Social homogamy in 19th century rural Italy

with an application of the Gini's homophily index: A research note

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1. Introduction

In pre-industrial and rural societies, marriage was a key event during the individual life-course because it marked the transition to adulthood more than any other event. Therefore, it was an event socially recognized, which was definitely subject to strong social control. In fact, marriage was much more than a simple act of affection and love, but rather it was closely associated with vital aspects of peasants' lives, such as access and transmission of the land, social mobility, family alliances, and status within the community of residence (Dribe, Manfredini, Oris 2014). This is the reason why in Nineteenth-century marriage was a family affair rather than a simple individual choice. Especially in social contexts where large and complex households were the norm, such as sharecropping areas of Italy, household heads tended to influence and determine not only which family members had to marry and when but also the partner they had to choose.

In rural societies, social homogamy, namely the marriage between two persons from the same socio-economic group, was generally the norm[1]. The reason was twofold. On the one hand, marrying a person from the same social class might facilitate socio-economic interactions and working collaborations between family groups, might guarantee access to land in the future, and might limit inheritance issues. On the other hand, people from the same socio-professional group have been raised in similar familiar and social contexts, often sharing similar experiences, ways of thinking, and attitudes. This preferential choice for the marriage of likes was then reinforced by social rules and social expectations, which made complicated to marry a person from a different social class, especially when marrying downward.

However, if the high levels of social homogamy in pre-industrial societies have been largely studied and proved (Dribe, Lundh 2005), the reasons for such a marriage pattern have been seldom investigated. This research note tries to shed some light on the levels and determinants of social homogamy in a mid-nineteenth century sharecropping community of Italy, Casalguidi. The research question is to check whether social homogamy might be a main feature of the marriage pattern even in a rural population with little social

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stratification and economic differentiation, where farmers amounted to over 70% of the total population of working age and a large majority of them were landless. Accordingly, the first part of the paper, will be devoted to measure the degree of social homogamy. This will be done by using two different indicators of socio-economic status, spouses' occupations and economic conditions of respective paternal households, evaluated by means of an index formulated by Gini in 1916 (the homophily index) which has been little used so far despite its simplicity. The second part of the paper will, then, be addressed to investigate the impact and role of some factors potentially affecting the choice between homogamous and heterogamous marriage.

2. The data

Data come from the parish registers of the local church of Casalguidi integrated with information taken from the Tax Register for the period 1818-58. Parish registers include baptism, marriage, and burial registers as well as annual Status Animarum (Manfredini 1996), sort of census drawn up by the priest during the Easter period and reporting information on resident households and the individual characteristics of their members (name, surname, age, sex, relation to household head, household head's occupation, and homeownership). Due to the Italian tradition of virilocality, which provided that the newly-wed couple resided in the husband's parish after having celebrated the wedding in the wife's parish, the marriage register recorded all the marriages of the population but those between a local man and a non-local woman (hereunder wife-exogamous marriages). On the other hand, Status Animarum record the resident population, which includes also the newly-wed couples married elsewhere. A peculiar linkage technique between the two religious sources has been then applied to include in the analysis also the wife-exogamous marriages (Manfredini 2003)[2]. The Tax register contains year-by-year information on the economic conditions of all resident households as well as on household head's occupation. The former piece of information is provided by recording the tax each household had to pay annually: The higher the tax, the more well-off was the family group. Indigent people were vice versa exempted from paying any due.

The linkage and integration of all the information recorded on those sources has allowed to reconstruct the individual life-histories of spouses and their family members as well as to determine their occupation at marriage along with the family tax their parental household had to pay (Manfredini, Breschi 2008). However, it should be noted that whilst the piece of information on occupation is always available for husbands (taken alternatively from parish registers or tax registers), it is missing for non-local women married to men from Casalguidi, whose marriage was celebrated and recorded in the wife's parish. On the other hand, family tax can be used only for strict endogamous marriages, being limited to couples whose parental family was formerly recorded in the local Tax

register. It should be therefore borne in mind that the socioeconomic indicator used determines a different sample of marriages and therefore could assume different implications and considerations.

3. The area studied

The paper analyzes the Tuscan community of Casalguidi from 1819 to 1859 (Breschi, Derosas, Manfredini 2004). This village, whose population was about 2,500 inhabitants on average, was characterized by an obvious massive presence of peasant categories (about 79% of total household heads on average), both landed and landless. Landed farmers were usually smallholders but also landowners (about 17.8%), whilst landless categories were represented by sharecroppers and tenants (49%) as well as day laborers (12.6%). Artisans (17.4%) and some families from the bourgeoisie (3.2%) completed the socio-economic structure of Casalguidi. As obvious, the large majority of indigent and poorest families was in the group of day laborers and among those households without indication of any known activity.

As typical of Tuscan sharecropping communities of the mid-nineteenth century, sharecroppers (and tenants) and day laborers (and artisans) followed two distinct patterns of family formation, patrilocal the former and neolocal the latter (Barbagli 1990). The main reason for this different behavior was in the different tie with the land, which was weaker for day laborers and definitely stronger for sharecroppers, and the consequent different family and work organization. Sharecroppers, in fact, lived in large and complex households, forming a production and consumption unit, headed by a household head with greater authority and power compared to day laborers. The goal of heads of sharecropping household was to secure an adequate family workforce over time, condition necessary to guarantee their access to land and permanence on the farm. In this complex household organization, family interest came before individual necessity. And marriage, event changing the size and composition of the household, was definitely a family affair, often at the core of household strategies. Thus, the household head not only said the last word on who and when the family member had to marry, but also on the characteristics of the spouse. As for day laborers and artisans, there was obviously the hope that one of the children may marry upward, thereby improving their conditions through acquired rights to inheritance (assets, property, and land) or simply through direct access to land. However, the poor economic conditions and a low social position of day laborers make their upward marriage quite unlikely, at least more unlikely than marrying someone from the same social group.

The first and immediate consequence of the different control of the household over individual choices was the level of permanent celibacy (at 50 years) in the various socioeconomic categories. Thus, among sharecroppers, it was definitely higher (15.7% for males and 10.8% for females) than it was among day laborers (6.5% for males and 6.2% for females).

4. Results

The marriages involving at least one inhabitant of Casalguidi in the period 1818-59 amounted to 1,068. About 51% of them were between two persons residing in Casalguidi, 19.1% were between a local man and a non-local woman, whilst 29.9% were between a local woman and a non-local man.

As for social homogamy, two different indicators of socio-economic status have been used, spouse's occupation and family tax. The first factor should privilege social and cultural aspects associated with belonging to the same occupational category, whilst the second one should be more focused on mere economic aspects. First of all, I tried to measure the level of social homogamy existing in the population of Casalguidi in the mid-nineteenth century. The tables 1 and 2, shown hereunder, report the number of couples by spouses' profession[3], on the one hand, and by Family Tax, on the other hand[4].

Tab. 1. *Crosstabulation of husband's occupation by wife's occupation. All marriages*

Occupation	Day laborer	Sharecropper	Other	Total
Day laborer	44	54	50	148
Sharecropper	128	366	85	579
Other	20	42	73	135
Total	192	462	208	862

Tab. 2. *Crosstabulation of husband's family tax by wife's family tax. All marriages*

Family Tax	High	Low-medium	No tax	Total
High	30	23	18	71
Low-medium	34	167	81	282
No tax	6	44	54	104
Total	70	234	153	457

The number of homogamous marriages by spouses' occupation accounts for 56.0% of total marriages with available information for both spouses (tab. 1), whilst the level of social homogamy by family Tax is a bit lower, 54.9% (tab. 2).

Analyzing the results by gender, it possible to highlight the high level of homogamy among farmers with access to land, namely the category of sharecroppers, tenants, and smallholders (63% for males and over 79% for females), against the low levels of females belonging to the group of day laborers and non-farming activities (about 25%-30%). As for the family tax, the levels of social homogamy are generally a bit higher (around 40-50%) for both sexes in all the tax groups but rich women (35%).

A more refined measure of homogamy can be calculated, as already mentioned in the introduction, by means of the Gini's homophily index (Gini 1916), which evaluates the degree of agreement between two nominal variables with an identical number of categories *c*. The coefficient *s* is given by

$$s = \frac{\sum \pi_{ii} - \sum \pi_{i+}\pi_{+i}}{\sqrt{(1 - \sum \pi_{i+}^2)(1 - \sum \pi_{+1}^2)}}$$

where $\Sigma\pi_{ii}$ and $\Sigma\pi_{i+}\pi_{+i}$ are, respectively, the proportions of observed and expected agreement, while $\Sigma\pi_{i+}$ and $\Sigma\pi_{+i}$ are the (sum of) marginal totals. The coefficient *s* assumes the value of 1 in case of perfect homogamy (marriage between likes), 0 in case of indifference (independence between variables), and -1 in case of perfect repulsion (marriage between unlikes). The meaning of *s* is clear only when $s=0$ or $s=\pm1$, otherwise its interpretation depends on *c*, the number of categories. More specifically, when $c>=3$, *s* «is generally considered uninterpretable, because no single coefficient is sufficient to completely and accurately convey information on agreement when there are three or more categories» (Warrens 2013). Conversely, when there are only two categories, the interpretation of coefficient *s* is similar to the Pearson correlation coefficient. Thus, the number of occupational and tax categories have been reduced to two in both cases. Farmers and non-farmers are the groups considered for the analysis on occupation with the aim to investigate the level of social homogamy associated with agricultural activities, while the analysis on family tax compares spouses from privileged family environments to spouses of less privileged and poor families[5]. The homophily index *s* results positive in both the analyses, which also present definitely similar values, respectively 0.302 when measured by spouses' activity sector and 0.321 when measured by household economic status. The two variables appear, therefore, similar in outlining partner's choice according to socio-economic status, which emerges to be only moderately homogamous.

As outlined in the introduction, the second part of the research note aims at shedding some light on the key determinants of social homogamy based on the individual life-histories of the inhabitants of Casalguidi at risk of marriage. The population at risk is formed by never-married individuals between 18 and 45 years of age. The choice to focus on first marriages in the analysis of the determinants of nuptiality stems from the obvious consideration that widow/ers had a completely different mate choice pattern, not only in terms of age gap between spouses but also in terms of family compositional factors (Breschi *et al.*, 2007). The analysis has been done by means of Event History Analysis in discrete time. This technique, based on a logistic regression, is particularly fit for longitudinal data, such as individual life-histories, and allows to assess the odds of an event – marriage, in this case – within a specific time interval, here the year. A set of explanatory variables is added to the model in

order to gain some insight on how risk factors and covariates affect the event times (Allison 1982; Singer 2003). The choice of the discrete modelling is due to the nature of Status Animarum and Tax register, whose information were updated yearly. The basic unit of analysis is therefore the 'person-year'. The aim is to find out the determinants underlying the three competing marriage outcomes, namely 'married homogamously', 'married downward', and 'married upward'. However, the three events imply different populations at risk, as High-tax individuals will never marry upward just like tax-exempted ones will never marry downward. For this reason, I will model each competing risk separately, treating all other events as censored (Steele 2005; Hosmer, Lemeshow 2000). Thus, in each of the models, the dependent variable is a dichotomous variable identifying the transition from the unmarried status to the status of married homogamously (or, alternatively, upward or downward)[6].

Both spouses' occupation and Family Tax have been used to determine the type of marriage, but, for the sake of brevity and the preliminary nature of this research note, only the models relative to Family Tax will be here presented and commented. Three different categories of Family Tax are considered, namely tax exempt for manifest indigence, low tax, and medium-high tax. The population at risk is formed by never-married individuals between 18 and 45 years, residing in the parish between 1819-58. Given the characteristics of the Family Tax register described in the Data section, the models concern only endogamous marriages, namely marriages between individuals living both in Casalguidi before marriage. Models for males and females have been run separately. As for males (tab. 3), what emerges is a general and expected effect of age regardless the type of marriage, with the highest and significant risk in the age group that includes the mean age at first marriage for men, namely 25-34 years. The variables concerning the composition of the family group do play a role especially for homogamous marriages. In particular, the presence of an older sister or the presence of brothers (regardless of age) appear to decrease significantly the risk of marriage by, respectively, 30% and 30%-50%, whilst males coresiding with the sole father are 53% more likely to marry homogamously than individuals living with both parents are. The effects of household composition on the other types of marriages are less pronounced, although the presence of an older brother appears to be a common and significant depressive factor whatever the type of marriage. This could be linked to the strong age hierarchy in the access to marriage in this rural society (Manfredini, Breschi 2008), which forced men to wait until the older brother had succeeded in marrying himself. As for the presence of parents, no significant effect is present for downward marriages, whilst the presence of the sole father seems increasing significantly (more than 3 times higher compared to individuals coresiding with both parents) the chances of upward marriages for their sons. The absence of the mother may determine the need for a new important female figure within the family group, thereby facilitating son's

marriage, even though less urgency seems to appear when marrying downward. This latter type of marriage is vice versa more likely to occur in times immediately following a crisis. In fact, in the biennium following the cholera epidemic of 1854-55, the risk of marrying downward appears to be remarkably higher (two times higher) when compared to other periods. The modification of the demographic structure of the population of Casalguidi, the changes introduced in the marriage market and in the socio-economic structure of the population might have loosened the social constraints toward marrying downward or even modified the concept of 'downward marriage'. As for females, it is possible to highlight a lower impact of the household compositional elements on the risk of marriage. The presence of siblings has some effect only for upward marriages when the presence of an older sister decreases significantly by 50% the risk of marriage, which could lead to hypothesize a minor role of age hierarchy in the order of marriage among females, which is compatible with the consideration that women had to leave the native household on marriage. On the other hand, the presence of parents plays an opposite role in homogamous and in upward marriages. The former are less likely to occur when the father is absent (either when the sole mother is present or both parents are absent), whilst the latter are encouraged in case of presence of the sole mother. It would seem that the presence of the father might be more crucial in the decision to marry a man from the same economic group. In the case of downward marriages, the model does not reach statistical significance with respect to null model, that is a model where all the regression coefficients are zero.

Tab. 3. *Risk of marriage of males by type of marriage. Casalguidi, 1819-1858*

	Homogamous		Downward		Upward	
	OR	p-val	OR	p-val	OR	p-val
Age (ref. 18-24 years)						
25-34 yrs	2.717	0.000	1.738	0.014	2.068	0.026
35-45 yrs	1.068	0.777	0.934	0.848	0.472	0.309
Younger brothers (ref. None)						
Yes	0.698	0.010	0.751	0.236	0.332	0.025
Younger sisters (ref. None)						
Yes	1.107	0.488	1.080	0.772	1.465	0.369
Older brothers (ref. None)						
Yes	0.487	0.000	0.526	0.002	0.388	0.010
Older sisters (ref. None)						
Yes	0.699	0.052	0.684	0.234	0.609	0.363
Parents (ref. Both present)						
Only father	1.519	0.054	1.383	0.393	2.924	0.049

Only mother	0.892	0.503	0.882	0.679	1.226	0.709
No parents	0.875	0.498	1.036	0.913	1.932	0.261
Migrant previous 3 yrs (ref. No)						
Migrant	1.053	0.668	0.855	0.464	4.866	0.000
Post-cholera period (ref. No)						
Yes	1.020	0.937	1.997	0.047	0.644	0.571
Person-years	9439		7043		4790	
Log likelihood	-1330.5		-532.7		-222.9	
Wald chi-square	125.8		32.5		67.2	
p-value	0.000		0.001		0.000	

Tab. 4. *Risk of marriage of females by type of marriage. Casalguidi, 1819-1858*

	Homogamous		Downward		Upward	
	OR	p-val	OR	p-val	OR	p-val
Age (ref. 18-24 years)						
25-34 yrs	1.676	0.001	1.842	0.017	1.469	0.135
35-45 yrs	0.522	0.102	0.949	0.911	0.579	0.280
Younger brothers (ref. None)						
Yes	0.821	0.186	0.878	0.579	1.069	0.801
Younger sisters (ref. None)						
Yes	0.950	0.743	1.243	0.378	1.482	0.159
Older brothers (ref. None)						
Yes	1.016	0.915	0.795	0.339	0.806	0.365
Older sisters (ref. None)						
Yes	0.729	0.106	0.853	0.622	0.492	0.083
Parents (ref. Both present)						
Only father	0.746	0.305	0.793	0.632	1.758	0.239
Only mother	0.563	0.007	1.303	0.423	2.124	0.017
No parents	0.577	0.017	0.922	0.807	1.236	0.613
Migrant previous 3 yrs (ref. No)						
Migrant	1.467	0.013	1.034	0.889	1.334	0.225
Post-cholera period (ref. No)						
Yes	1.254	0.387	0.467	0.290	0.890	0.825
Person-years	7164		4817		3743	
Log likelihood	-934.4		-409.6		-363.4	
Wald chi-square	30.7		14.2		22.4	
p-value	0.001		0.220		0.022	

5. Conclusions

In this research note, I provided the first results on social homogamy in a rural community of mid-nineteenth-century Italy, Casalguidi. As expected, in this society, people got married preferentially with partners from the same socio-economic group. Since marriage was prevalently a family affair, it is normal that family groups could use marriage as a way to reinforce or create alliances, to try to improve their social position, or, at worst, not to worsen it. However, the strength of this marriage pattern was not as high as hypothesized. In fact, the Gini's index of homophily provided evidence of only a moderate homogamy, which could be the result of a certain level of social mobility between the socioeconomic categories here considered.

As for the determinants of the different type of marriages, the risk models did not provide any conclusive result. What appears to be relevant for homogamous marriages, it is usually relevant also for upward marriages (age, household composition, etc.). The only significant difference is the role played by the cholera epidemic, whose impact on the population structure seems to have determined a weakening of social constraints on marriage, with men be more likely to marry downward than in normal times.

This partial lack of important evidences could be the effect of the narrowness of the sample (only one rural population, little social differentiation, limited time span) and of the fact that models considered only marriages between local spouses. The decision to find a spouse outside the parish could be in fact motivated exactly by the absence of local potential partners in terms of socioeconomic characteristics.

In any case, the hope is to extend in the future such an analysis to further communities, with a possibly more pronounced socioeconomic stratification.

[1] In this paper, the dichotomy homogamy/heterogamy will refer to the socioeconomic status of spouses, whilst the endogamy/esogamy dochotomy will concern their residence before marriage.
[2] In rural Italy, the marriage pattern was strictly virilocal. In case of exogamous marriages, in fact, weddings were celebrated in the wife's parish, but couples settled down and lived in the husband's parish.
[3] For brides, father's occupation was taken into account. This was done because the very largest part of women were recorded as housewives. The category of Sharecroppers includes also tenants and smallholders, whilst shopkeepers and other non-agricultural professions are counted among the group of Artisans.
[4] The Family Tax refers to the tax paid by the household in which the spouse lived the year before marriage.
[5] For a discussion on the definition and classification of Tax groups see Manfredini and Breschi, 2008.
[6] This implies estimating three different equations, one for each of the possible alternative outcomes. In this specific case, the hazard rates are considered independent one another, and they are usually interpreted as the theoretical rates that would result when all the competing events were eliminated.

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Summary

Social homogamy in 19th century rural Italy with an application of the Gini's homophily index: A research note

The paper deals with the issue of social homogamy in a sharecropping community of mid-nineteenth-century Italy, Casalguidi. The aim is to provide not only a measure of the phenomenon in a pretransitional population, a topic largely studied for many pre-industrial communities, but also and mostly the motives for such a marriage behavior. The present study supports the evidence of high levels of social homogamy in rural contexts along with a strong positive effect of household composition on homogamous marriages and a depressive effect of hard times (epidemics) on the same type of union.

Riassunto

Analisi dell'omogamia sociale nell'Italia rurale del XIX secolo, con un'applicazione dell'indice di omofilia di Gini: una nota di ricerca

Lo studio analizza l'omogamia sociale in una popolazione mezzadrile Italiana a metà Ottocento, Casalguidi. Lo scopo è quello di determinare non solo i livelli di tale fenomeno in una comunità pre-transizionale, tematica già ampiamente studiata per molti contesti pre-industriali, ma anche e soprattutto di investigare le ragioni di tale scelta matrimoniale. I risultati confermano innanzitutto l'esistenza di alti livelli di omogamia sociale nella comunità rurale analizzata. Permettono poi di evidenziare come la composizione familiare sia uno dei fattori decisivi nella scelta di un partner con simili caratteristiche socio-economiche, mentre periodi di forte crisi (epidemie) con importanti riflessi sulla struttura demografica della popolazione possano, al contrario, allentare tali vincoli a vantaggio di scelte matrimoniali meno orientate.

Keywords
Marriage; Social Homogamy; Pre-transition; Rural.

Parole chiave
Matrimonio; Omogamia sociale; Pre-transizione; Rurale.