

**Intergroup cooperation and rent allocation  
in colonial Spanish America:**

**The roles of marriage choice and identity re-invention  
in 'melting-pot' Chiloe**

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**Abstract**

In colonial Chiloe, Southern Chile, extreme geographical isolation and special historical circumstances helped to generate informal, self-supporting arrangements for peaceful intergroup cooperation (Fearon and Laitin, 1996; Leeson, 2006). Emigration to Chiloe had offered unique opportunities for self re-invention. The elite or *encomendero* class tended to use marriage choices mostly to start 'melting-pot' families, which combined 'Old Christian' and 'New Christian' surnames. Some were secret descendants of converted Jews, to whom emigration to the New World was forbidden. Rent seeking by 'melting-pot' families was particularly successful. These families gained privileged access to Indian labour and state lands. This paper uses econometric analysis of data from sources never used before, to examine whether individuals were aware of 'New' / 'Old Christian' surname differences between groups, how they responded to this awareness, and how the system rewarded or punished their responses.

**Keywords**

Intergroup cooperation, Identity, Marriage choice, Rent seeking, Surnames, Colonial history, Chiloe, *Encomenderos*, Inquisition

## 1. Introduction

This paper examines intergroup cooperation in colonial Chiloe, Southern Chile. Chiloe was the most remote of all the Spanish possessions in the New World, literally the end of the world. Cooperation emerged because of extreme geographical isolation and special historical circumstances. The two groups involved were both formed by Spanish (and some Portuguese) colonists. But their surnames were different. Some surnames ('New Christian') had been adopted by Spanish and Portuguese Jews when converting to Catholicism (although not everyone with a 'New Christian' surname was a descendant of converted Jews). The rest of the surnames were 'Old Christian'.

Because of the special conditions of colonial Chiloe, these two groups, those with 'Old' and those with 'New Christian' surnames, had to work together. Peaceful cooperation between them was the only way of resisting attacks from pirates and enemy invaders (Dutch, English, or Portuguese), and of keeping the *encomienda* Indians, on whose work the local economy depended, under control (Urbina Burgos, 1990, 2004; Angulo, 1997; Guarda, 2002; Trivero Rivera, 2004).<sup>1</sup> The social optimum depended on both groups avoiding the behaviours they had practiced before, everywhere else.

Peaceful cooperation meant that the 'Old Christians' had to abstain from the hatred, bigotry and brutal repression which had been inflicted upon 'New Christians', or suspects of being 'New Christians', in Spain. Those 'New Christians' who wished to revert to Judaism, as they had done in other places

under religious freedom (such as Amsterdam or early colonial Northern Brazil), had to abstain from doing so, at least publicly. The fact that these informal, self-supporting arrangements for peaceful intergroup cooperation existed at all had to be kept secret, because the existence itself of individuals of Jewish ancestry in colonial Chile was a secret. Both groups had to abstain from fear of each other, and trust each other.

Intermarriage is often used in intergroup cooperation to create reputation or signal credibility or trust, or as a form of gift exchange (Leeson, 2006). This paper looks at the marriage choices, and related attempts at identity re-invention, of the first three generations of Spanish *encomenderos* in early colonial Chile. We also look at the consequences of these marriage choices, in terms of access to *encomiendas* (entitlement to exploit Indian labour) and *mercedes de tierras* (grants of land instead of Indians). Such marriage choices, identity re-inventions, and subsequent opportunities for access to rents offer insights into a system of 'stateless', self-supporting, informal arrangements for peaceful cooperation between heterogeneous groups (Carr and Landa, 1983; Fearon and Laitin, 1996; Benson, 1999; Leeson, 2006).

After 1492, emigration from Spain to its American colonies offered migrants a unique opportunity to re-invent themselves. This was particularly important for 'conversos' or 'New Christians', ie the descendants of Spanish Jews who had converted to Catholicism (voluntarily or not, in 1492 or before). Many of them were suspected by the Inquisition to continue practicing Judaism secretly. Once in the New World, marriage choice was a key way to express

identity. This paper uses for the first time several rich databases to explore specific combinations of surnames in the first three generations of those immigrant families to Chiloe who would eventually become the local elite. Econometric analysis is used to study the incidence of 'New Christian' surnames from different places in Spain, and 'Old Christian' surnames, in different families. In looking at marriage choice as a proxy for identity choice, the possible roles of preferences of the family founder, compatibility or the opposite between different identities or origins, and numerical limitations (physically no one there who would make a perfect marriage partner) are all part of the general picture.<sup>2</sup> The present study is the first ever of 'New Christians' in colonial Spanish America which does not rely mainly or solely on Inquisition records and sources.

In terms of the consequences of these marriage choices and identity re-inventions, the key to successful access to rents was, first, a good balance of surnames when the family founder and his children and grandchildren married. Whatever their personal preferences, 'melting-pot' families were better than concentration on either 'Old Christian' or 'New Christian' surnames. This may have helped to make the first three generations of a family larger, and a larger family would eventually be rewarded with more *encomiendas*. As we shall see, preferences for and against an 'Old Christian' surname, or for and against 'New Christian' surnames from different Spanish cities and regions (Asturias, Ciudad Real, and neither Ciudad Real nor Asturias), could all make a difference. However, our econometric evidence suggests that the most common attitude about surname origins and marriage

choices was that either family founders ‘couldn’t care less’, or, if they did care, there was little they could or would do about it anyway.

Most or all *encomenderos* in early colonial Chiloe were aware of differences between those with ‘New Christian’ surnames and those with ‘Old Christian’ ones among them (as our econometric results will show). As explained below, there can be no doubt that some of the Spanish *conquistadores* and early colonists in Chiloe had secret Jewish ancestors. Some among them observed secretly at least some Jewish religious practices (they were ‘crypto-Jews’), several generations after their ancestors’ conversions to Catholicism (which had taken place in 1492 or before). Several questions arise. For example, why did the Inquisition never start an investigation of possible ‘New Christians’ in Chiloe? How is it that commercial, legal or other disputes were never followed by one of the sides accusing the other of being crypto-Jews (regardless of whether it was true or not), or such accusations were never recorded? How is it that unhappy marriages never led to one of the partners complaining that the other had strong, inflexible or unacceptable religious beliefs which had not been disclosed before the wedding? How is it that the crypto-Jews in Chiloe never built, or organised themselves in a synagogue? Or if they did, why this synagogue was never discovered? Or if it was, why its members were never punished? The most likely answers to all these questions is that cooperation between the two groups (‘New Christian’ surnames and ‘Old Christian’ ones) was better than confrontation, for both groups, and that informal, self-supporting arrangements for peaceful intergroup cooperation had emerged (Fearon and Laitin, 1996; Leeson, 2006).

The next section offers historical and contemporary examples of informal, self-supporting intergroup cooperation around the world, and discusses some determinants and characteristics of this cooperation in colonial Chile. Some of the massive evidence of a large (but secret) presence of descendants of converted Jews in the New World, colonial Chile and Chile is explored in Section 3. Section 4 reviews the main sources used in this research. Our marriage choice model and the results of empirical tests are presented in Section 5. Section 6 refers to questions of heterogeneity between large 'melting-pot' families, and small families with higher concentrations of either 'Old Christian' or 'New Christian' surnames. The determinants of the allocation of *encomiendas* and land grants are examined in Section 7. Section 8 concludes.

## **2. Stateless, informally supported intergroup cooperation**

Peaceful cooperation between heterogeneous ethnic groups may be more common than some journalists would make us believe. Instances of such cooperation have been identified in many geographical regions and historical periods, including the post-Soviet republics, pre-colonial Africa, Pacific Ocean islands, Chinese merchants and their trading partners, medieval Europe and the Mediterranean under '*lex mercatoria*' or 'law merchant', the American 'Wild' West, medieval Iceland, and the diamond trade in contemporary New York (Carr and Landa, 1983; Fearon and Laitin, 1996; Benson, 1999; Leeson, 2006). However, no one has found yet an example from post-medieval

Hispanic cultures, from the Spanish- or Portuguese-speaking worlds. These arrangements for peaceful cooperation tend to be informal and self-supporting. They do not need enforcing by the state. In fact, they may work better in the absence of such state.

Colonial Chiloe presented many of the characteristics which are necessary for the emergence of such arrangements (Leeson, 2006). Colonial Chiloe was for many practical purposes 'stateless'. Because of huge physical distances and primitive transport and communication technologies, the Spanish imperial institutions functioned in Chiloe very differently from elsewhere, or did not function at all. The *encomenderos* were divided into at least two and probably more heterogeneous groups. The first generation of Chiloe *encomenderos* (who are also the elite family founders) were all born in Europe, in different Spanish regions, and some of them in Portugal. Many (but less than half of them), especially among the Spanish-born, had 'Old Christian' surnames. Their families came from 'Old Christian' villages and towns (Nalle, 1987). Evidence of their 'blood purity' (meaning no Jewish ancestors) was sufficiently strong to allow them to, for example, apply to positions as Inquisition officials, even in places where these ancestry examinations were rigorous, which was not the case of continental Chile, let alone Chiloe (Medina, 1952; Guarda, 2002). The rest of the first generation of Chiloe *encomenderos* had 'New Christian' surnames. This was no proof of Jewish ancestry, but still left them more exposed than the 'Old Christians' to gossip, suspicion, investigation, and intimidation (Hojman, 2007). Those of Jewish ancestry among them had to

keep it secret. Possibly only a handful were crypto-Jews. Everyone pretended to be 'Old Christian'.

In the game theoretic approach by Fearon and Laitin (1996), inter-ethnic cooperation relies, either on fears that a defection (meaning opportunistic withdrawal of cooperation) will be punished by anyone from the other group, and therefore will spiral into all-out violent confrontation, or on expectations that defections will be policed and punished by the own group. Possibly both these ways of enforcing cooperation applied in colonial Chiloé (Guarda, 2002). Gradually, fears that an individual defection could, more or less inevitably, spiral into a disaster for all may have become pervasive, as increasingly more families engaged in intermarriage. Intermarriage was widely used, at least partly as a tool to signal credibility and trust to members of the other group, or as a form of gift exchange (in this Chiloé was no different from elsewhere, Leeson, 2006).<sup>3</sup> As we shall see, efforts by the own group towards policing and punishing defections from intergroup cooperation may have included the isolation of those families (both 'Old' and 'New Christian') who insisted on marrying 'their own'. Members of such families would not have been preferred as marriage partners and consequently these families remained small in size. A minor role (but still interesting because it was so different from elsewhere) in policing and punishing defections in the own group may have been played by the local Inquisition officials. In Chiloé, there were only a handful of these officials and special circumstances, to be discussed in the next section, surrounded them (Guarda, 2002). Possibly not much prestige was attached to these occupations locally. 'Blood purity'



guarantees as strong as elsewhere could not be given by applicants to Inquisition positions, and these guarantees were not sought. At least some Inquisition officials may have been co-opted by the most powerful local families.

The Chiloe arrangements for peaceful intergroup cooperation were successful. By the end of the colonial period (1826), all-out confrontation, the nightmare scenario in the Fearon and Laitin (1996) model, had been avoided. Moreover, for all practical purposes, and after several generations of intermarriage, the distinction between the two groups had disappeared. The most successful local families (which were also the large ones) had substantial numbers of members with both 'Old' and 'New Christian' surnames (Hojman, 2007). In this sense there was little difference between any particular large family and the next one. These 'melting-pot' families were generously rewarded with *encomiendas* and land grants.

We are not claiming that everybody knew about someone else's Jewish ancestry in colonial Chiloe. A secret shared by so many would not have remained secret for long. Our claim is more modest. We argue that it is likely that: a) only some among the *encomendero* elite knew, or shared the secret; b) everyone who knew, either also knew that it was in his or her own interest to keep the secret, or was told by senior, highly respected members of his or her own group, and possibly his or her own family, to keep quiet; c) the opportunistic temptation to defect was always individual, but the motivation to cooperate was individual, family-specific, group-specific, or even all three; and

d) defections would be swiftly acted upon, so that their negative impact would be minimised. Very few, if any, knew that someone else in another family was a crypto-Jew, or even that someone else in another family had Jewish ancestors. However, most or all knew that there were some differences between those with 'Old' and those (or at least some of those) with 'New Christian' surnames, and that these differences had had immediate and powerful implications back in Europe. <sup>4</sup>

### **3. 'New Christians' in the New World, Chile and Chiloe**

At the time of Columbus' travels and the beginning of the Spanish conquest of the Americas in 1492, life for converted Jews in Spain was becoming intolerable. This resulted from an especially nasty combination of popular and institutional anti-Semitism, with a Spanish Inquisition keen on identifying crypto-Jews, confiscating their assets, and applying extreme forms of physical punishment (Wolff, 1971; Haliczzer, 1973; MacKay, 1985; Poole, 1999; Rabade Obrado, 2005). There are three types of evidence of massive colonial emigration to the New World by descendants of converted Jews. This emigration was illegal and therefore secret. The first type of evidence can be found in historical sources from the conquest and colonial period themselves (Friede, 1951; Liebman, 1973; Boyd-Bowman, 1976; Hoberman, 1977; Flory and Smith, 1978; Hordes, 1991; Schwartz, 1991; Novinsky, 2001). Extreme poverty and huge income and wealth inequalities among both Inquisition officials and other churchmen in Spain and the Americas, as well as expectations of impunity, made widespread corruption, document

falsification and rule bending inevitable (Nalle, 1987; Millar Carvacho, 2004). Many '*conversos*' were recorded as Portuguese (Keith, 1969; Saguier, 1985; Silverblatt, 2000; Bradley, 2002).<sup>5</sup> The second type of evidence is contemporary, provided by twentieth or twenty-first century families who claim a secret Jewish ancestry (Halevy, 1996; Ward, 1999; Jacobs, 2000; Kunin, 2001; Loewe and Hoffman, 2002). The third type of evidence comes from modern genetics (Ellis et al, 1998; Lee et al, 1999; Carvajal-Carmona et al, 2000; Mullineaux et al, 2003; Makriyianni et al, 2005; Weitzel et al, 2005). The accumulated weight of these three types of evidence is overwhelming.

Among the first waves of Spanish arrivals to continental Chile, in the 1530s and 1540s, there were some *conquistadores* of secret Jewish ancestry (Bohm, 2001). Chile was poorer and more primitive than Peru, and therefore less attractive. But it was also much safer for those who wanted to go as far away as possible from the Inquisition (Medina, 1952). From very early on, many of the Spanish (and Portuguese) families arriving in Chile had 'New Christian' surnames (Retamal Favereau et al, 2000, 2003; Bonnin, 2001; Hojman, 2007). The only time when there was a relative decline in these arrivals (albeit a temporary one), was following the trials and executions of alleged crypto-Jews in Lima in 1639. At least one of the victims had been extradited from Chile. Immediately after 1639 there was also a temporary improvement in the prestige and desirability of Inquisition jobs in Chile, which traditionally had been much lower than elsewhere (Medina, 1952; Cross, 1978; Wadsworth, 2005). However, in the long term Chile may have remained

as hospitable to 'New Christian' surnames as before 1639 (Bradley, 2002, p. 612).

Differently from other places in the New World, there is little evidence of arrivals of secret Jewish ancestry to colonial Chiloe.<sup>6</sup> In every sense, Chiloe was precisely the opposite from the most 'civilised' places in the Spanish American colonies, such as Mexico City and Lima. Chiloe was extremely poor, with no gold or silver, and cold and rainy (Moreno Jeria, 2006). It was literally the end of the world, far away from any highly frequented trade route. Its main value to the Spanish crown was strategic, as a key stop in the route of possible Dutch or English invaders to the Pacific Ocean shores of the Americas, coming round Cape Horn (Angulo, 1997; Guarda, 2002).<sup>7</sup> It was precisely its geographical isolation and remoteness which would have made Chiloe attractive to anyone keen on going as far away from the Inquisition as possible. If 'New Christians' in search of a new life went as far away as the colonial territories which today are northern New Mexico and southern Colorado, or to the Central American tropical jungles, the Brazilian Sertao, the Colombian Andes, Buenos Aires and continental Chile, there is no reason why they should not have gone to Chiloe. Possibly there were also processes of self-selection. As opposed to Lima, Chiloe was no good for a rich merchant active in international trade who was determined to stay in this economic activity. But most 'New Christians' were not merchants, let alone this type of long-range, wholesale, internationally-connected merchant. Many 'New Christians' were shoemakers, subsistence farmers, petty vendors, sailors,

artisans, small craftsmen, peddlers and petty government officials (Keith, 1969; Aufderheide, 1973; Rabade Obrado, 2005; Simms, 2007).<sup>8</sup>

Guarda (2002) studied several thousand members of Chiloe *encomendero* families and their social milieu during the colonial period. But only four Inquisition officials were found among them. Even these four were unusual. The first one, born in Spain, had married into a Santiago (Chile) family. They had no family in Chiloe and no children. They seem to have been isolated in Chiloe and possibly at some stage they went back to Santiago. The wife of the second Inquisition official had been born in Chiloe and they had several children locally. However, we know nothing of the following generations. Apparently no descendant successfully presented this ancestor's Inquisition activities as proof of merits or entitlements (which would have been the usual practice). Numbers three and four were respectively grandfather (on the mother's side) and grandson. One of the grandson's ancestors on the father's side had been Portuguese. All four of these Inquisition officials, or their wives, had some ancestors with 'New Christian' surnames.

#### **4. Data and sources**

The key sources for this study are the above mentioned Guarda (2002) and the website [www.sephardim.com](http://www.sephardim.com). We have compiled from the former a list of all 82 founders of Chiloe *encomendero* families for whom the names of their wives, and the names of the respective children's and grandchildren's spouses, are available. This gives a total of 347 *encomendero* surnames in

the first three generations of these 82 families. Since these individuals were socially equivalent, had their marriage choices been random, any two of these surnames had the same probability of getting together in a marriage.

Alternatively, if there were some differences (cultural, secret religious, or other) among these people, and individuals were aware of these differences and prepared to act on them, then the patterns in which pairs of surnames would come together in marriages would not be random. In particular, individuals with 'Old Christian' ancestry, or with a secret 'New Christian' ancestry from a particular place in Spain, either may have preferred to marry 'their own', or may have used the opportunity to re-invent themselves, which included marrying someone different from themselves.<sup>9</sup>

Our second source is the most complete source of 'New Christian' surnames: the website [www.sephardim.com](http://www.sephardim.com). This website gives possible places for surname origins in Spain including Aragon, Asturias, Ciudad Real, Mallorca, Murcia and Tarazona. Out of our 347 surnames of Chiloe *encomendero* families mentioned in the previous paragraph, 41 are identified in [www.sephardim.com](http://www.sephardim.com) as Asturias ones, and 48 as Ciudad Real ones. A total of 123 surnames from our list of 347 are 'Old Christian', meaning that they do not appear in [www.sephardim.com](http://www.sephardim.com) at all. There are also 111 surnames in our list of 347, which are mentioned in [www.sephardim.com](http://www.sephardim.com) as 'Bonnin surnames' (that is, listed as 'New Christian' in the classic book by Bonnin, 2001), but which are not from either Asturias or Ciudad Real. A small number among the 347 surnames (25 of them) are not in any of the previous groups, but they are mentioned as 'New Christian' by other sources consulted by the

[www.sephardim.com](http://www.sephardim.com) compilers. Out of the 82 surnames of Chiloe *encomendero* family founders, 9 of them are in both the Asturias and the Ciudad Real [www.sephardim.com](http://www.sephardim.com) lists. It must be emphasised that having a 'New Christian' surname was no proof of Jewish ancestry. When adopting a new surname, often Jewish converts would choose common Spanish surnames. In the case of some 'New Christian' surnames, at least some individuals with that particular surname had 'Old Christian' ancestors.<sup>10</sup> Whether these surname differences and surname-related identities made any difference to marriage choices in early colonial Chiloe is an empirical matter which will be addressed in following sections.

## **5. The marriage choice model:**

### **'Old Christian', 'New Christian', or 'couldn't-care-less'?**

The first important question we will address is as follows. To what extent, if at all, were any particular proportions or ratios between surname groups or types, in a Chiloe *encomendero* family, affected by the preferences of the family founder? By answering this first question, we will also be answering a second, equally important question. Were family founders aware of differences (cultural, possibly secret ethnic, possibly secret religious) between these groups with different surnames? Preferences regarding marriage choices according to surnames are possible, or make sense, only if there is prior awareness of such differences.

Therefore, the first group of dependent variables to be explained are several ratios between surnames in each family. Only the surnames in the first three generations of the family are considered. This is because it is unlikely that the family founder would still have been around to affect the marriage choices of his great grandchildren. By then any direct, living memories of his place of origin in Spain or Portugal, and of his family, friends and neighbours there would have disappeared. There are four of these ratios between surnames with a substantial presence in our Chiloé sample. They are: one, the ratio between 'New Christian' (NC) surnames from Ciudad Real (CR), and 'Old Christian' (OC) surnames in a family (CR/OC); two, the ratio between NC surnames from Asturias (AST), and OC surnames (AST/OC); three, the ratio between other NC, or 'other Bonnin' (2001), surnames (OBO, excluding Ciudad Real and Asturias), and OC surnames (OBO/OC); and four, the ratio between OC surnames and all NC surnames, the latter defined as the sum of Ciudad Real plus Asturias plus 'other Bonnin' surnames (OC/NC).

$$[1] \quad NC = CR + AST + OBO$$

Descriptive statistics are presented in Table 1. <sup>11</sup>

The respective right-hand, explanatory, or independent variables are total family size, again in the first three generations only (T, measured in, or approximated by, number of surnames in the family), and the origin of the family founder's surname (dummy variables DCR, DAST, DOBO, and DOC, for Ciudad Real, Asturias, 'other Bonnin', and OC, respectively). Both positive



and negative, and linear and non-linear effects of family size on the ratios between surnames are possible. For example, a large family may have become so large that eventually their preferred marriage choices (exogamic or endogamic) became increasingly more difficult. Or, depending on whom you were or what you wanted, marrying into a small family may not have been as attractive as into a larger one. The family founder may (or is expected to) have used his authority to encourage a child or grandchild towards or away from a potential marriage partner. This pressure could take place without explaining its real reasons and without alerting the local Inquisition agents.

$$[2] \quad CR/OC = f(T, T^2, DCR, DAST, DOBO, DOC)$$

$$[3] \quad AST/OC = g(T, T^2, DCR, DAST, DOBO, DOC)$$

$$[4] \quad OBO/OC = h(T, T^2, DCR, DAST, DOBO, DOC)$$

$$[5] \quad OC/NC = i(T, T^2, DCR, DAST, DOBO, DOC)$$

If substantial numbers of family founders were aware of any identity differences between these groups, and were prepared to act accordingly, at least some of the estimated coefficients of the dummy variables will be significantly different from zero. The expected signs of the respective estimated coefficients may be either positive or negative, depending on whether family founders were keen on family members marrying 'their own',

or, on the contrary, keen on using marriage choices in order to re-invent themselves.

A selection of empirical results for Equations 2 to 5 is presented in Tables 2 to 5, respectively. Each column represents an ordinary least squares multiple regression. The estimates are heteroskedastic-consistent (White, 1980). The four or five columns in each table give a range of alternative combinations of regressors. The best fits in each table, according to the coefficient of determination adjusted for degrees of freedom ( $R\text{-bar}^2$ ), are Regressions 2.4 in Table 2, 3.4 in Table 3, 4.4 in Table 4, and both 5.2 and 5.4 in Table 5. The most important results are as follows.

First, family size did not make any difference. Neither  $T$  nor  $T^2$  were ever statistically significant.

Second, in all four tables, one (but only one) group of family founders made a difference to marriage choices in his own family. Family founders with 'Old Christian' surnames played a statistically significant role (at the five percent level or better) in lowering the ratio CR/OC in their own families (see the impact of the dummy variable DOC in Table 2, especially Regression 2.4).

Family founders with a 'New Christian' surname from Asturias played a statistically significant role in increasing the ratio AST/OC in their own families (see the impact of the dummy DAST in Table 3, especially Regression 3.4).

Family founders with 'New Christian' surnames, but not from Ciudad Real or Asturias, played a statistically significant role in increasing the ratio OBO/OC

in their own families (see the impact of the dummy DOBO in Table 4, especially Regression 4.4). Finally, family founders with 'Old Christian' surnames (again) played a statistically significant role in increasing the ratio OC/NC in their own families (see the impact of the dummy DOC in Table 5, especially Regressions 5.2 and 5.4). In all four cases, the relative impact of the respective dummy variable is neither negligible nor excessively large.<sup>12</sup>

Third, it follows from the second result above that all the family founders were aware of differences according to surnames, with the possible but unlikely exception of family founders with 'New Christian' surnames from Ciudad Real (see the next result).

Fourth, a Ciudad Real surname in the family founder never makes any difference to anything. It is highly unlikely that these family founders were unaware of group differences, since everyone else was aware of them. It is more likely that their previous experiences in Spain may have led them to adopt extremely low profiles as a survival strategy.<sup>13</sup>

Fifth, many family founders did not care about a whole range of marriage choices, or, if they did care, they did not do anything about it. The respective dummy variables were never statistically significant at the usual levels. None of the three 'New Christian' surname groups (Ciudad Real, Asturias, and 'other Bonnin') in the family founder makes any difference to the ratio CR/OC (Table 2). The three surname groups, 'New Christian' from Ciudad Real, 'other Bonnin' 'New Christian', and 'Old Christian', do not make any difference

to the ratio AST/OC (Table 3). The three surname groups, 'New Christian' from Ciudad Real, 'New Christian' from Asturias, and 'Old Christian', do not make any difference to the ratio OBO/OC (Table 4). Finally, none of the three 'New Christian' surname groups (again) makes any difference to the ratio OC/NC (Table 5).

Sixth, the amount of variance in the dependent variable which is explained by this model is small, always less than 20 percent of the total. At least 80 percent of the variance is explained by factors which are not considered by the model. In particular, at least 80 percent of the variance is not explained by surname preferences of the family founders. This, together with our fifth result above, confirm that most family founders: a) 'couldn't care less' about the surname origins of those whom themselves and their children and grandchildren married; or b) could not or would not do anything about it; or c) were deliberately using intermarriage in order to re-invent themselves.<sup>14</sup>

## **6. Heterogeneity, surname concentration, and family size**

The multiple regression exercises presented in the previous section used all the available observations in the 82-family sample (76 in Tables 2, 3 and 4, and 82 in Table 5). These regressions yielded several interesting results. However, we should not assume that the sample is perfectly homogeneous. On the contrary, there is substantial heterogeneity in it. In particular, it is possible to identify several small groups of families, which are different from other small groups, both in terms of the degree of concentration of surname

types in the families in that particular group, and in terms of family size. In tests run with the whole 82-family sample, the association between surname concentration and family size was not statistically significant. However, when we compare any two of these small groups of families, the differences are dramatic. All the large families are 'melting-pot' ones: they are good at combining 'Old' and 'New Christian' surnames. In contrast, some small families are not.

If we define a large family as having 20 or more surnames in its first three generations (our results are robust to alternative definitions), there are 8 of these large families in the 82-family sample, ranging in size from 20 to a maximum of 30 surnames. A typical characteristic of the large families is that, although the surname type of the family founder tends to prevail, still other surname origins have relatively substantial presences. 'New' and 'Old Christian' surnames combine more or less effortlessly in every large family. Out of a total of 199 surnames in the eight large families, 152 surnames are 'New Christian' and 47 are 'Old Christian', a ratio of just over 3 to 1. Even the comparatively most 'New Christian' among the large families (its founder has an 'other Bonnin' 'New Christian' surname) presents a 'New' to 'Old' surname ratio of 22 to 3, or slightly over 7 to 1. The comparatively most 'Old Christian' of the large families (its founder has an 'Old Christian', Basque surname) has a 'New' to 'Old' ratio of 14 to 10, or slightly less than 3 to 2. The large families were not identical, but they were all 'melting-pot' families.

In contrast, there is much more surname concentration in some of the small families. In the comparatively most 'New Christian' among the small families (up to 12 surnames in the first three generations, 15 families, a total of 122 surnames), the average 'New Christian' to 'Old Christian' surname ratio is 10 to 1. There are 5 families in the 82-family sample without any 'Old Christian' surnames in them at all. Their average family size is very small, less than 7 surnames each. Similarly concentrated surname patterns appear in those small families which comparatively are predominantly 'Old Christian'. There are 7 families in the sample, in which the 'New Christian' to 'Old Christian' surname ratio is less than or equal to 1.0. The average family size in this group is only 10 surnames.

These small families possibly have more concentrated surname origins, at least partly because they were unable or unwilling to mix with others. And, in addition to any biological considerations, these families remained small in size, at least partly precisely because they did not mix. In contrast, and relatively speaking, the large families tended to follow 'melting-pot' patterns, rather than reproduce the Old World ethnic divisions. It is likely that those small families who did not want to mix were rejected themselves by the rest, who rightly saw them as a threat to intergroup cooperation.

## **7. Allocation of *encomiendas* and land grants**

Between the arrival of the first Spanish *conquistadores* in 1567 and the end of the *encomienda* system in 1780, Chiloé had 96 *encomiendas* which were

allocated to individual *encomenderos* a total of 416 times (Guarda, 2002, pp. 13-27). The most desirable *encomiendas* (which allowed the *encomendero* to become very rich very fast) were not easy to get. Often they were fought over at every stage, from the local level to Santiago, and then to Lima, and ultimately all the way to Madrid (Flusche, 1989). Many of our 82 *encomendero* families managed to receive only one *encomienda* during this whole 213-year colonial period (Guarda, 2002, pp. 36-37). However, other families were much more successful. A total of 15 families received 10 or more *encomiendas* each. The most successful family in our sample received a total of 31 *encomiendas* during the period.

What were the determinants of a family's success? Did a particular surname origin in the family founder help? Or any particularly high or low ratios between surnames of different origins (in the first three generations)? Could success have been affected by family size (again, in the first three generations), in linear or non-linear ways? All of these possibilities are included in the model presented in Equation 6, where the dependent variable, ENCO, is the number of *encomiendas* allocated to a family during the whole of the colonial period.

$$[6] \quad \text{ENCO} = j(T, T^2, \text{CR/OC}, \text{AST/OC}, \text{OBO/OC}, \text{OC/NC}, \\ \text{DCR}, \text{DAST}, \text{DOBO}, \text{DOC})$$

A selection of multiple regression results is presented in Table 6. They explain about 40 percent of the variance in the dependent variable. The best

fit is Regression 6.3. Only three right-hand variables were statistically significant: family size, squared, the ratio CR/OC, and DOC. The respective signs are positive, negative, and negative.  $T^2$  is highly significant, at the one percent level or better, across Table 6.  $T^2$  gives much better results than  $T$  (the latter regressions are not presented here). This non-linearity aspect is particularly interesting. In practice it means that, for example, a family size equal to 10 surnames in the first three generations led to a total of 2 *encomiendas* during the whole colonial period. But a family twice as large (20 surnames in the first three generations) yielded, not 4, but 8 *encomiendas*. Large family sizes in the early colonial period were generously, and non-proportionally, rewarded by the system. The ratio CR/OC is significant with negative sign. Families with 'too many' Ciudad Real surnames, in relation to 'Old Christian' surnames (in the first three generations), were punished. The respective points-of-means elasticity is -0.2. For each 10 percent increase in CR/OC, the family would receive 2 percent fewer *encomiendas*. On the other hand, those families in which the founder had had an 'Old Christian' surname (dummy variable DOC) were also punished by the system, losing about 3 *encomiendas* each during the whole period.

So, the Chiloe *encomiendas* went overwhelmingly to the large *encomendero* families, which as mentioned before were better at 'melting-pot' marriages and consequently were contributing more actively to intergroup cooperation. Moreover, the other two econometric results in this section simply reinforce this pattern. 'Old Christian' surnames and Ciudad Real 'New Christian' ones represent respectively the two extremes of cultural, ethnic or religious



polarisation along Old World, European lines. By punishing one of them for becoming too large at the expense of the other (negative impact of the ratio CR/OC), but also punishing the other (negative impact of the DOC dummy), a sort of balance, equilibrium or compromise is restored. Among the 'New Christian' surnames, only the most high-profile ones (Ciudad Real) suffered, but not the Asturias or 'other Bonnin' ones.

Land grants (land but not Indians) became gradually more desirable as the Indian population declined. This decline had made many *encomiendas* (Indians but not land) less profitable. The first systematic land grants in Chiloe, a total of 29, were awarded between 1670 and 1696 (Donoso and Velasco, 1970, pp. 211-213). This is just over a hundred years after the arrival of the first *conquistadores* to Chiloe (1567). It corresponds very closely to the period immediately after the first three generations of *encomendero* families. Since these land grants were only a small number, 29, not every family in Chiloe benefited. *Encomendero* families did much better than other families, even in the same social milieu. Four families received two land grants each, which makes the total number of beneficiary families even smaller, down to 25. Twenty families were *encomendero* families and the rest (five) were not. Guarda (2002, pp. 500-504) lists 94 *encomendero* families and 341 non-*encomendero* families in the same social milieu. The statistical evidence of association between being an *encomendero* family and having access to a land grant is very strong.

Moreover, there was further concentration in the allocation of these land grants. Even among *encomendero* families, those with several *encomiendas* did much better than those with only a few, or just one. Out of the 94 *encomendero* families mentioned by Guarda (2002, pp. 36-37), 28 families were awarded more than three *encomiendas* during the colonial period, and the rest (66 families) were awarded only three or less *encomiendas*. However, the former group received 14 out of the 20 land grants. The second group received only 6 land grants. Again, the statistical evidence of association between being one of the most powerful *encomendero* families, and receiving a land grant, is very strong.

The 29 land grants under study were distributed during a period of twenty-seven years (1670-1996). New multiple regressions, based on a theoretical model similar to that of Equation 6, may help to explain further which families did benefit from them. But the sample is small and the results (which are not presented here) may not be as reliable as those in Tables 2 to 6. Also, assumptions are needed about time preferences. It was not the same to receive your land grant at the beginning of this 27-year period, or at the end of it, especially since no credible promises about future awards could be given. The only independent variable with a significant non-zero impact, which was robust to different time-discount assumptions, was the dummy DOBO, with positive sign. Even among the most powerful *encomendero* families, not all of them did equally well. It helped if the family founder had had an 'other Bonnin' 'New Christian' surname. Families with 'other Bonnin' surname founders did significantly better than the rest in terms of land grants.

Rent allocation was used to reward intergroup cooperation. Among the beneficiaries, 'other Bonnin' surnames may have done particularly well, precisely because they were not unequivocally 'New Christian' from a particular city or region (such as Ciudad Real or Asturias). 'Other Bonnin' surnames may have benefited from their low profiles, or from the possibility of being seen as having, or even discreetly suggesting themselves, either 'New' or 'Old Christian' roots, according to specific circumstances on different occasions. This ambiguity may also be seen as a case of 'strength of weak ties' (Granovetter, 1973). Combining strong ties (with individuals who also had 'other Bonnin' surnames) and weak ties (with everyone else) in their social networks may have been better than forming and keeping strong ties only.

## **8. Conclusions**

Most (or all) *encomenderos* in early colonial Chile were aware of differences between 'Old' and 'New Christian' surnames, and between different 'New Christian' ones. The passive attitudes regarding marriage choices of the only possible exceptions, family founders with Ciudad Real 'New Christian' surnames, were more likely to result from cautious survival strategies than from ignorance. The most typical response to such awareness was a 'couldn't care less' one, especially in large, 'melting-pot' families. These families were rewarded with *encomiendas* and land grants. Among them,

families with 'other Bonnin' surname founders (that is, 'New Christian' surnames but not from Ciudad Real or Asturias) did even better than the rest.

More than 500 years have passed since the expulsion of the Jews from Spain in 1492, and almost 200 years since the final demise of the Spanish Inquisition. Still, even today no Chilean historian will point a finger at a Chilean family and 'out' them as descendants of converted Jews. If the family themselves come forward to publicly claim Sephardi ancestry, that is their own business, but no one else's. This is standard practice among English-language intellectuals, but not in Latin America (Elkin, 1996). We may interpret this self-imposed silence as yet another reminder of how hugely successful the informal, self-supporting arrangements for peaceful intergroup cooperation, explained above, were in early colonial Chiloe. Although further research is necessary before this can be confirmed, possibly with only minor modifications similar arrangements emerged also in continental Chile. Some of the attitudes, traditions and beliefs generated by these arrangements may have become an essential aspect of the country's national culture.

No one in colonial Chiloe (or for that matter anywhere else in colonial Spanish America) would have admitted to a 'New Christian' ancestry, except under torture. Differently from Spain and many other places in the New World, the typical Inquisitorial methods of investigation were never used in Chiloe.

However, when combined with information from the [www.sephardim.com](http://www.sephardim.com) website, the Guarda (2002) data on the marriage choices of Chiloe *encomenderos* represent a very rich source of information on these families'

perceptions of their own identities, on whether some of them saw themselves as different from the rest, and on what they did if that was the case. Our econometric and other results show that these people were aware of differences between them, but, whereas some *encomendero* families insisted on marrying 'their own', most attempted to re-invent themselves and therefore adopted 'melting-pot' attitudes. In the long term, such attitudes contributed not only to intergroup cooperation, but also to successful rent seeking. They were eventually rewarded with more *encomiendas* during the whole of the colonial period, and with more land grants when these grants were being systematically distributed.

In other words, not discriminating (or refusing to discriminate) paid. Or maybe the ambiguities associated to having both 'New Christian' and 'Old Christian' surnames in the same, large family, could be exploited in different ways under different circumstances, but always, or almost always, with a favourable outcome.

Perhaps these results are only surprising if we wrongly see even the most remote corners of colonial Spanish America as places where rule by the Inquisition could not be challenged, however discreetly. Or, if we mistakenly see all descendants of converted Jews everywhere as secretly engaged in Jewish religious practices and ready to become martyrs (both approaches have been taken by some authors in the past). On the other hand, our results are perfectly compatible with the Becker (1971) theory of discrimination. A discriminating employer (who prefers to hire men but not women, or whites

but not blacks) will eventually be punished by a competitive product market in which other, non-discriminating employers make higher profits by hiring both men and women, and both blacks and whites. In colonial Chile the (paradoxically competitive) market for rents eventually favoured those early *encomenderos* who did not have a taste for discrimination. Our results may also be compatible with sociological theories of the 'strength of weak ties'. Possibly even more important, the success of the Chile 'melting-pot' families could not have happened in the absence of informal, self-supporting (and secret or very discreet) arrangements for peaceful intergroup cooperation.

There may be some interesting implications of this paper's results, for understanding both Chilean culture and the long-term relative success (especially by Latin American standards) of free-market, open-economy policies in Chile. Fear of the Spanish Inquisition may have contributed to a distinctive culture of discretion, in which not only answers but also questions were carefully thought out and articulated. On the other hand, the remoteness of the nearest Inquisition tribunal (in Lima, Peru) could have made the threat of confiscation on the grounds of heresy less immediate. Possibly the Inquisition was less of a threat to property rights in colonial Chile, and therefore less damaging to investment, and less of a 'roving bandit', than elsewhere. Finally, the coming together of 'New Christian' and 'Old Christian' surnames in 'melting-pot' Chile families (and, under slightly different circumstances, possibly also in continental Chile) may be a good example of early Chilean compromise, finding a solution that makes everyone happy, or

reasonably happy, following 'conciliatory British' rather than 'conflict-prone Hispanic' patterns.

**Table 1****Descriptive statistics: means, standard deviations, minima and maxima, and correlation matrix**

## 1A. Means, standard deviations, minima and maxima

Variable	Mean	Std. dev.	Minimum	Maximum
Ratio CR/OC	1.077	0.993	0.000	4.000
Ratio AST/OC	0.877	0.925	0.000	5.000
Ratio OBO/OC	1.746	1.226	0.000	6.000
Ratio OC/NC	0.462	0.486	0.083	2.500
Family size T	12.702	6.018	5.000	30.000
ENCO	6.368	6.718	1.000	31.000

## 1B. Correlation matrix

	OBO/OC	CR/OC	AST/OC	OC/NC	T
CR/OC	0.303				
AST/OC	0.221	0.693			
OC/NC	-0.526	-0.456	-0.419		
T	-0.042	-0.003	0.075	-0.128	
ENCO	0.008	-0.130	-0.047	-0.126	0.602



**Table 2****Chiloe *encomenderos*: impact of the family founder surname on CR/OC marriage choices, first three generations**

(dependent variable: CR/OC, the ratio between 'New Christian' surnames from Ciudad Real and 'Old Christian' surnames, Equation [2])

	2.1	2.2	2.3	2.4
Constant	1.75 (2.86)	1.75 (2.86)	1.20 (3.49)	1.26 (4.42)
Family size, T	-0.073 (-0.97)	-0.072 (-0.99)	0.012 (0.79)	
T <sup>2</sup>	0.0028 (1.28)	0.0027 (1.29)		0.00052 (1.18)
Dummy DCR	0.51 (1.78)	0.51 (1.86)	0.52 (1.81)	0.52 (1.85)
Dummy DAST	0.013 (0.04)			
Dummy DOBO	-0.50 (-1.70)	-0.50 (-1.77)	-0.51 (-1.76)	-0.51 (-1.76)
Dummy DOC	-0.69 * (-2.41)	-0.70 * (-2.42)	-0.66 * (-2.29)	-0.66 * (-2.30)
R-bar <sup>2</sup>	0.139	0.152	0.150	0.154
n	76	76	76	76

Note: The t-statistics are in parentheses. The standard errors and variance are heteroskedastic-consistent estimates.

\* Statistically significant at the 5 percent level.

**Table 3****Chiloe *encomenderos*: impact of the family founder surname on AST/OC marriage choices, first three generations**

(dependent variable: AST/OC, the ratio between 'New Christian' surnames from Asturias and 'Old Christian' surnames, Equation [3])

	3.1	3.2	3.3	3.4	3.5
Constant	1.16 (1.96)	1.11 (1.97)	0.73 (2.87)	0.78 (4.68)	0.67 (4.85)
Family size, T	-0.045 (-0.63)	-0.049 (-0.67)	0.010 (0.63)		
T <sup>2</sup>	0.0018 (0.82)	0.0019 (0.86)		0.0004 (0.83)	0.0004 (0.82)
Dummy DCR	-0.0012 (-0.004)				
Dummy DAST	0.66 * (2.01)	0.71 * (2.28)	0.69 * (2.15)	0.70 * (2.17)	0.75 * (2.27)
Dummy DOBO	-0.11 (-0.41)				
Dummy DOC	-0.37 (-1.41)	-0.30 (-1.56)	-0.27 (-1.50)	-0.28 (-1.54)	
R-bar <sup>2</sup>	0.058	0.083	0.089	0.091	0.082
n	76	76	76	76	76

**Table 4****Chiloe *encomenderos*: impact of the family founder surname on OBO/OC marriage choices, first three generations**

(dependent variable: OBO/OC, the ratio between other Bonnin 'New Christian' surnames and 'Old Christian' surnames, Equation [4])

	4.1	4.2	4.3	4.4
Constant	2.39 (3.15)	1.95 (5.93)	1.66 (7.59)	1.82 (6.02)
Family size, T	-0.087 (-0.88)	-0.020 (-1.13)		-0.021 (-1.20)
T <sup>2</sup>	0.0021 (0.76)		-0.0005 (-1.12)	
Dummy DCR	-0.055 (-0.19)			
Dummy DAST	-0.24 (-0.85)	-0.29 (-1.18)		
Dummy DOBO	0.68 * (2.16)	0.68 * (2.00)	0.80 * (2.40)	0.81 * (2.43)
Dummy DOC	-0.57 * (-2.31)	-0.53 * (-2.07)	-0.42 (-1.66)	-0.42 (-1.69)
R-bar <sup>2</sup>	0.140	0.159	0.160	0.164
n	76	76	76	76

**Table 5****Chiloe *encomenderos*: impact of the family founder surname on OC/NC marriage choices, first three generations**

(dependent variable: OC/NC, the ratio between 'Old Christian' and 'New Christian' surnames, Equation [5])

	5.1	5.2	5.3	5.4	5.5
Constant	0.022 (0.11)	0.098 (0.55)	0.368 (6.32)	0.088 (0.50)	0.340 (6.82)
Family size, T	0.043 (1.64)	0.041 (1.64)		0.038 (1.55)	
T <sup>2</sup>	-0.0015 (-1.91)	-0.0015 (-1.93)	-0.0002 (-1.06)	-0.0014 (-1.84)	-0.0002 (-1.02)
Dummy DCR	0.13 (0.74)				
Dummy DAST	-0.15 (-1.48)	-0.12 (-1.96)	-0.11 (-1.65)		
Dummy DOBO	0.058 (0.58)				
Dummy DOC	0.39 * (2.50)	0.34 ** (2.83)	0.32 ** (2.77)	0.35 ** (2.90)	0.34 ** (2.84)
R-bar <sup>2</sup>	0.103	0.115	0.112	0.115	0.113
n	82	82	82	82	82

\* Statistically significant at the 5 percent level.

\*\* Statistically significant at the 1 percent level.

**Table 6****Allocation of Chileo *encomiendas* to *encomendero* families, 1567-1780**(dependent variable: ENCO, number of *encomiendas* allocated to each family, Equation [6])

	6.1	6.2	6.3	6.4	6.5
Constant	5.56 (2.70)	5.66 (2.76)	4.91 (2.51)	5.63 (2.69)	6.07 (2.28)
T <sup>2</sup>	0.021 ** (3.78)	0.020 ** (3.71)	0.020 ** (3.74)	0.020 ** (3.72)	0.020 ** (3.74)
Ratio CR/OC	-1.81 * (-2.58)	-1.58 * (-2.40)	-1.35 * (-2.15)	-1.59 * (-2.46)	-1.67 * (-2.18)
Ratio OC/NC	-1.39 (-1.30)	-1.20 (-1.20)		-1.18 (-1.18)	-1.23 (-1.19)
Dummy DCR	1.17 (0.80)				
Dummy DAST				0.17 (0.11)	
Dummy DOBO					-0.53 (-0.27)
Dummy DOC	-2.74 (-1.72)	-2.88 (-1.87)	-3.19 * (-2.13)	-2.87 (-1.86)	-3.23 (-1.67)
R-bar <sup>2</sup>	0.391	0.398	0.403	0.386	0.387
n	57	57	57	57	57

## Notes

<sup>1</sup> Chiloe is an island about 1,000 kilometres south of Chile's capital city, Santiago. Legal details of the *encomienda* as an institution varied across colonial Spanish America. In general, the *encomienda* owner or *encomendero* collected taxes from 'his' or 'her' Indians (typically as forced labour) in the king's name, made sure that the Indians converted to Catholicism, and kept any surpluses for himself or herself. At least at the beginning of the colonial period, *encomenderos* could become extremely rich. However, since *encomiendas* were granted for only limited periods, *encomenderos* often acted as 'roving bandits' (Olson, 2000).

<sup>2</sup> Spaniards in early colonial Chiloe (whether 'Old' or 'New Christian') were not the only ones attempting to re-invent themselves on arrival to Chile. Far from it, many others did the same. For example, Basque immigrants in the eighteenth century faced an uphill struggle against the snobbery of earlier arrivals, which may have forced the Basques to ignore many of the traditions they had left behind, in order to be accepted (Vial Correa, 1971; Hojman, 2002).

<sup>3</sup> On the other hand, sometimes endogamy was perceived as desirable or inevitable (Hojman, 2007).

<sup>4</sup> Another factor possibly contributing to the success of intergroup cooperation in colonial Chiloe may have been the fact that many of the *encomenderos* with 'Old Christian' surnames were Basques. The conflict between 'Old' and 'New Christians' was less traumatic in the Basque Country than elsewhere in the Iberian Peninsula (Reguera, 1984; Gampel, 1986; Bombin Perez, 1997). Maybe converted Jews or their descendants integrated more successfully in Basque areas, or the Basques were more tolerant, or they resented the Inquisition as a tool of political control by the Castilian crown. Additionally, Basque immigrants to colonial Chiloe were a self-selected group, possibly keener on cooperation and compromise, as compared with those who had chosen to stay in Europe.

<sup>5</sup> However, it would be wrong to assume that all the Portuguese immigrants, merchants or travellers in the Spanish colonies were 'New Christians' (Smith, 1974; Costa, 2004).

<sup>6</sup> This evidence includes several hints, deliberate or not, but always very discreet, by the Chilean historian Gabriel Guarda (2002), hints by other historians, and personal communications from members of Chiloe families to me, regarding one of my previous publications on a related subject (Hojman, 2007). See also the website [www.genealog.cl](http://www.genealog.cl).

<sup>7</sup> The proportion of Spanish women, as a share of the total number of migrants travelling to a particular New World destination, is a good indicator of how 'civilised' that particular destination was considered to be. In the period 1579-1600, the respective proportions for Peru were 29.0% women, for New Spain (Mexico) 33.2% women, and for Cartagena 40.8% women (Boyd-

Bowman, 1976). In contrast, the proportion for Chile (presumably including Chiloe) was 6.7% women. But the more 'civilised' a place, the closer the Inquisition was likely to be, and the more dangerous for anyone who could be suspected of converted Jewish ancestry. Just a small difference in physical distance could mean relative safety (Aufderheide, 1973, p. 219).

<sup>8</sup> Chiloe was not the only colonial destination where Portuguese and other migrants with 'New Christian' surnames became *encomenderos*. Among the Portuguese in the Caracas, Venezuela, region in 1606, *encomendero* was the second most popular occupation after farmer, and before silversmith, cobbler, tailor, grocer, barber, doctor, swordmaker, artilleryman, cartwright, carpenter, mason, street vendor and slave factor (Keith, 1969, pp. 369-370).

<sup>9</sup> Our list of 82 families of early Chiloe *encomenderos* excludes any family with less than five surnames in its first three generations. A very small number of surnames in a family may be related to an unusually high degree of endogamy (the same surname appearing again and again), illegitimate births, or unions in which one of the spouses was Indian, and therefore his or her surname was not recorded. The *mestizo* children of the latter unions were normally excluded from *encomiendas* and prestigious public positions, even if the union itself was legitimate.

<sup>10</sup> Whether an individual with a 'New Christian' surname had Jewish ancestry or not can only be determined by additional, new information. Moreover, just like any sample will have some individuals with 'New Christian' surnames but 'Old Christian' ancestry, there may also be individuals of secret Jewish ancestry who were never identified as such, and therefore their surnames have been classified as 'Old Christian'. For more on 'Bonnin surnames', see Bonnin (2001) and Hojman (2007).

<sup>11</sup> The sum of OC plus NC in each family is not equal to family size T but smaller ( $OC + NC < T$ ). Some surnames in our sample are in [www.sephardim.com](http://www.sephardim.com) but they are not from Ciudad Real or Asturias, and they are not in Bonnin (2001).

<sup>12</sup> For example, the estimated coefficient of the dummy variable DOC in Regression 2.4 is -0.66 (Table 2). The constant term is equal to 1.26. Therefore the net impact on a family with an 'Old Christian' surname founder, after accounting for the dummy, is 0.60 ( $1.26 - 0.66$ ). To put this in context, the sample mean of the dependent variable, the ratio CR/OC, is 1.077 (Table 1).

<sup>13</sup> The Ciudad Real Inquisition activities were early (in the 1480s) and systematic ones. They were carefully observed then and have been studied ever since (Beinart, 1981). According to Uchmany (2001, p. 191), the names of the Ciudad Real Inquisition victims coincide almost exactly with those of the *conquistadores* and colonisers of Chiapas in Mexico. Ciudad Real survivors, or their descendants, may have had an amazing capacity to get together again in far away places.

<sup>14</sup> A 'couldn't-care-less' 'New Christian' attitude towards marrying 'Old Christians' in colonial Chile was not only needed for, or at least helpful towards, successful intergroup cooperation. It was also compatible with other cultural and philosophical characteristics observed by several authors in Spanish Jews before 1492, and '*conversos*' and exiles after 1492. These characteristics included individualism, rationalism, the so-called 'Averroist heresy', syncretism, disbelief, embracing 'modernity', and attempting to be accepted as white, as opposed to Indian or black (MacKay, 1985; Edwards, 1988; Bodian, 2002; Marquez Villanueva, 2006; Schorsch, 2007).



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