.1	2.64***	2.15	2.61***	1.66	2.25***	1.79	2.35***
POOR	0.29	0.38***	0.28	0.35***	0.43	0.34***	0.42	0.35***	0.63	0.39***	0.61	0.38***
AGEPTR	1.52	1.95***	−4.21	−4.14*	1.44	1.64***	−3.4	−4.32***	2.14	1.58***	−4.46	−4.93***
INEQUAL	0.08	0.11***	0.08	0.10***	0.07	0.05***	0.07	0.05***	0.14	0.10***	0.14	0.11***
NORMI	0.98	0.96***	0.98	0.97***	0.98	0.87***	0.99	0.90***	0.86	0.79***	0.84	0.79***
NORMII	0.03	0.04***	0.03	0.04***	0.01	0.03***	0.01	0.03***	0.04	0.05***	0.04	0.05***
POPDEN	309.63	234.51***	308.04	258.59***	638.28	338.84***	645.3	337.35***	159.34	227.66***	160.19	218.39***
POOL	0.14	0.22***	0.14	0.22***	0.31	0.80***	0.31	0.79***	0.71	0.82***	0.71	0.81***
MIGRATION	0.04	0.04	0.04	0.05***	0.01	0.04***	0.01	0.04***	0.02	0.05***	0.02	0.04***
SEGREG	0.09	0.16***	0.09	0.15***	0.18	0.60***	0.17	0.60***	0.49	0.61***	0.49	0.59***

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

INEQUAL, NORMI, NORMII, POPDEN, POOL, SEGREG all measured at municipality level. Means reported for 15–34-year-old age cohort.

Source: author's calculations based on census data.

Third, there is variation in endogamy between men and women across the three groups. Muslim Moro women (2.2 per cent) are less likely to marry or cohabit outside of their group than Moro men (3.2 per cent); Christian settler women (3.7 per cent) are about as likely to do so as their male counterparts (4.2 per cent); Lumad females (18.5 per cent), interestingly, are more likely than Lumad males (14.8 per cent) to do so. In patriarchal societies, particularly those where children commonly assume the religious and ethnic identities of the father, the choice of life-partners of a group's women-folk becomes of high importance because it is perceived as tied to the survival and preservation of the group. Women are sexually policed to different degrees between groups because it reflects the extent to which social forces dominate individual choice within these groups.

Lastly, the logit analysis, reported in Tables 5 and 6, confirms the substantive and statistical significance of social norms in predicting marriages outside the group. NORMI, which measures the strength of the endogamy norm, is strongest among Muslim Moro. A one standard deviation increase in this norm decreases the odds of a Muslim Moro outmarrying by 0.12 standard deviations in contrast with 0.04 and 0.03 standard deviations for Christian settler and Lumad males respectively.

Table 4: Intermarriage patterns in Mindanao in 2010 by ethnicity/religion and education†

Ethno-religious group		Christian settler female		Muslim Moro female		Lumad female	
	Education	Low	High	Low	High	Low	High
Christian Settler male	Low	860,923	294,239	4,720	1,338	41,228	9,504
		1.24	−0.28	−0.97	−0.98	−0.68	−0.73
	High	179,658	826,979	1,507	4,202	8,555	18,709
		−0.45	1.35	−0.99	−0.94	−0.92	−0.37
Muslim Moro male	Low	5,880	2,710	447,158	50,413	1,964	325
		−0.96	−0.98	4.96	0.59	−0.96	−0.98
	High	1,724	8,060	49,444	157,039	342	575
		−0.97	−0.89	0.54	10.57	−0.99	−0.91
Lumad male	Low	29,701	9,797	1,394	232	291,307	27,393
		−0.74	−0.92	−0.97	−0.99	6.66	1.67
	High	4,533	16,396	146	401	17,523	41,011
		−0.82	−0.40	−0.99	−0.92	1.07	16.96

† Reports number of marriages and a marriage 'tendency' statistic beneath. Positive statistic indicates more marriages than expected; negative statistic indicates fewer than expected

Source: author's calculations based on census data.

Individualizing forces

(a) Elite autonomy. Educational status is a powerful predictor of marriage outside of the group. Consistent with the hypothesized status-optimization logic, the direction of this relationship varies with the social rank of the group. Among the two lower-ranked minority groups, the Muslim Moro and the Lumad, highly educated members are more likely to marry *outside* of their group. Table 3 reports *t*-test comparisons of the means of predictor variables. The mean educational status, using the five-point scale, for outmarrying Moro males is 2.61 and for inmarrying Moro it is 2.10. The difference is statistically significant. For the Lumad, the numbers are 2.25 and 1.66. The logit models confirm this difference is substantively and statistically significant even when controlling for other factors. A one standard deviation increase in educational level for a Moro male increases the odds of his marrying out by 0.14 standard deviations. For the Lumad male, the increase is 0.12 standard deviations. The effect, however, is generally smaller for females. The difference between men and women is consistent with the argument described earlier for stronger social control exerted by groups over their women-folk that counters the individualizing effect of higher education on life-partner choices.

In marked contrast, within the higher-ranked Christian settler group the highly educated are more likely to marry *within* their groups. The average educational status for a Christian settler male who outmarries is 2.36 compared with 2.68 for one who inmarries. In terms of the multivariate logit model, a one standard deviation increase in a Christian settler male's educational status lowers the odds of his outmarrying by 0.10 standard deviations. Again, the effect is smaller for Christian settler females, suggesting the weaker net effect of education on women may be due to the stronger socializing forces on them that counter the individualizing power of education.

(b) Status equalization. Ethnic inequality is a second powerful and robust determinant of marriage outside of the group. Again, the effect is contingent on the social rank of the ethnic group: high-ranked members tend to inmarry as the distance in the socioeconomic status between low- and high-ranked groups declines in the community; low-ranked members tend to outmarry. More precisely, a one standard deviation decrease in between-group inequality *increases* the odds of outmarriage for Moro and Lumad males by 0.08 and 0.21 standard deviations respectively, whereas it *decreases* the odds of outmarriage for Christian settler males by 0.11 standard deviations. These findings hold whether horizontal inequality is measured at the municipality or at the barangay levels; they are weaker at the barangay level, implying that differences in relative group status are also felt at a local level, but less acutely. An interpretation based on the logic of status optimization would attribute this divergence to the threat felt by a high-rank group member to the distinctiveness of their status superiority and to the aspiration by a lower-ranked group member for upward mobility through outmarriage. In terms of gender, the effect is larger for Christian settler men than women, suggesting men feel the status threat more acutely; Muslim Moro women, however, again appear to have less freedom than Moro men to outmarry as the social distance closes; Lumad women appear to enjoy about the same autonomy as Lumad men.

Table 5: Logistic regression models reporting determinants (unstandardized coefficients) of individual marriage decisions in Mindanao (15–34 years cohort)

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.16***	−0.05***	0.27***	0.22***	0.24***	0.23***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.02)
INEQUAL	3.79***	1.95***	−2.43***	−2.21***	−5.24***	−4.57***
	(0.36)	(0.33)	(0.56)	(0.48)	(0.55)	(0.49)
AGE	0.02***	0.01***	−0.04***	−0.02***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.19***	0.19***	−0.20***	−0.15***	−0.70***	−0.75***
	(0.02)	(0.02)	(0.04)	(0.04)	(0.03)	(0.03)
AGEPTR	0.01***	0.00**	0.01*	−0.01***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−3.18***	−2.89***	−4.36***	−5.09***	−0.32	0.02
	(0.11)	(0.09)	(0.16)	(0.18)	(0.24)	(0.18)
POPDEN	−0.06***	−0.04***	−0.03***	−0.02***	−0.04**	−0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
POOL	1.20***	1.61***	3.24***	3.25***	0.34*	0.32*
	(0.12)	(0.10)	(0.08)	(0.08)	(0.14)	(0.13)
MIGRATION	0.05	0.18***	0.06	−0.13	0.61***	0.50***
	(0.04)	(0.03)	(0.09)	(0.10)	(0.06)	(0.05)
SEGREG	−1.55***	−1.56***	−0.47*	−0.88***	−1.64***	−2.07***
	(0.15)	(0.14)	(0.20)	(0.21)	(0.23)	(0.23)
N	680,635	876,546	243,796	311,142	165,917	225,506

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table 6: Logistic regression models reporting determinants (standardized coefficients) of individual marriage decisions in Mindanao (15–34 years cohort)

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.101***	−0.033***	0.140***	0.122***	0.121***	0.122***
INEQUAL	0.114***	0.059***	−0.077***	−0.071***	−0.210***	−0.184***
AGE	0.051***	0.017**	−0.070*	−0.040***	−0.032***	−0.032***
POOR	0.046***	0.046***	−0.042***	−0.034***	−0.173***	−0.189***
AGEPTR	0.028***	0.010***	0.012***	−0.022***	−0.032***	−0.038***
NORMI	−0.043***	−0.034***	−0.116***	−0.105***	−0.026	0.002
POPDEN	−0.081***	−0.049***	−0.180***	−0.147***	−0.032**	−0.023**
POOL	0.098***	0.133***	0.492***	0.504***	0.041**	0.039**
MIGRATION	0.005	0.019***	0.003	−0.007	0.044***	0.037***
SEGREG	−0.101***	−0.104***	−0.031*	−0.061***	−0.112***	−0.145***
N	680,635	876,546	243,796	311,142	165,917	225,506

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

4 Discussion and conclusion

Drawing on classical sociological theory I have argued that intermarriage is a function of the balance between social and individualist forces in a divided society and that individual autonomy rises when social ties weaken. My findings corroborate theory and evidence suggesting education is one significant individualizing force countering the normative and sanctioning power of ethnic and religious groups in society. I suggest education promotes individualization, and consequently intermarriage, through at least two channels: first, as an individual's educational status increases, their autonomy to establish social ties independently of group pressures rises; second, as the socioeconomic distance, measured by education, declines between groups in a community, individual freedom to establish ties across group boundaries increases. The paper goes further by showing how this increased independence—be it from higher individual educational attainment or from lower between-group inequality—is exercised by individuals from low- and high-ranked groups differently: high-ranked group members tend to inmarry; low-ranked members to outmarry.

These findings, however, have several important qualifications. First, the claims in respect of education are predictive, not causal. The techniques and data used simply observe an association between individual education level and group-based inequality, on the one hand, and intermarriage, on the other. While theory helps make observed associations more causally credible, it remains possible that untheorized, unobserved factors are driving these findings. Second, the status-optimization mechanism I suggest is not tested empirically, but instead implied theoretically. A different interpretation of the observed marriage patterns and divergent behaviour of high- and low-ranked groups is conceivable. Third, these findings are based on cross-sectional, not longitudinal data. Notwithstanding the use of lagged determinants, caution is required in interpreting the findings as support for the modernization hypothesis that rising education weakens ethnic and religious identification over time in society. Fourth, although it examines a violently divided society, this paper does not test whether intermarriage as a form of cross-group tie is inhibitive of conflict or even conducive to social cohesion. This is an important part of the causal theory that remains to be evaluated. Lastly, the substantive significance of the two identified channels to promote intermarriage needs to be assessed relative to the other factors that influence intermarriage. In this case, the opportunities presented by the marriage market—both the available pool of non-coethnic partners and the spatial organization of groups—are also substantively important. However, elite autonomy and ethnic inequality are generally either at least or more substantively significant. The most notable exception appears to be for the intermediately ranked Muslim Moro group for whom ethnic inequality is less important than the pool of available partners.

In addition to the empirical findings, the paper contributes to the theoretical debate within the conflict literature on the role of ethnic inequality in shaping intergroup relations. It suggests that between-group inequality is a barrier to the formation of cross-group ties. However, in contrast with much of the conflict research that has considered inequality in terms of a debate over the roles of opportunities and grievances in explaining conflict (Cederman et al., 2013; Collier & Hoeffler, 2004), the paper suggests inequality's role may also be understood by reframing the debate in terms of changes to relative group status. Furthermore, unlike the grievance–opportunity literature that focuses primarily on the motivation of the aggrieved or opportunistic subordinate group that rebels, this paper examines how inequality affects the calculus of *both* groups. Status equalization threatens the superordinate group, leading it to strengthen ingroup preferences; however, it has the converse effect on subordinate group members. By conceptualizing inequality in terms of status, the paper's argument resonates more with psychosocial theories of ethnic

conflict that emphasize the importance of group ranking, group esteem, and symbolic threats to group position in the social hierarchy (Horowitz, 1985). This theoretical position is in turn consistent with Weber's notion of *Stände* (status groups), which recognizes the pursuit of social prestige and the maintenance of social distinctions between inferior and superior groups as a powerful motivational force in society (Weber, 1978). It is also consistent with the rationale for anti-miscegenation laws in ranked societies such as the United States pre-civil rights and South Africa during apartheid, where the maintenance of group boundaries was so important that the state enforced them and attempts at racial desegregation fuelled racial conflict.

Lastly, the paper points to three further issues that merit investigation. First, given the findings that the odds of outmarriage relative to inmarriage increase for low-ranked group members but decrease for high-ranked groups, an intermarriage is only logically possible if the lower-ranked group is numerically smaller than the higher-ranked group. The relative sizes of the subordinate and superordinate groups then are an important mediating variable in shaping cross-group ties. Further research into how different social structures would alter these findings is needed. For instance, would they hold between equally sized groups such as the Protestants and Catholics in Northern Ireland or between subordinate majorities and superordinate minorities such as Hutu and Tutsi in Rwanda? Second, the importance of relative status suggests an important scope condition for these findings: the ethnic groups in question must be socially *ranked* such that there is a status asymmetry between them. We would expect, then, to find similar results in places with disadvantaged ethnic and religious groups who also represent numerical minorities such as the Malay in Singapore, the Rohingya in Myanmar, and the Hazara in Afghanistan. It remains to be investigated whether unranked groups such as the Sinhalese and Tamils in Sri Lanka, the Yoruba, Hausa, and Ibo in Nigeria, or the Creoles and East Indians in Guyana would behave differently. Lastly, if it is the educated *elite* who enjoy the greatest autonomy from their ethnic or religious groups in the choice of their social relations, *within-group inequality* may be an important determinant of cross-group ties. It remains an empirical question whether the equalization of educational status *within* the ethnic group would increase or decrease individual autonomy relative to the group's social power.

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Appendix

Table A1: Logistic regression models reporting (unstandardized) determinants of individual marriage decisions in Mindanao (15–34 years cohort)—community-level variables measured at barangay instead of municipality level

	(1)	(2)	(3)	(4)	(5)	(6)
	Christian settler males	Christian settler females	Muslim Moro males	Muslim Moro females	Lumad males	Lumad females
EDUC	−0.16***	−0.05***	0.15***	0.10***	0.20***	0.18***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.03)
INEQUAL	3.60***	2.12***	−0.50	−1.26*	−3.43***	−1.90***
	(0.34)	(0.33)	(0.54)	(0.53)	(0.39)	(0.35)
AGE	0.00	−0.01**	−0.09***	−0.06***	−0.03***	−0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.09***	0.09***	−0.21***	−0.16**	−0.67***	−0.70***
	(0.03)	(0.02)	(0.05)	(0.05)	(0.03)	(0.03)
AGEPTR	0.01***	0.01***	0.02***	0.00	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−2.72***	−2.58***	−2.31***	−2.84***	−0.84***	−0.88***
	(0.17)	(0.13)	(0.16)	(0.16)	(0.12)	(0.11)
POPDEN	−0.00*	−0.00	−0.00	−0.00	−0.00	−0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOL	1.88***	2.09***	3.08***	3.05***	1.22***	1.08***
	(0.09)	(0.09)	(0.08)	(0.08)	(0.07)	(0.07)
MIGRATION	−0.01	0.15***	−0.15	−0.45***	0.41***	0.30***
	(0.04)	(0.03)	(0.09)	(0.11)	(0.07)	(0.06)
SEGREG	−1.45***	−1.56***	−0.87***	−1.67***	−1.84***	−1.94***
	(0.17)	(0.15)	(0.18)	(0.21)	(0.26)	(0.26)
N	647,964	834,554	203,633	258,396	152,931	206,999

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the barangay level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table A2: Logistic regression models reporting (unstandardized) determinants of individual marriage decisions in Mindanao (15–34 years cohort)—EDUC specified as ten-point instead of five-point variable

	(1)	(2)	(3)	(4)	(5)	(6)
	Christian settler males	Christian settler females	Muslim Moro males	Muslim Moro females	Lumad males	Lumad females
EDUC	−0.08***	−0.02***	0.14***	0.12***	0.13***	0.13***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
INEQUAL	3.77***	1.94***	−2.44***	−2.22***	−5.18***	−4.52***
	(0.36)	(0.33)	(0.56)	(0.48)	(0.55)	(0.49)
AGE	0.02***	0.01***	−0.04***	−0.02***	−0.02***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.20***	0.20***	−0.19***	−0.16***	−0.69***	−0.75***
	(0.02)	(0.02)	(0.04)	(0.04)	(0.03)	(0.03)
AGEPTR	0.01***	0.00**	0.01*	−0.01***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−3.19***	−2.91***	−4.36***	−5.08***	−0.32	0.02
	(0.11)	(0.09)	(0.16)	(0.18)	(0.24)	(0.19)
POPDEN	−0.06***	−0.04***	−0.03***	−0.02***	−0.04**	−0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
POOL	1.21***	1.61***	3.24***	3.25***	0.34*	0.32*
	(0.12)	(0.10)	(0.08)	(0.08)	(0.14)	(0.13)
MIGRATION	0.05	0.18***	0.06	−0.13	0.61***	0.50***
	(0.04)	(0.03)	(0.09)	(0.10)	(0.06)	(0.05)
SEGREG	−1.55***	−1.56***	−0.48*	−0.89***	−1.64***	−2.07***
	(0.15)	(0.14)	(0.20)	(0.21)	(0.23)	(0.23)
N	680,635	876,546	243,796	311,142	165,917	225,506

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table A3: Logistic regression models reporting determinants of individual marriage decisions in Mindanao (15–34 years cohort)—NORMII specified instead of NORMI

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.23***	−0.15***	0.21***	0.12***	0.23***	0.23***
	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)	(0.02)
INEQUAL	3.03***	0.83*	−5.11***	−4.44***	−5.39***	−4.24***
	(0.37)	(0.35)	(0.68)	(0.62)	(0.36)	(0.34)
AGE	−0.06***	−0.06***	−0.12***	−0.11***	−0.02***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.03	−0.01	−0.39***	−0.39***	−0.70***	−0.75***
	(0.02)	(0.02)	(0.04)	(0.05)	(0.03)	(0.03)
AGEPTR	0.02***	0.03***	0.02***	0.01**	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMII	8.61***	5.81***	12.41***	13.91***	1.55	0.36
	(0.74)	(0.69)	(1.65)	(1.83)	(0.85)	(0.75)
POPDEN	−0.08***	−0.06***	−0.08***	−0.10***	−0.02	−0.02
	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
POOL	1.12***	1.67***	3.14***	2.84***	0.43***	0.34**
	(0.13)	(0.12)	(0.10)	(0.11)	(0.12)	(0.12)
MIGRATION	−0.07	0.06	0.19*	0.02	0.60***	0.50***
	(0.04)	(0.04)	(0.09)	(0.10)	(0.06)	(0.05)
SEGREG	−2.55***	−2.88***	−2.82***	−3.80***	−2.02***	−2.15***
	(0.13)	(0.11)	(0.18)	(0.19)	(0.30)	(0.28)
N	680,635	876,546	243,827	311,214	168,879	227,543

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMII, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table A4: Logistic regression models reporting (unstandardized) determinants of individual marriage decisions in Mindanao (15–34 years cohort)—SEGREG measured by the index of exposure instead of index of dissimilarity

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.16***	−0.06***	0.27***	0.22***	0.23***	0.21***
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
INEQUAL	3.86***	1.97***	−2.90***	−1.24*	−5.32***	−4.99***
	(0.39)	(0.34)	(0.63)	(0.52)	(0.53)	(0.47)
AGE	0.02***	0.00**	−0.04***	−0.03***	−0.01**	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.18***	0.18***	−0.22***	−0.19***	−0.70***	−0.78***
	(0.02)	(0.02)	(0.04)	(0.05)	(0.03)	(0.03)
AGEPTR	0.01***	0.00***	0.01*	−0.01***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−3.87***	−3.65***	−4.57***	−5.20***	−1.12***	−0.66***
	(0.08)	(0.06)	(0.14)	(0.15)	(0.22)	(0.18)
POPDEN	−0.06***	−0.04***	−0.02**	−0.02**	−0.04**	−0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
POOL	−1.67***	−0.81**	3.30***	2.15***	0.39	0.03
	(0.32)	(0.26)	(0.19)	(0.20)	(0.21)	(0.20)
MIGRATION	0.04	0.17***	0.07	−0.18	0.62***	0.50***
	(0.04)	(0.03)	(0.09)	(0.10)	(0.06)	(0.05)
SEGREG	4.12***	3.44***	−0.15	1.16***	−0.69**	−0.53*
	(0.42)	(0.33)	(0.22)	(0.22)	(0.23)	(0.21)
N	680,635	876,546	243,796	311,142	165,917	225,506

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table A5: Logistic regression models reporting (unstandardized) determinants of individual marriage decisions in Mindanao (15–34 years cohort)—unclustered instead of clustered standard errors reported

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.16***	−0.05***	0.27***	0.22***	0.24***	0.23***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
INEQUAL	3.79***	1.95***	−2.43***	−2.21***	−5.24***	−4.57***
	(0.12)	(0.11)	(0.25)	(0.27)	(0.17)	(0.13)
AGE	0.02***	0.01***	−0.04***	−0.02***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.19***	0.19***	−0.20***	−0.15***	−0.70***	−0.75***
	(0.01)	(0.01)	(0.03)	(0.03)	(0.02)	(0.01)
AGEPTR	0.01***	0.00**	0.01*	−0.01***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−3.18***	−2.89***	−4.36***	−5.09***	−0.32***	0.02
	(0.06)	(0.05)	(0.08)	(0.09)	(0.05)	(0.04)
POPDEN	−0.06***	−0.04***	−0.03***	−0.02***	−0.04***	−0.03***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOL	1.20***	1.61***	3.24***	3.25***	0.34***	0.32***
	(0.04)	(0.03)	(0.04)	(0.05)	(0.05)	(0.03)
MIGRATION	0.05	0.18***	0.06	−0.13	0.61***	0.50***
	(0.03)	(0.03)	(0.07)	(0.08)	(0.04)	(0.03)
SEGREG	−1.55***	−1.56***	−0.47***	−0.88***	−1.64***	−2.07***
	(0.05)	(0.05)	(0.10)	(0.10)	(0.06)	(0.05)
N	680,635	876,546	243,796	311,142	165,917	225,506

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; unclustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table A6: Logistic regression models reporting (unstandardized) determinants of individual marriage decisions in Mindanao—results are for all age cohorts instead of 15–34 years cohort

	(1) Christian settler males	(2) Christian settler females	(3) Muslim Moro males	(4) Muslim Moro females	(5) Lumad males	(6) Lumad females
EDUC	−0.10***	−0.02**	0.25***	0.20***	0.21***	0.20***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.03)
INEQUAL	2.36***	1.07***	−1.18*	−1.93***	−4.85***	−4.44***
	(0.35)	(0.32)	(0.51)	(0.44)	(0.58)	(0.52)
AGE	−0.01***	−0.01***	−0.01***	−0.00	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
POOR	0.19***	0.17***	−0.30***	−0.22***	−0.82***	−0.83***
	(0.02)	(0.02)	(0.03)	(0.04)	(0.03)	(0.03)
AGEPTR	0.03***	0.01***	0.00**	−0.00	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
NORMI	−2.19***	−2.38***	−4.99***	−5.45***	−0.18	0.23
	(0.09)	(0.08)	(0.14)	(0.16)	(0.22)	(0.18)
POPDEN	−0.07***	−0.04***	−0.02***	−0.02***	−0.02	−0.01
	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
POOL	1.41***	1.67***	3.22***	3.27***	0.27	0.31*
	(0.11)	(0.10)	(0.07)	(0.07)	(0.16)	(0.15)
MIGRATION	0.11***	0.18***	0.04	−0.06	0.61***	0.53***
	(0.03)	(0.03)	(0.07)	(0.08)	(0.05)	(0.05)
SEGREG	−1.52***	−1.40***	−0.74***	−0.99***	−1.53***	−2.07***
	(0.14)	(0.13)	(0.19)	(0.21)	(0.25)	(0.25)
N	2,466,264	2,450,246	729,297	721,389	472,831	500,640

Dependent variable 0 = inmarried, 1 = outmarried; coefficients reported as odds ratios; clustered robust standard errors reported in parentheses. INEQUAL, NORMI, POPDEN, POOL, SEGREG all measured at the municipality level.

Statistical significance * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: author's calculations based on census data.

Table A7: Variance inflation factors to measure collinearity between predictor variables—scores >5.0 considered problematic collinearity

EDUC	1.26
INEQUAL	2.67
AGE	1.09
POOR	1.22
AGEPTR	1.04
NORMI	1.83
NORMII	1.61
POPDEN	1.39
POOL	3.01
MIGRATION	1.01
SEGREG	1.30

Scores for Lumad females.

Source: author's calculations based on census data.