

# Marriage in Córdoba City (Argentina) in the Late-Colonial and Early-Independent Periods: Homogamy and Surnames as Emerging Features

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Sonia Colantonio<sup>1</sup>, Claudio Küffer<sup>2</sup>, and Juan Nazer<sup>3</sup>

## Abstract

Married couples in Córdoba City (Argentina) were studied from the census data of 1778, 1795, 1813, 1822, and 1832. Homogamy regarding ethnic group, juridical status, and the title “Don/Doña” was analyzed through contingency coefficients as well as inbreeding and mate preferences among lineages, using the isonymy and repeated pair methods. Class endogamy was revealed in all groups and homogamy was found for various characteristics. The inbreeding was low, but repeated pairs of surnames indicated associated family lines in the Spanish group. A temporal analysis showed that both indicators were higher in times of sociopolitical instability.

## Keywords

marital homogamy, surnames, Córdoba (Argentina), xviii–xix centuries, ethnosocial groups, isonymy and repeated pairs

## Introduction

In human populations, each generation is a complex product of the multiple factors that influenced the previous ones, being particularly affected by the concurrent political, economic, religious, and other features.

These factors can have significant effects on populations if they have an impact on the arrangement of their reproductive units, namely the couples (the interface between biology and culture). The circulation of spouses involves both gene flow and social dynamics, with the latter including the ideal norms as well as material goods. This selection of partners through the marriage system regulates the functioning of social stratification.<sup>1</sup> Thus, the homogeneity/heterogeneity of the

<sup>1</sup> Centro de Investigaciones y Estudios sobre la Cultura y la Sociedad (CONICET Universidad Nacional de Córdoba); Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba; CONICET.

<sup>2</sup> Centro de Investigaciones y Estudios sobre la Cultura y la Sociedad (CONICET Universidad Nacional de Córdoba).

<sup>3</sup> Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba.

## Corresponding Author:

Sonia Colantonio, Facultad de Ciencias Exactas, Físicas y Naturales, Universidad Nacional de Córdoba, 299 Av. Vélez Sarsfield, Córdoba X5000, Argentina.

Email: scolanto@efn.uncor.edu

population will be a direct consequence of the guidelines existing in mate selection, be it outside one's own group (exogamy), within the group (endogamy) or, finally, the selection of a person having similar characteristics to oneself (homogamy).

Marrying patterns arise from the interplay of three social forces: the preferences of the individuals for certain characteristics in a potential spouse, the influence of the social group of which they are members, and the limitations of the marriage market in which the partner is looked for.<sup>2</sup> The particular historical circumstances present should also be added to these driving forces.

The degree of endogamy/exogamy depends on factors such as the population size,<sup>3</sup> the demographic structure that conditions a particular marriage market and the social structure, which together define the number of eligible spouses fulfilling either normatively prescribed or wished for characteristics.<sup>4</sup> Related to this, according to the social background, some features are more valued than others.<sup>5</sup>

As well as endogamy being related to the ethnosocial group, unions between people having similar characteristics can be traced to other issues, such as the age, social status, and the geographical area, in addition to the legal condition. However, both endogamy and homogamy can be examined through another factor of a cultural nature, namely the spouses' surnames.

Lasker showed that the effect of mating preferences can be studied from surname distributions either in the couples or in the whole population.<sup>6</sup> Throughout time, mate selection has translated cultural factors into biological phenomena such as inbreeding and relationships. Crow and Mange<sup>7</sup> and Crow<sup>8</sup> proposed a method to estimate inbreeding by means of the use of surnames, called isonymy, which consists of relating marriages between spouses having the same surname to their distribution in the set of pairs, thereby allowing homogamous behavior to be analyzed with respect to surnames.

The combination of different surnames at frequencies surpassing the random value expected may reveal some type of endogamy in subgroups within the population, due to other factors directly or indirectly associated to a surname, for instance: inheritance, social status, wealth, property, the above-mentioned ethnic group, and so on. On this issue, Lasker and Kaplan devised a method to measure subdivision by using the combinations of surnames that are repeated in couples,<sup>9</sup> which is often related to preferences caused by socioeconomic differences within each community.<sup>10</sup> In this way, lineage selection can be measured through the observed frequency of repeated pairs of surnames among married couples with respect to the frequency that should be expected if mating were at random.<sup>11</sup>

The population of Córdoba city (Argentina) in the late Colonial period (end of the eighteenth and beginning of the nineteenth centuries) and early independent period (first decades of the nineteenth) was characterized by a strongly stratified society, with a "noble" class at the top. In these times, Córdoba was more reluctant than most Argentine and Hispanic American cities to contract marriage between members of different ethnosocial groups.<sup>12</sup> Nevertheless, by the end of the eighteenth century, a steady population growth took place<sup>13</sup> together with an increasingly evident miscegenation process.<sup>14</sup> The "Real Pragmática de Matrimonios" (Royal Decree of Marriage), promulgated in 1776 in Spain and extended two years later to Hispanic America (amended several times), had the purpose of preventing "unequal" marriages<sup>15</sup> and, in the case of the Hispanic American colonies, marriages between Spaniards and people belonging to the "Castas" (or mixed groups) were discouraged.<sup>16</sup>

The first decades of the nineteenth century involved forced mobilizations brought about by the independence wars, which led to the independence being achieved in 1816. However, important ideological antecedents also took place in the "Revolución de Mayo" (May Revolution) in 1810, and later on in civil wars, with these having an effect on the demographic and economic structure.<sup>17</sup>

By taking into account these historical circumstances, the aim of this work was to discover, through population censuses, if married couples in these times reflected the above-mentioned stratification with a strongly endogamous and homogamous behavior, by exploring the

characteristics of the spouses. Simultaneously, we set out to investigate, both through isonymy and repeated pairs of surnames, whether there were significant levels of marital inbreeding, or if the associations occurred mainly between not necessarily related family lines and resulted from other types of alliances than those based on blood ties.

## Material and Methods

The sources of data used in this work were five population censuses corresponding to the years 1778, 1795, 1813, 1822, and 1832. All of these, except for the second, are civil registries whose original documents are located in the Historical Archive of Córdoba Province. The census of 1795 is an ecclesiastic register and the original can be viewed in the Archive of the Archbishopric of Córdoba. Except for this last census, the registers have been published as digital databases by Arcondo for the years 1813,<sup>18</sup> 1778,<sup>19</sup> and both 1822 and 1832,<sup>20</sup> but without people's nominative information, which were key for this study and were therefore loaded to these databases by the authors.

The censuses displayed disparity in their recorded information, with the 1795 data set having a notorious underregistration of the population. Nevertheless, the data needed for the completion of this article (full name, "class"—more properly referred to as "ethnosocial group" here—conjugal status, legal condition, and the presence or not of the title Don/Doña in the Spaniards) were present in all. From the total resident inhabitants in Córdoba city, the married couples were selected, which were described as such in their corresponding households only in the registers of 1778 and 1795. For the 1813 census, the vast majority of married couples were identified by M. del C. Ferreyra from complementary sources (vital registers, marriage records, etc.), and for 1822 and 1832 this task was performed by the authors of this work, with couples only being included for those mentioned in the census as married couples and/or those that could be identified as such. This sampling is not representative of all the couples of the population, since consensual unions at that time were numerically important in the Spaniards, but more so among the Castas, reaching in the latter values close to 50 percent.<sup>21</sup> Nevertheless, this sampling will at least allow the typical patterns in the population that formed their pairs according to the legal norms to be revealed.

Once identified, the married couples were classified by ethnosocial group (named "class" by the enumerator), thereby reducing and unifying the diverse nomenclature used in each census. For this first analysis of endogamy/homogamy, the groups were classified as "Spaniards," "Indians," "Blacks," and "Castas," thus excluding those people whose groups were not specified in the census. The word "Spaniard" is equivalent to the term "White" used in other registers of the time, and includes individuals born in the Iberic peninsula and in Hispanic American colonies along with some non-Spanish European, and their non-mixed descendants. Although the term "Casta" covers a variety of names applied to many combinations of racially mixed individuals,<sup>22</sup> and moreover sometimes even has an economic connotation, the term has been used here to designate collectively the people resulting from miscegenation among the groups of Spaniards, Indians, and Blacks. It should be noted that these categories were not "immutable" even for the same individual, and these changes in statuses among censuses (e.g., due to the phenomenon of "blaqueamiento") may have had some effect on the results obtained. "Blaqueamiento" was a mechanism by which a person mentioned in older registers as belonging to a lower social class (Castas, Indians, etc.) later appeared in newer ones as a member of an upper class, typically White or Spaniard. It is known that in many circumstances the same individuals were categorized in different ways, with many trying to raise their own status as much as possible.<sup>23</sup> A similar case is the title "Don/Doña," where it is known, for instance, that sometimes Castas' individuals were given (for various reasons) these titles.

This first analysis of endogamy and homogamy was carried out by calculating the contingency coefficients between the spouses for each feature described in the census. The nominal variables and their respective categories were ethnosocial group (Spaniards, Indians, Blacks, and Castas); in the

case of Spaniards, the title “Don/Doña” (with or without this title); and in the case of Castas and Blacks, their legal condition (free or slave).

It was assumed that the characteristics analyzed for the spouses existed prior to mate selection and that one or several of these factors conditioned this selection. However, it cannot be totally discarded the possibility that, on some occasions, some characteristics had been assimilated through marriage (e.g., possible changes in the “class” of a person if the spouse belonged to a higher position in the social scale) or that some married women’s surnames were in fact their husbands’ surnames. Nevertheless, the previous revision of the data should reduce these possibilities.

In a second analysis, indicators of inbreeding and population subdivisions for each group were calculated using the surnames of the married couples. Since methods that use surnames as data assume that these represent genes transmitted by the paternal line through generations (therefore with a probable common origin), the estimations made were taken with either more or less caution according to whether the form of inheritance was known. Data were selected from those married couples with both spouses having known surnames (i.e., whose surnames were stated by the enumerator or could be determined by cross-referencing data from different sources). All slaves and “libertos” (freedmen) were discarded, as they had probably adopted their masters’ or the masters of their parents’ surnames. In addition, due to their scarce number possibly causing a bias in the results, Blacks and Indians also had to be excluded from the analyses of surnames. Therefore, the analyzed population consisted of two sets of people, one derived from the diverse racial admixtures (Castas) and the other of Spaniards. We also considered that this classification could benefit comparative analyses since, due to the fact that the officials of Nueva España generally used these categories together with Indians for recording the people,<sup>24</sup> with the Spaniards and Castas belonging to the only categories that McAlister considers as having a defined social and legal status.<sup>25</sup>

For the Spaniards and their descendants, as there was a consistency in surname transmission (although some had to be corrected, and various spellings appeared), the obtained results were considered to be reliable for this group (considering the probabilistic terms on which the models dealing with surnames are based). Nevertheless, in the case of Castas, the estimations were taken with more caution due to the possibility of their previously acquiring surnames from the Spaniards.

The homogamous and consanguineous behaviors with respect to the surnames in the spouses were analyzed for each group (Spaniards and Castas) by means of two procedures, “isonymy” and “repeated pairs.” First, the method of “isonymy” (spouses with the same surname) was used, which allowed estimation of the random inbreeding ( $F_r$ ) based on the population size and the frequencies of each surname, the non-random inbreeding caused by preferences when choosing a relative for marrying ( $F_n$ ),<sup>26</sup> as well as the total inbreeding ( $F_t$ )<sup>27</sup> by using the following equations:

$$F_r = \sum p_i q_i = 4 \text{ and } F_n = \frac{I_o}{I_e} = 4 \frac{I_o}{I_e}$$

where  $p_i$  is the frequency of the  $i$ th surname in husbands and  $q_i$  is the frequency of the same surname in wives, with the summation being of all surnames.  $I_o$  = frequency of isonymous couples in relation to the total of couples, and  $I_e = \sum p_i q_i$ . Finally, the total inbreeding ( $F_t$ ) can be estimated as:

$$F_t = F_r + F_n$$

Marital isonymy is an estimator of both endogamy and homogamy, in the sense of marrying not only a relative but also a partner having the same surname, with another indicative element considered in connection with endogamy being the possible existence of associations between some “lineages” or families through marriages between their respective members. Related to this, another method used for dealing with surnames proposed by Lasker and Kaplan<sup>28</sup> is called Repeated Pairs (RP), which takes into account the tendency for pairs of surnames to recur in marriages, and the random expected values ( $RP_r$ ) proposed by Chakraborty<sup>29</sup> are calculated by:

**Table 1.** Number of Married Couples in Each Ethnosocial Group by Census.

Ethnosocial group	Year				
	1778	1795	1813	1822	1832
Spaniards	307	109	371	279	416
Indians	9	2	4	80	19
Castas	248	251	308	137	377
Blacks	37	0	19	0	9
Interethnic	27	1	65	39	52
Nonspecified	27	15	2	48	2
Total	655	378	769	583	875
Total population size	7,740	3,721	8,420	11,569	11,764

$RP = \frac{1}{N} \sum_i \sum_j S_{ij} S_{ji} = \frac{1}{N} \sum_i S_i^2 = \frac{1}{N} \sum_j S_j^2$ , where  $S_{ij}$  is the number of marriages of the  $i$ th and  $j$ th surname in husbands and wives, respectively, and  $N$  is the total number of marriages.

$RP_r = \frac{1}{N} \sum_i S_i^2 = \frac{1}{N} \sum_j S_j^2 = \frac{1}{N} \sum_i S_i^2 = \frac{1}{N} \sum_j S_j^2$ , where  $S_i^2$  y  $S_j^2$  are, respectively, the squares of the  $i$ th surname in husbands and the  $j$ th surname in wives, with  $N$  being the total number of marriages.

In order to investigate whether the number of observed repeated pairs was significantly different from that expected by random, the “z” value was calculated according to Relethford<sup>30</sup> as:

$$z = \frac{RP - RP_r}{\sqrt{ES(RP_r)}}$$

The percentage of excess observed above the expected random value given by  $(RP - RP_r)/RP_r$  can be calculated as a comparative statistic, because  $RP$  and  $RP_r$  vary across populations.

The general statistical procedures were evaluated using the computer programs SPSS 11.5 and Excel 2007, with the corresponding isonymy and repeated pairs analyzed using software developed ad hoc.

## Results and Discussion

Table 1 shows the total population size and the number of identified married couples per ethnosocial group in each census, including in another category the interethnic ones. To the latter, the married couples were added when the class of one of the spouses was not specified in the register.

For each characteristic of the spouses (ethnosocial group, title “Don/Doña” in Spaniards, and legal status in Castas and Blacks), the values of statistical association between the categories of these variables with their statistical significance are shown in Table 2. In some cases, the scarcity or absence of people in Indian and/or Black groups (see Table 1) prevented us from making reliable estimations.

The first row of Table 2, which belongs to the ethnosocial group endogamy, shows that throughout the studied period this trait conditioned marrying. The contingency coefficients between the husband’s and wife’s ethnosocial groups obtained for each census were all of high magnitudes and statistical significance ( $p < .001$ ) with the minimum value being in 1813, which could be showing a lower endogamy regarding the ethnosocial groups of around this year. This may have resulted, to some extent, as an outcome of the lessening of ethnosocial boundaries following the Revolution of 1810. Nevertheless, it is also possible that a more important factor might have been the political instability at the time immediately after this Revolution,<sup>31</sup> characterized by fights and conscription<sup>32</sup> that removed from the city a large part of the male population of reproductive age<sup>33</sup> and thereby reduced the marriage market within each group. Indeed, the sex ratio calculated for 1778 and 1795 for the population aged fifteen to forty-nine years of all the ethnosocial groups showed values

**Table 2.** Coefficients of Association between the Homologous Categories of Each Variable.

Variables	1778 <sup>a</sup>			1795 <sup>a,b</sup>		1813 <sup>a</sup>			1822 <sup>b</sup>			1832 <sup>c</sup>		
	S	C	B	S	C	S	C	B	S	I	C	S	I	C
Ethnosocial group (CC)		0.83***			0.82***		0.77***			0.79***			0.82***	
Don/Doña (CC)	0.24 ***	—	—	—	—	0.65 ***	—	—	0.59***	—	—	0.68 ***	—	—
Legal status (CC) (free/slave)		0.21 **	0.66 ***		0.28 ***		0.34 ***	0.64***			0.34***			0.25 ***

Note: S □ Spaniards; I □ Indians; C □ Castas; B □ Blacks; CC □ contingency coefficients.

<sup>a</sup>Due to their small N, Indians were only considered for the ethnosocial group variable.

<sup>b</sup>No marriage between Blacks were found.

<sup>c</sup>Due to their small N, Blacks were only considered for the ethnosocial group variable.

\*\*\* $p < .05$  (significant); \*\* $p < .001$  (highly significant).

of 76.1 and 56.6 men for each 100 women, respectively. In addition, for the censuses after the Revolution (1813, 1822, and 1832) these figures were 49.3, 50.3, and 45.9, in that order, thus showing the influence of the incorporation of men into the armies or fleeing to other jurisdictions on the consequent reduction of the marriage market for women. Though the described situation continued for some time, Ghirardi estimates for the population of the City a sex ratio of 84.8 in the year 1840,<sup>34</sup> a figure more akin to those found for the censuses prior to 1810.

Despite the apparent class endogamy found in each census, it should be born in mind that the figures are not representative of the total population, but are only derived from the identified married couples. This needs to be emphasized due to the fact that in the population of Córdoba (especially in the Castas but also in the Spaniards) a double pattern of mating and reproduction was common: one "official" through the law of the religious marriage and the other "non-official" (but not necessarily less frequent) with couples existing *de facto*. This latter state produced a high percentage of "illegitimate" or "natural" children,<sup>35</sup> through which the intense process of miscegenation that took place between different ethnosocial groups becomes evident.<sup>36</sup>

The characteristic pattern of marriages was a high-class endogamy and a very low interchange between groups, with a slight relaxation occurring in the prevalent endogamy after 1810. In fact, the percentage of endogamous married couples calculated for Spaniards and Castas, respectively, were 1778 (99.0 percent and 95.7 percent), 1795 (99.1 percent and 99.6 percent), 1813 (95.8 percent and 90.3 percent), 1822 (97.1 percent and 91.0 percent), and 1832 (96.2 percent and 94.5 percent), with the very scarce exogamy being more marked in husbands in all cases. As can be deduced, there was a noticeable closure in the groups, especially in 1795, and a relative opening around 1813, which diminished later. This closing could have been caused by the Real Pragmática promulgated in 1776 by the Spanish Crown, which demanded parental permission for Spaniards and "pure race" people to be committed in marriage.<sup>37</sup> Thereafter, the Revolution of 1810 prevented the entrance of Spaniards for a long time, which could have brought about the forced opening of the marriage market that appeared in 1813 (the lowest contingency coefficient). This led to marriage with other groups, before the loss of class privileges and perhaps revenge occurred in the days of the independent era. In the Castas, probably this miscegenation phenomenon occurred mainly with minor status groups, such as the Indians and the Blacks. However, it was not known what happened within the groups, in the sense of whether the spouse selection took place between individuals with similar features, that is to say homogamously.

When the association between the title "Don" and "Doña" was analyzed in the Spaniards, a somewhat unexpected outcome arose. These data were not analyzed in 1795 because belonging to the Spanish group could be deduced from this title appearing, whereas in other censuses many Spaniards were not given this title. An increasing tendency toward homogamy for this characteristic was observed from 1778 to the nineteenth century, despite 1822 and 1832 corresponding to the post-colonial times. Maybe the more liberal laws and less defined limits between groups (it is worth remembering that in 1813 nobility titles had been abolished) produced a parallel reaction of "closing" in the privileged Spaniards as a mechanism of self-protection, especially at times when Spaniards and Hispanic Americans (including the Castas) often faced each other in the battles for Independence. In addition, as a result of this process, the government of Buenos Aires banned marriages between Spanish men and Argentine born women<sup>38</sup> through a decree enacted in 1817 and derogated in 1822.<sup>39</sup>

Although class homogamy tended to decrease after 1813, this was not the case for legal status. Though the "Asamblea del Año XIII" (Assembly of Year XIII) decreed in 1813 the "libertad de vientres" (freedom of wombs), by virtue of which the children born to slaves from then on would be considered free, the lapse of time to 1822 or even to 1832 was not long enough so that the ones born free from 1813 could, once adults, freely choose their spouse with respect to his or her legal status. This seems to have been so not only because legislative changes were very recent, but also

since some rejection occurred against those having been born enslaved due to the mentality of the time. What is conspicuous for all years studied is the higher preference of slave men for free women compared to that of slave women for free men. Although such a phenomenon could have partly been a consequence of an imbalanced sex ratio (with more females), mate selection according to legal status remained as a strategy of the spouses, since until 1813 the lineage inherited the maternal legal status and the slave children were born slaves. These findings are in agreement with those published by other researchers for the same period<sup>40</sup> or for the previous one.<sup>41</sup>

In summary, the characteristics analyzed here have been shown to be strongly associated in the spouses, with a net preference for homogamy of the ethnosocial group and, within Spaniards, also with respect to the title “Don/Doña.” Concerning the legal status, it is very likely that, because of the reasons pointed out previously, there was no clear tendency to a reduced homogamy in the most recent censuses.

Having analyzed the sociodemographic characteristics of the spouses, a deeper insight into the patterns of endogamy and homogamy was now looked for by means of surname analysis. However, as this requires a substantial population size in order to be able to obtain reliable indicators, the selected groups were the Spaniards and free Castas. The Indians and the Blacks were not considered in this analysis because of their low numerical representation, and the slaves were not taken into account due to the possibility of recent surname acquisition taking place from their masters rather than from their fathers.

The marital homogamy with respect to the surname was analyzed through isonymy between spouses, by estimating random inbreeding ( $F_r$ ), preferential or non-random inbreeding ( $F_n$ ), and total inbreeding ( $F_t$ ), resulting from the summation of the random and non-random values. The results of this analysis of surnames are shown in Table 3, but without the significance levels, since there is no test of significance of differences for these indexes at the present moment. Therefore, these results are interpreted in terms of value trends. In addition to considering the Spanish group in total, the indicators for the spouses having the title “Don/Doña” were calculated, in order to detect if the homogamy previously found for this characteristic corresponded with surname homogamy and the possibility of kinship.

As can be observed in Table 3, the random component of the inbreeding ( $F_r$ ) displayed a relatively low value for all years, with a narrow rank existing. These values are similar to those from historical populations that displayed a noticeable dynamism with respect to the entrance and exit of people, such as in Massachusetts in the eighteenth and nineteenth centuries<sup>42</sup> and Andorra from the seventeenth to the twentieth centuries.<sup>43</sup> These results suggested a population with a considerable diversity of surnames, caused by a large population size or through immigration of a substantial magnitude. Despite the small differences obtained among the values for each census, these are indicative of a certain trend over time. Related to this, during the eighteenth and first half of the nineteenth centuries, Córdoba had a population with a reduced effective size, and the high diversity of surnames and low values of random inbreeding especially in the Spaniards may have been mainly due to immigration, since the Spaniards were those that most frequently appeared as “foreign” to the city. It is worth emphasizing that some immigration and settlement of Spaniards arriving from Europe continued throughout the period here considered, thereby bringing new surnames to the city, which, in turn, contributed to the increase in diversity and the low value of random inbreeding. The maximum value was observed in 1778 in Castas, who had few surnames, with many people of the same surnames occurring among the population. Indeed, the average numbers of people per surname for Spaniards and Castas were 2.2 and 3.2, respectively, while in 1832, toward the end of the studied period, these figures had fallen to 1.8 and 1.5. However, the small variation in the  $F_r$  component over the years is in agreement with little change in population size and steady migratory flows.

The non-random or “preferential” component ( $F_n$ ) of inbreeding was of a magnitude that could be considered to be between moderate and low, and similar to those found in a great part of the



**Table 3.** Components of Inbreeding ( $F_r$ ,  $F_n$ , and  $F_t$ ) for Each Group and Census.<sup>a</sup>

Isonymy	1778		1795		1813		1822		1832	
	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas
$F_r$	0.00112	0.00228	0.00131	0.00130	0.0011	0.0019	0.00162	0.00166	0.00108	0.00137
$F_n$	□0.00012	□0.00230	□0.00132	□0.00131	0.0068	0.0099	0.00378	0.01272	0.00436	0.00238
$F_t$	0.00100	□0.00002	□0.00001	□0.00001	0.0079	0.0118	0.00539	0.01435	0.00544	0.00375
	Don				Don		Don		Don	
$F_r$	0.00106				0.0011		0.00203		0.00106	
$F_n$	□0.00107				0.0063		0.00425		0.00246	
$F_t$	0.00001				0.0074		0.00628		0.00351	

  

Repeated pairs	1778		1795		1813		1822		1822	
	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas	Spaniards	Castas
RP	0.00006	0	0	0	0.00007	0.00009	0.00018	0.00018	0.00007	0.00007
$RP_r$	0.00002	0.00005	0.00003	0.00003	0.00001	0.00006	0.00004	0.00005	0.00002	0.00003
$RP_r/RP$	27.60%	—	—	—	19.97%	63.78 %	23.03%	24.36 %	23.62%	41.37 %
$(RP \square RP_r)/RP_r$	268%	—	—	—	401 %	57%	334 %	311%	422 %	141 %
$z \square (RP \square RP_r)/ES(RP_r)$	7.49***	0.57	□0.87	□0.95	9.62***	1.70	14.32***	3.48***	14.16***	6.68***
	Don				Don		Don		Don	
RP	0.00008				0.00009		0		0.00008	
$RP_r$	0.00002				0.00002		0.00003		0.00002	
$RP_r/RP$	19.48 %				23.82 %		—		21.12 %	
$(RP \square RP_r)/RP_r$	413 %				319 %		—		374 %	
$z \square (RP \square RP_r)/ES(RP_r)$	9.21***				8.86***		□0.14		14.79***	

<sup>a</sup>Below, also by group and census, repeated pairs (RP and  $RP_r$ ), ratios between observed and expected values ( $RP_r/RP$ ) and  $(RP \square RP_r)/RP_r$ , and “z” value.

\*\*\* $p < .001$  (highly significant).

populations of the world of similar characteristics for the same time period.<sup>44</sup> The only exception was the 1795 census, since the negative sign of this indicator might denote an absence of preferences or maybe a rejection to marry related people (but not in the case of 1778, where this value was around 0). Therefore, in spite of the population being relatively small, with strongly endogamic groups and a marked discrimination on the part of the dominant group against the others, a class endogamy was not revealed in an inbreeding of any remarkable magnitude. In the case of the Spaniards in Córdoba, due to their strong prejudices with respect to the ethnosocial and economic hierarchies, high values of inbreeding were expected, together with relationship associations playing a major role in the social life and the alliances (including marital alliances). As numerous studies have already shown, high values of inbreeding are typical of closed groups having a strong cultural identity.<sup>45</sup> Nevertheless, in our study, the highest values of preferential inbreeding were found in the Castas, precisely in 1813 and 1822, coincident with a lapse of more freedom, legal equality, and a reduction in class endogamy. This behavior may have been conditioned by multiple factors, some of which will surely never be accurately known by researchers who have to examine registers of data written by past generations. However, as this article has outlined, some of the factors might have been determined, at least in part, in these findings.

In the case of Córdoba, the existence of laws such as the “Real Pragmática de Matrimonios” prevented the admixture between the Spaniards with colored or mixed-race individuals, and these had legal status until the independent period.<sup>46</sup> Then, however, they began to lose their power and for the first time the various groups had the freedom to marry, without any limiting norms, thus producing the decrease observed in the rates of endogamy. Nevertheless, facing this growing and unavoidable possibility of miscegenation within the framework of a harsh political situation, it is possible that at least some groups such as the Spaniards then adopted strategies of “self-protection” by in fact looking for more frequently than before marriage between relatives. This hypothesis could be investigated knowing the immigratory dynamics described in other studies for the period. However, little can be done in this article, due to the lack of data about the geographical origin in most of the censuses studied here.

The Peninsular Spaniards, who arrived in the city during the eighteenth century, with a predominance of single men, were welcomed because their metropolitan origin would have been well seen and also since they were perceived as a guarantee of good husbands and skilled administrators. Indeed, the new arrivals were favored when contracting marriages with American Spanish women of the elite,<sup>47</sup> as a means to social rise.<sup>48</sup> However, between the end of the eighteenth and the beginning of the nineteenth centuries, a reduction in the marriage market among the Spaniards took place, when the entrance of European Spaniards was legally prevented, together with the previously mentioned more apparent “closing” of the ethnosocial groups for the years immediately after 1810. In 1832, regarding the conjugality of peninsular Spanish men, there was continuity of what had been taken place since the eighteenth century, for most of them (around 74 percent) married women of Spanish ancestry born in Córdoba or other women born in Hispanic America.<sup>49</sup>

The gradual “blanqueamiento” (whitening) of Castas people could have brought insecurity to the Spanish population as regards “limpieza de sangre” (cleanliness of blood) at the time of mate selection. Therefore, knowing that family lineage could result in a “purity” guarantee and avoid the possibility of losing economic patrimony, also warned against mating outside the family.

In this way, the relatively low values of inbreeding obtained may be less reliable if it were the case that a number of people appearing as Spaniards in the censuses were indeed “blanqueados” (whitened ones) and actually belonged to the Castas. Nevertheless, the few other studies performed on Córdoba data from these times also show a very small frequency of marital dispensations for blood relationships, with values of 1.2 percent and, at most, about 4.7 percent of the total married couples.<sup>50</sup>

In the present study, although inbreeding was not high, the greatest levels were observed in the 1813 census, not only in Spaniards, but also in Castas. A possible explanation for the increase in

preferential inbreeding in the latter could be that this behavior responded to a strategy of self-protection, but of a different nature in the Castas than that of the Spaniards, because for the former the possibility of mixing with the Spaniards was always attractive. Although the independent period around 1813 was a time when the Spaniards had somehow become the “enemy” of subordinate ethnosocial groups, this does not explain the increasing choice of relatives as spouses in the Castas. In a previous analysis related to the structure of complex households in Córdoba City for Whites and free people of the period, it was found that, contrary to expectations, a greater number of relatives lived in the households of free individuals than in Spanish ones where the main feature was the presence of servants and slaves.<sup>51</sup> This phenomenon in Castas’ households happened especially in those with female heads (these were very frequent in the absence of men and had a high percentage of widows), which may have been due to a certain behavior in times of difficulties, predominantly in the households of the most disadvantaged (in this case the Castas). Maybe this strengthening of family ties and the spatial coexistence of related individuals caused the increase of inbreeding found in 1813, and which increased by 1822. A similar situation occurred in the Spaniards of low status, since a large part of their population in Córdoba did not have a high economic level. As Moreno showed for Buenos Aires, there was a high frequency of extended families, since under difficult circumstances characterized by widowhood and economic hardship, the pooling of incomes might have been one survival strategy for poor families.<sup>52</sup>

For the analysis focusing on the subgroup of Spaniards with the title “Don/Doña,” the random component of inbreeding ( $F_r$ ) was very similar to the whole set of the Spaniards. But contrary to what was expected, preferential inbreeding ( $F_n$ ) tended to show in this subgroup similar or even lower values than those in the whole Spaniards. These results may indicate that even in the set of people with higher “social status,” the choice of a relative as a spouse was not a definite trend. For the Spaniards, the largest total inbreeding ( $F_t$ ) occurred after the revolution of 1810 and the lowest in 1778 (it is worth remembering that it was not possible to analyze this variable in 1795).

On analyzing another aspect of mate selection not related to the choice of relatives or spouses of the same surname, the results showed something different. The indicators of “repeated pairs” (which indicate population subdivisions in certain groups that commonly represent alliances among different lineages not related by kinship) showed that subdivisions occurred in the groups, especially in the Spaniards.

These results (Table 3) showed a chronological pattern akin to those found in the other indicators. The Spaniards had (except 1795) more associated pairs of surnames (RP) than that expected by chance ( $RP_r$ ), and the relationship between the two components ( $RP - RP_r$ )/ $RP_r$  indicated a minimum of this type of population subdivision occurring in the first part of the period analyzed and peaking again in 1813. Here, the randomness was only 19.97 percent ( $RP_r/RP$ ), with the observed associations far exceeding (401 percent) the expected number under random conditions of mate selection. This higher than expected value of RP is significantly higher with respect to those commonly found in studies that use repeated pairs,<sup>53</sup> thereby indicating a strong presence of associated lineages in marriages. In fact, this value is even higher than those calculated for Indian populations of the second half of the twentieth century for caste groups such as the Kuruma from Andhra Pradesh, where the ratio expressed as percentage of ( $RP \square RP_r/RP_r$ ) is about 33 percent and that of ( $RP_r/RP$ ) is 75 percent.<sup>54</sup>

Within the “Don/Doña” subgroup, the ( $RP \square RP_r$ )/ $RP_r$  index was higher than that for the Spaniards in 1778, which suggests the importance of status in mating selection among certain lineages. However, in all cases, the Spanish group showed that alliances found for the observed repeated pairs were much more frequent than expected if the marriages occurred at random, as shown by the highly significant “z” values in this group. In contrast, married couples of Castas displayed a different behavior. Although during the eighteenth century no subdivision of this population into groups of repeated surnames was evidenced, after 1813, the observed associations of surnames surpassed the

expected values, with the largest associations (although much lower than in Spaniards) being recorded in 1822 and then again in 1832.

A comprehensive analysis including all the results suggests that although both groups (Spaniards and Castas) had similar behaviors, they may have used different marriage strategies throughout this period. Both groups were endogamous, the Spaniards more so, but preferential unions that resulted in an evident total inbreeding ( $F_t$ ) did not take place until 1813, when relatively higher values of this indicator were found that decreased again in later records. This inbreeding was not more noticeable, contrary to what might have been expected, in the highest status subgroup (Don/Doña). That is to say that despite Spanish marriages being preferential between certain lineages, this was not reflected between relatives to the point of producing an apparent inbreeding. This behavior must have been the norm in situations of relative stability, for it is precisely at the time of social, political, and military conflicts (1813) when there was a noticeable trend toward marriage alliances both within their own families (shown by isonymy) and with other families within the population (shown by repeated pairs), probably as a kind of self-protection strategy, and possibly implicating one's own property. It is also noteworthy that it was in 1778 (prior to the revolutionary outbreaks, the moment when the repeated pairs of surnames in the "Don/Doña" subgroup was proportionally more frequent than in the whole Spanish population) when social status was indeed an important factor in the matter of marriage. Probably the political, social, and resultant economic insecurity occurring since 1810 had a greater effect on the Spaniards who had fewer economic resources. Then, due to the impossibility of marriage with Spaniards of higher status, the strategy was to keep at least the small patrimony within the family, while also establishing alliances with other lineages of a similar socio-economic level as a mutual aid. Perhaps this strategy was repeated in the Castas, whose level of inbreeding also rose in 1813 and 1822, as well as of partnerships between different lineages after 1813.

Our previous studies on various characteristics of the Spaniards and Castas at the same time period showed that these groups, although representing different ethnosocial classes with contrasting economic features, did not behave substantially different from a demographic point of view. While the factors that conditioned the marriage strategies were found to be multiple, it is worth remembering the typical complex households in 1813, where the Spaniards and Castas only differed by the possession of servants and slaves among the former and the prevalence of relatives living in the same household among the latter, perhaps in order to alleviate the difficulties of individual subsistence.<sup>55</sup> Similar features were also present in Córdoba city in 1795, when although there were a much higher percentage of complex households in Castas than in Spaniards, both groups showed very low levels of inbreeding.<sup>56</sup> Furthermore, analyses of the migration of these groups in 1813 also showed similar behaviors in Spaniards and Castas<sup>57</sup> with respect to their mobility patterns.<sup>58</sup> Regarding these similarities, Anderson argues that the frequent grouping in published studies of all the Spaniards together prevents any trends being discovered for Spaniards of low status.<sup>59</sup> He demonstrates that in the census of 1821 in Guadalajara, if the group of "Spaniards" is disaggregated by social status criteria, then the low status Spaniards are virtually indistinguishable from the Indians and Castas.

From the analysis of inbreeding and homogamy, as well as in the other populations analyzed, the estimates using isonymy and repeated pairs show that by considering the two methods together, important information can be revealed about marriage patterns within and between population subgroups. In the case of Córdoba, it seems that in times of little political conflict, marital selection was not as common between related individuals, except in some family lines wielding mostly high status. These findings contrast with other studies that showed persistent consanguineous or kin marriages over time found, for instance, by Reid<sup>60</sup> and also by Merzario.<sup>61</sup> In times of instability (such as in 1813, at the height of the wars for independence and in 1822 during civil wars), both the Spaniards and the Castas were more exogamous compared to the other groups. Within the Castas, closure was the result of a search for a related spouse, perhaps as a strategy for economic cooperation and to have

a family labor force to maintain destitute households in the city, which were mainly run by widows. In the case of the Spaniards, this closure was expressed by both contracting marriage between relatives (which was maybe especially true in poorer families, with a purpose similar to that of the Castas) and by alliances between families that were not necessarily the most socially privileged (lacking the title “Don/Doña”) but probably had the same needs. Thus, this desire to combine assets, showing a clear subdivision of the population, may explain the low inbreeding observed. Similar population subdivisions have been discovered in European ethnic groups, such as between Albanian and Greek villages of southern Italy and Sicily<sup>62</sup> or in the Arbëreshe minority in Calabria.<sup>63</sup>

Noting that, in general, the Spaniards turned to marriages between certain lineages, it may be postulated that the observed inbreeding is not actually an outcome of a search for relatives as spouses, but a by-product of relationships that continued family alliances throughout time. Also, if the values derived from isonymy and repeated pairs are compared with those obtained for other populations, it can be seen that inbreeding in Córdoba was substantially lower, while values derived from the repeated pairs were remarkably high. Perhaps this is the cause of the lack of correlation found between the high levels of endogamy and homogamy with the absence of a marked inbreeding, a result also found and discussed by Segalen and Jacquard.<sup>64</sup>

Finally, it should be stressed again that these events only occurred within what was referred to in the present study as the “formal” system, that is, couples who, whatever the reasons, complied with the religious and legal standards imposed by society, of which Catholic marriage was one of the pillars. Nevertheless, it should not be forgotten that, in parallel, “unofficial” practices existed, shown primarily through the formation of couples *de facto*, the reason for the large amount of illegitimacy in Córdoba.<sup>65</sup> This included the vast majority of “exogamous” couples belonging to different ethnosocial groups, for which inbreeding and homogamy did not necessarily follow the guidelines that characterized formal unions. The high percentage in the censuses of people born to parents of different ethnosocial extraction revealed just how common this phenomenon was in the population under study. Also, the fact that the miscegenation occurred almost exclusively when analyzing the behavior of the population living “outside the norms” showed that the strictness of such norms did not produce the results desired, since a good part of the population reproduced in ways at odds with the authorities.

Summing up, all the analyses of this study have consistently shown similar behaviors in the Spaniards and the Castas, which suggests the possible existence of two not mutually exclusive phenomena. The Spanish population and their descendants in Córdoba did not seem to have been characterized, in general, by people of high socioeconomic status, but rather by people of a medium level, and furthermore, as argued by Bronner,<sup>66</sup> studies of colonial Hispanic American cities suggest a society that, for all its inequalities, exhibited regular contact between upper and lower classes.

## Conclusion

Córdoba City’s society has shown, throughout the studied period, tendencies toward both marital endogamy and homogamy, with a marked preference in mating within the same ethnosocial group and for partners of their social and legal status.

Inbreeding between spouses was negligible and almost nil in the last third of the eighteenth century. This increased in the first thirty years of the nineteenth century, but still at a low magnitude in the Spaniards and the Castas.

Even though inbreeding within families was low, a clear preference for marriages was found among certain family lineages, especially for the Spaniards, perhaps as a strategy to retain some kind of power, either related to social status or economic assets.

The results, analyzed over time, showed that marital endogamy and homogamy strengthened through more consanguineous relationships, especially in the Castas, at periods of greater political

instability, such as during the years immediately after the independence, which were characterized by constant fighting and recruitment to armies. This probably resulted as a strategy to strengthen the survival possibilities of households through alliances between relatives, and second, due to the narrowing of the marriage market.

Considering isonymy and repeated pairs together revealed some ties in a complex network of different kinds of relationships between groups. It should not be forgotten, however, that these behaviors and effects are characteristic only of the portion of the population that conformed to the guidelines established by ecclesiastical and legal standards, while another almost equally large part was reproducing outside the norms, with patterns of class exogamy, consensual couples, miscegenation, and illegitimate children. Future research should now focus on an analysis of this specific population, perhaps by using sources other than censuses to be able to include the entire set of breeding pairs of the population.

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### Author Biographies

Sonia Colantonio has a bachelor's degree in Biological Anthropology and PhD in Natural Sciences. She holds the Chair of Anthropology at the Universidad Nacional de Córdoba (Argentina). She is a main researcher at CONICET, member of the research staffs Programa Estructuras y Estrategias Familiares de Ayer y de Hoy, del Centro de Estudios Avanzados (CEA-CONICET-UNC) and Grupo de Estudios de Población y Sociedad de la Universidad Complutense de Madrid. Associate editor of the *Revista Argentina de Antropología Biológica (AABA)* and member of the editorial board and external reviewer of national and international scientific journals, among other activities. She published numerous articles in the area of Biodemography, referring particularly to the structure of human populations, evolutionary factors, inbreeding, consanguinity, isonymy, migration, and relationships among populations. Her recent publications include Fuster, V., P. Zuluaga, S. Colantonio, and J. Roman Busto, "Factors Determining the Variation in Birth Weight in Spain (1980–2010)." *Annals of Human Biology* 40 (2013), 266–75; Roman-Busto, J., V. Fuster, and S. Colantonio, "Portuguese Migration to the Canary Islands: An Analysis Based on Surnames." *Anthrop. Anz.* 69 (2012), 243–53; and Colantonio, S., A. Mangeaud, "Migraciones internas y sus condicionantes en Córdoba a principios del período independentista." *Revista de Demografía Histórica* XXIX (2011), 29–58.

Claudio Küffer is a biologist and has a PhD in Biological Sciences. He is currently an assistant researcher at CONICET and member of the research staff Programa Estructuras y Estrategias Familiares de Ayer y de Hoy, del Centro de Estudios Avanzados (CEA-CONICET-UNC). Member of Asociación de Antropología Biológica Argentina (AABA), Asociación de Estudios de Población de la Argentina (AEPA) y Asociación Latino Americana de Población (ALAP). Currently, he deals with the study of the biological structure of human populations and demographic data from historical nominal lists of the province of Córdoba (Argentina). He has published articles in the areas of

Biodemography and Historical Demography, including Küffer, C., and S. Colantonio, “Inbreeding and Population Subdivision in Córdoba Province (Argentina) at the End of the 18th Century.” *Journal of Biosocial Science* 43 (2011), 717–32; and Küffer, C., M. Ghirardi, and S. Colantonio, “Educación elemental en la ciudad de Córdoba, Argentina, en el primer tercio del siglo XIX. Sus variaciones y su relación con las demás ocupaciones infantiles.” *Revista Iberoamericana de Educación* 56 (2011), 1–12.

Juan Nazer is currently a biology student at the Universidad Nacional de Córdoba (Argentina) and is preparing his degree thesis that deals with Biodemography and historical demography.