

# The Richness of Italian Historical Demography

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# The Richness of Italian Historical Demography

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## ABSTRACT

In this paper, we present a new methodology for the reconstruction of individual life-histories based on information derived from the integration of different parish registers. This methodology makes it possible to associate the sequence and timing of demographic events not only with the structural features of the households in which they occurred, but also with more general historical context and the economic factors that shaped the lives of people and households. All these elements are then evaluated in a dynamic and temporal perspective, allowing the adoption of a longitudinal approach in the analysis of demographic processes for historical populations.

**Keywords:** Longitudinal databases, Life histories, Parish registers, Italy

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## 1 INTRODUCTION

Reconstruction of the demographic history of the Italian population can only be pursued at the cost of a great effort of research and commitment. The reason is not the limited availability of sources and historical data, as typical of other countries, but, paradoxically, the opposite. The problem was described by Karl Julius Beloch, the most important scholar of Italian historical demographic documentation and author of valuable essays on the history of the Italian population in the unsurpassed study *Bevölkerungsgeschichte Italiens* (1994)<sup>1</sup>. In his short text advocating a new reconstruction of the Italian population (Beloch, 1887), Beloch notes that the sources are 'not a problem, indeed the richness and quantity of historical materials create major difficulties to those who want to undertake research in that field. Our archives are full and rich in documents and data providing precise knowledge of population(s), market prices, socioeconomic conditions, and other features since the 15th century' (Beloch, 1887, p. 48). He wrote this volume when he was 33 and had already launched his ambitious program of an extensive survey of demographic documents in all the national archives. The result in the following year (Beloch, 1888) was publication of his influential essay on the Italian population between the 16th and the 18th century.<sup>2</sup>

Since then, historical demographic research has made significant progress. In particular, basic demographic documentation, such as time series of population size as well as births and deaths, became the subject of important surveys and systematic analyses. Besides the work of Beloch, we must also note the extraordinary census of pre-unification (before 1861) archival sources launched by Corrado Gini, a project whose results were condensed in ten volumes published between 1933 and 1941.<sup>3</sup> In this line of research, we also include scientific activity promoted by the Institute for Industrial Reconstruction (IRI). Their work supported a series of regional studies and, starting from the 1970s, an articulated series of seminars on demographic sources carried out by the Italian Committee for the study of Historical Demography (CISP) and by the newly founded Italian Society of Historical Demography (SIDES) after 1977.

There is no need to trace the development of the historical demographic research in Italy of the last 50 years here.<sup>4</sup> However, despite undeniable advances and improvements, Beloch's remark that the richness of historical documentation has hindered the development of research on the history of the Italian population is still valid; the treasure trove of historical sources remains largely unexplored.

Because of the richness, complexity, and variety of demographic sources in Italian archives, we decided to focus on a set of parish registers existing almost everywhere in Italy. The systematic administration of demographic data by way of a population register and civil vital registration at the municipal level began after 1861, the year of Italian unification. Before that date, most of the old Italian states and kingdoms preferred to rely on the centuries-long practice of priests and parsons recording registers of baptisms, marriages, and burials as well as *Status Animarum*, a sort of annual census carried out on Easter. These four sources, which were systematically recorded since the 16th century, are available for most of the over twenty thousand parishes spread across Italy.<sup>5</sup> The potential of such religious sources is well known. The most famous technique for reconstructing past populations, the family reconstitution method developed by Henry in the 1950s (Fleury & Henry, 1956), was based on these registers. It was used in hundreds of case-studies to describe both local and national demographic systems, such as the second volume of the history of the English population (Wrigley, Davies, Oeppen, & Schofield, 1997). The large majority of those studies relied exclusively on the three vital registers (baptisms, marriages, and burials), while very few used *Status Animarum*. This type of register is not common everywhere in

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1 The work was published posthumously in three volumes between 1937 and 1961. It was translated into Italian and collected in a single book with an introduction by Lorenzo Del Panta and Eugenio Sonnino.

2 This essay represented a landmark for a long time: it was reprinted in 1959 in the first volume of the *History of the Italian Economy* edited by Carlo Maria Cipolla. In the next fifteen years, Cipolla (1965) and Bellettini (1973) published two important essays on the history of the Italian population using information reported by Beloch in the third volume of *Bevölkerungsgeschichte Italiens*.

3 Archival research directed by Gini was collected in the book series *Archival Sources for the Study of Population Issues* until 1848.

4 For a more extensive description of the development of the historical demographic research in Italy see the contribution by Lucia Pozzi and Eugenio Sonnino (2012).

5 The total number of parishes in Italy, according to the Italian census of 1881 and to the state boundaries of the time, was 20,465, which raised to 24,615 in 1951.

Europe, and it is not found in some areas of Italy. On the other hand, there are many Italian parishes where it is possible to find multiannual series of Status Animarum. The Italian Committee for the Study of Historical Demography emphasized the potential of studies combining these four parish registers in the 1970s (CISP, 1974). Unfortunately, few studies followed these recommendations.

Our paper aims to highlight the full potential and the advantages offered by the combined use of individual-level data from all four parish registers, and specifically:

- integrating the study of local communities;
- extending the analysis to larger areas;
- reconstructing long-term changes from the sixteenth century to the second post-war period (1961);
- integrating the study of individual and family life-histories;
- studying the mobility of individuals and families indirectly;
- incorporating further sources of economic, social, and/or cultural information.

In other words, through the combined use of the four types of parish register, demography in Italy can bring the lives of poor and humble people into history. Those people left small traces of their existence: a baptism, sometimes a marriage, some others a simple list of family members. By handling these fragments with care, the historical demographer can bring them back to life by reconstructing their experiences.

This essay takes up this challenge. The first part of the paper describes the methodology adopted to link information from the four parish registers and to reconstruct the socio-demographic system of a mid-19th-century sharecropping village, Casalguidi. Then, the analysis expands to reconstruction of the economic context by adding historical sources of economic conditions. The final section outlines further developments of the project, which will mainly expand the time frame.

## 2 THE STUDIED POPULATION

In the period 1819–1855, the community of Casalguidi belonged to the Grand Duchy of Tuscany, located a few kilometers from the cities of Florence and Pistoia. Despite its rural nature, Casalguidi could be viewed as a small town with an average population of 2,500 people, rather than a simple peasant village (Breschi, Derosas, & Manfredini, 2000). The local rural economy was largely dominated by sharecropping, the most typical form of land tenure of mid-19th century Tuscany. The features and conditions of this peculiar system of land tenure had a profound impact on members of sharecropping households, including their demographic behaviors. Compared to other socioeconomic categories, sharecroppers had higher fertility (Manfredini & Breschi, 2008), lower infant mortality (Breschi, Manfredini, & Pozzi, 2004; Manfredini & Pozzi, 2004), more complex household structures due to residence in joint families (Doveri, 2000; Poni, 1982), and a different level of nuptiality (Della Pina, 1990; Rettaroli, 1993). Depending on the length of sharecropping contracts, migration and mobility could be more intense than in a rural context dominated by smallholders (Breschi & Manfredini, 2002). The high levels of mobility of individuals and households living in Casalguidi were also sustained by the presence of day laborers and seasonal workers. Since farm laborers had very short-term contracts and did not live on a farm, their family system was largely based on simple and small nuclear households, in contrast to the households of sharecroppers (Barbagli, 1990).

Overall, the demographic system of Casalguidi was typical of *ancien régime* populations, characterized by high levels of mortality (life expectancy at birth was around 35 years on average) and high levels of fertility (the total marital fertility rate was about 8 children per married woman between 20 and 49 years). Nuptiality responded to a variety of socio-economic and cultural factors, and stricter control over marriage within sharecropping households produced higher levels of permanent celibacy (Derosas, Breschi, Fornasin, Manfredini, & Munro, 2014) This behavior was the consequence of the rigid norms regulating household organization and behavior imposed by sharecropping contracts and enforced by the strongly patriarchal structure of sharecropping households (Della Pina, 1990; Doveri, 2000; Giorgetti, 1974).

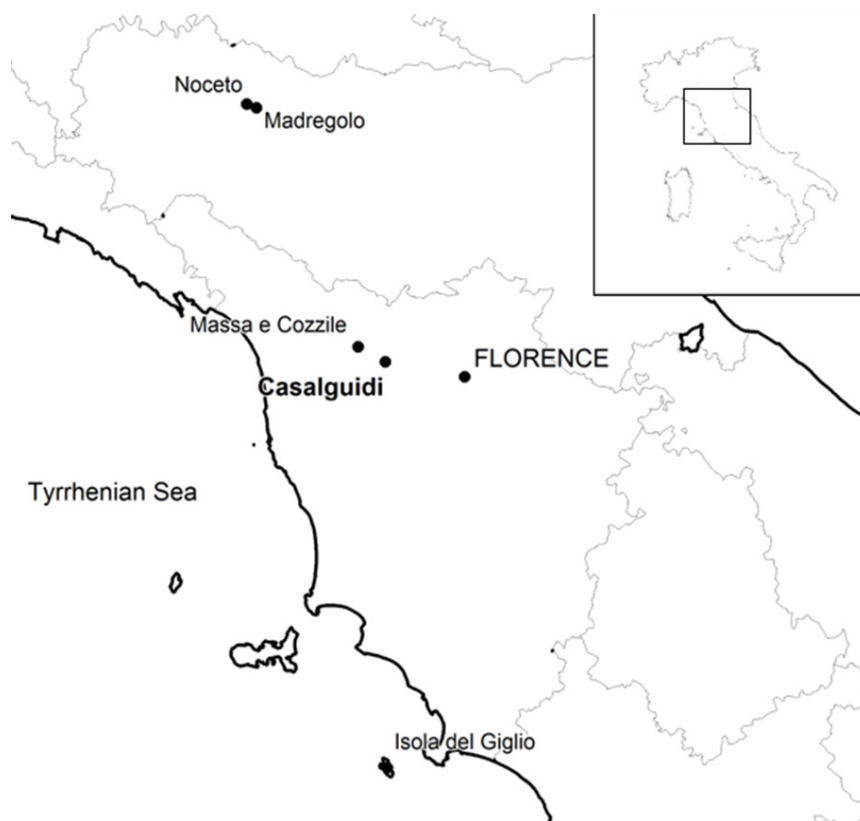
### 3 THE SOURCES

As already mentioned, the sources used to reconstruct the life histories of the inhabitants of Casalguidi were primarily of religious origin with the exceptions described below.

The parish registers of baptism, marriage, and burial became widespread across Italy at the end of the 16th century following the Council of Trent of 1545–1563, which made them compulsory for every person. Status Animarum were compulsory as well, but that duty was less respected by priests. Status Animarum were often of low quality, sometimes a simple list of household heads without any further information, sometimes a simple count of family groups and number of family members. Thus, Status Animarum are not common everywhere in Italy, and even where they are found, they often lack the necessary continuity over time. For this reason studies integrating parish registers and Status Animarum are rare in Italy. We can point to work by Carla Ge Rondi (1988) on a parish of the city of Pavia during the 18th century and a few others.<sup>6</sup> We have personally collected such sources for a few parishes, but those of Madregolo and Casalguidi are, to our knowledge, the only ones for which a complete and integrated dataset has been created so far (see Figure 1).<sup>7</sup> However, continuity over time of the Status Animarum has been the pre-condition that guided us in the choice of Casalguidi as a privileged case-study for our linkage methodology.

The parish registers of baptism, marriage, and burial show continuity over time between 1819 and 1859. The information contained in such registers are typical of Catholic records: the date of the event, name and surname of the recorded person(s), and father's and mother's names. Occupation and age were infrequently recorded, although the latter was often annotated for individuals who died at very young ages (see Table 1 for a complete overview).

Figure 1 *Geographical location of Casalguidi and the other parishes mentioned in the text*



6 See also the first volume by CISP (1974) on the sources of historical demography in Italy.

7 Other similar databases concern the parishes of Massa e Cozzile, Isola del Giglio, e Noceto.

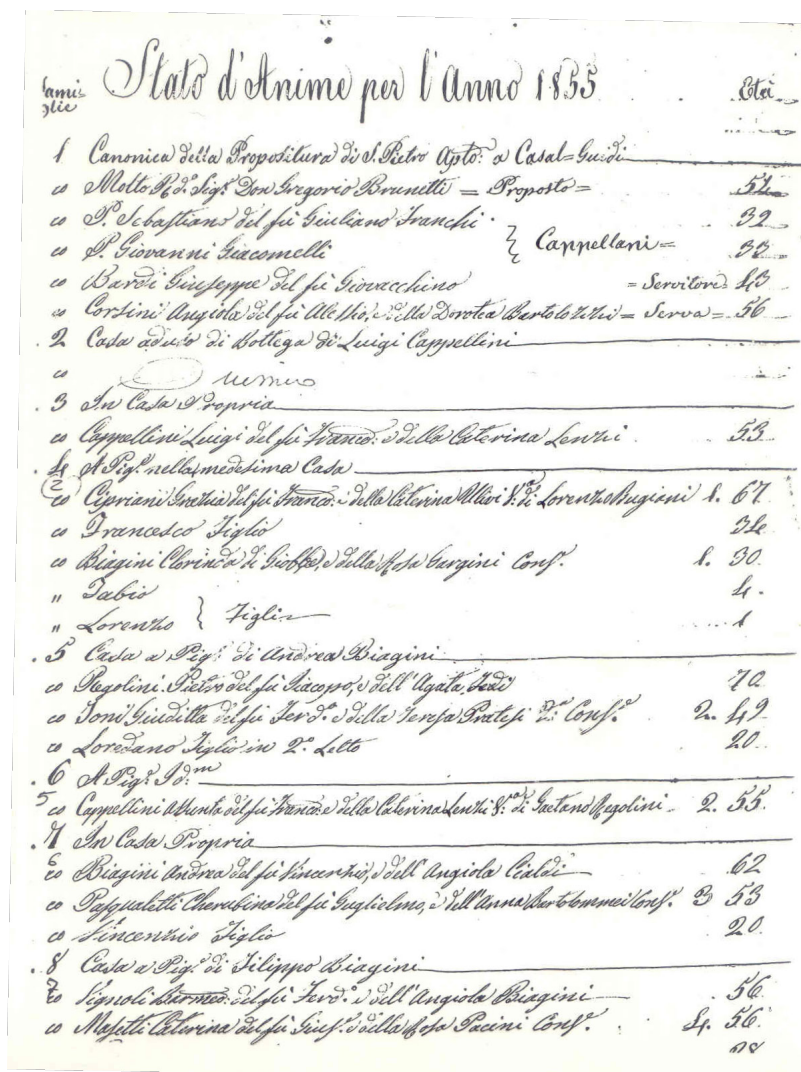


Table 1 Available information by parish register

Information	Baptism	Burial	Marriage <sup>b</sup>	Status Animarum
Date of event	Always	Always	Always	Only Year
Place of event	Always	Always	Always	Always
Name	Often	Always	Always	Always
Surname	Always	Always	Always	Always
Age	Never <sup>a</sup>	Often	Often	Always
Father's name	Always	Always	Always	Often
Mother's name	Always	Often	Infrequent	Often <sup>c</sup>
Civil status	-	Often	Always	Always
Spouse's name	-	Infrequent	-	Often <sup>c</sup>
Relationship with household head	-	-	-	Always
Household head's profession	Often	Infrequent	Often	Often
House property	-	-	-	Always

<sup>a</sup> Mother's age at birth; <sup>b</sup> Both spouses; <sup>c</sup> Inferred from the indication of relationships among members

Figure 2 Front page of Status Animarum, Casalguidi 1855



Between 1819 and 1859 only the Status Animarum of 1841 is missing, which can be replaced with information from the census of the Grand Duchy in that year. The Status Animarum (see Figure 2) provides a reliable and complete picture of the organization and structure of the households living in the parish. Who lived in the various households of the village? What were the relationships among family members? What were their demographic characteristics? Status Animarum answer all of these questions. If analyzed over time, in a diachronic perspective, they also provide researchers more detail about the mechanisms of household modification (fusion, fission, etc.), even tracing the movements of individuals between households. In this way, the study of the family shifts from a static view, simply looking at household composition in a given period, to a dynamic approach focused on the structural changes of households in relation to both internal and external events and/or stressors.

Status Animarum are even believed to provide a more reliable picture of the real population compared to the contemporary pre-unification population registers. Indeed, the list of the household members was recorded (updated) year after year, including people temporarily present. In contrast, the population registers recorded before 1861 suffered from delays in updating information and insufficient surveillance of temporary migrants.

In conclusion, the usual parish registers of baptism, marriage, and burial provide basic individual information (except for mother's age at birth) for the three essential demographic events. The Status Animarum allows us to recover information on the composition and structure of the household as well as on socioeconomic conditions (occupation of the household head and other members; property of the house; etc.). Moreover, the continuous updating of information makes it possible to analyze patterns of social mobility as well as household modification.

## 4 LINKAGE METHODOLOGY

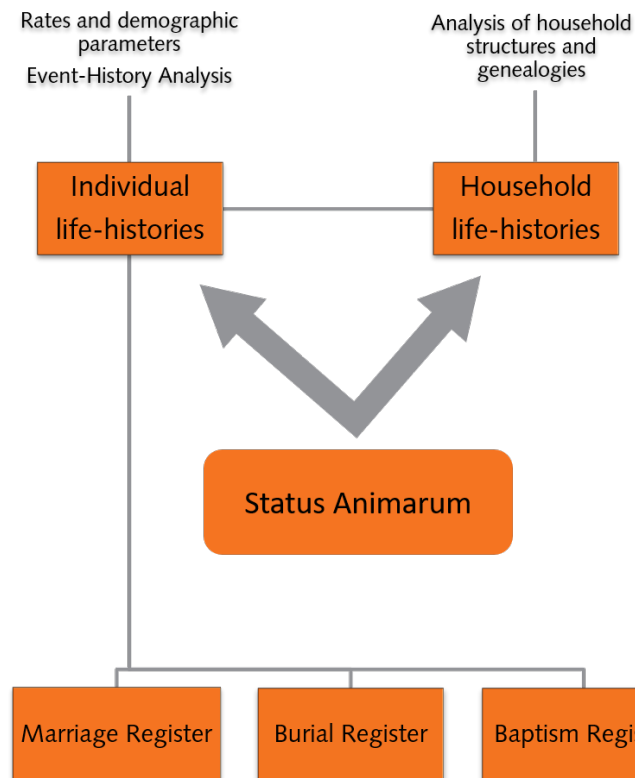
From what has been said above, it is clear that Status Animarum and the vital parish registers complement each other.

The flow-chart of the linkage process is provided in Figure 3. The starting point is the nominative linkage between successive Status Animarum, which allows tracing the life history of each parishioner in Casalguidi through a unique individual identification code. This reconstruction includes the (changing) characteristics of the households in which he/she lived year by year. Nominative linkage identifies marriages between local men and non-local women, which were not recorded in the marriage register of the groom's parish due to the custom of celebrating the wedding in the bride's parish. Those unions can be identified in Status Animarum by the change in the groom's marital status between year  $t$  and year  $t+1$ .

The second step consists of linking the demographic events in the parish registers of baptism, marriage, and burial to each individual found in the Status Animarum. At this point, the reconstruction of the life history is completed, and it is now possible to frame each demographic event within the family and socioeconomic context in which it occurred.

From an operational point of view, the linkage strategy involved two stages. In the first phase we applied an automated linkage process in which records from the various sources were linked when the name, surname, paternity, and maternity matched exactly. A further check of internal coherence was then carried out on the year of birth (or age). After these links were removed from the original list of records, the remaining records underwent a semi-automatic process of nominative linkage, where we decided which records had to be linked from a sub-set selected by relaxing the above matching criteria. Obviously, the linkage process was not that easy and various problems occurred during the second phase. For example, the earliest records of deaths did not report the maiden name of married women but only the husband's surname; in the death and marriage acts, some individuals were indicated with their nickname, shortened name, or with a first name not reported in the baptism act.



Figure 3 *Linkage process for the reconstruction of life-histories*

Despite these problems, the benefits of this methodology are numerous and substantial, involving both qualitative and quantitative aspects, such as:

- interpreting individual behaviors in the light of household characteristics and vice versa;
- carrying out longitudinal analyses thanks to the reconstruction of individual and family life-histories;
- calculating rates and other demographic indices for cross-sectional analyses based on the population at risk for each specific event;
- analyzing household structure, its evolution, and its impact on demographic behaviors;
- studies of spatial and social mobility, both at the individual and family level.

The linkage methodology described above is also useful to check the internal consistency of data and to replace missing information in both sources. First, Status Animarum provide the ages of each individual for estimating the year of birth of people born outside the parish or in a period not covered by baptism registers. The more data on ages we found in Status Animarum, the more precise the estimation. Secondly, the annual pace of this sort of religious census allows us to determine with yearly precision the entry and/or the exit from observation (i.e. from Status Animarum) of each parishioner. The nominative linkage with baptism, marriage, and burial registers offers the demographic reasons for such movements. If an individual is no longer recorded on Status Animarum but is recorded on a burial or a marriage act, the exit from observation can be attributed to the individual's death or his/her marriage. If no event occurred, emigration is the most likely reason for the disappearance. Likewise, if a person entering Status Animarum is associated with a baptism, then their appearance in the record is due to birth and not to immigration. In addition, it is also possible to retrieve the age of individuals for all those events.

In conclusion, the integration of Status Animarum with parish registers allows reconstructing and/or improving estimates of the following information:

- Year of birth of each parishioner;
- Age at death for the burial acts not presenting such a piece of information;
- Individuation and analysis of the exogamous marriages celebrated elsewhere, in particular in the bride's parish. These unions remain completely unknown in classic family reconstitution (Manfredini, 2003), and strongly bias the analysis of nuptiality;

- Mother's age at birth for all births that occurred in the parish;
- Demographic characteristics of migrants and movers, which is an enormous step forward in historical demography, where the simple assessment of migrant stock is often impossible.

## 5 RECONSTRUCTING LIFE HISTORIES

The procedure described above allowed us to retrieve information on 8,015 individuals who resided in the parish of Casalguidi for at least one year. These people contributed for 96,581 person-years, an average of 12.1 years.

In order to reconstruct the life histories of those people, we first determined the year of occurrence of each demographic event. As shown in the tables below, the integration with Status Animarum made it possible to retrieve much more information. In particular, the year of birth was reconstructed from Status Animarum for about 62% of the parishioners. The contribution of Status Animarum to the year of death is more limited, around 7% of total deaths. When it comes to the year of marriage, the situation is more complex. As already mentioned, the custom in Italy was to celebrate the wedding in the bride's parish and to settle in the groom's parish. Consequently, the marriage year of males marrying outside the town could only be established from their change in marital status as noted in the Status Animarum (Manfredini, 2003). Table 2 shows that information retrieved from Status Animarum determined the year of marriage for about 29% of total unions.

Table 2 *Data retrieval by piece of information and source, 1819–59*

	Parish Register		Status Animarum		Not retrieved		Total	
	N	%	N	%	N	%	N	%
Year of birth	2,996	37.4	4,971	62.0	48	0.6	8,015	100
Year of death	2,171	92.9	166	7.1	0	0.0	2,337	100
Year of marriage <sup>a</sup>	580	70.9	238	29.1	0	0.0	818	100

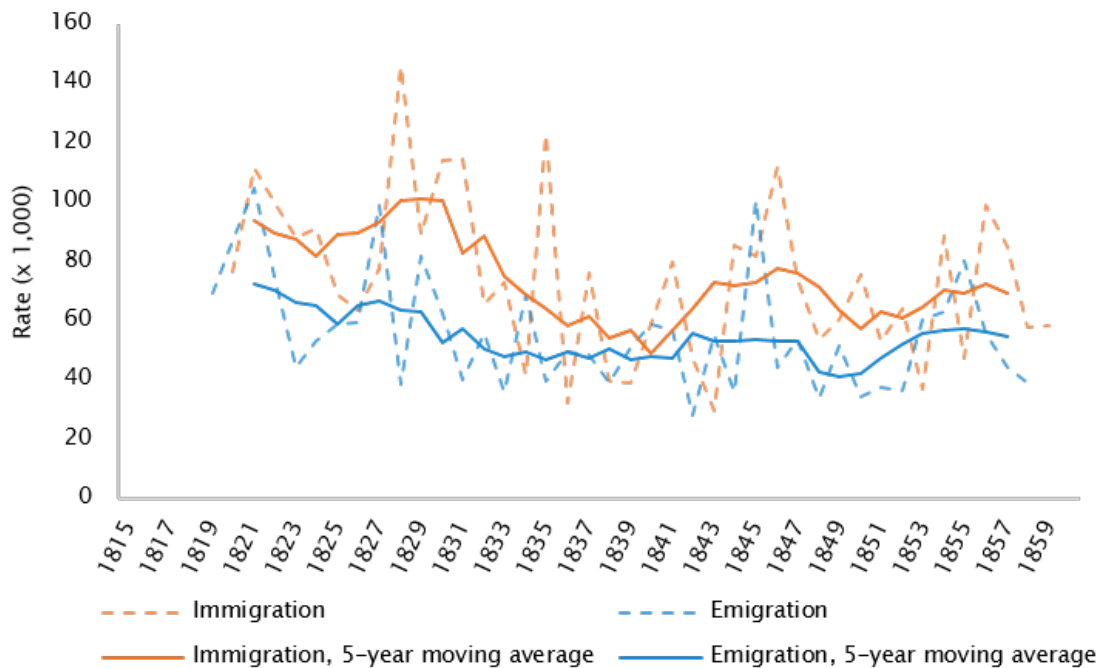
<sup>a</sup> For couples

Infants who died within their first year of life may not have been recorded in the Status Animarum and they were therefore not included in table 2. In Casalguidi we found 490 infants in the baptism and burial records who do not appear in the Status Animarum.

After every event is assigned to a year, we can combine them into a life history, the sequence of demographic events characterizing the life of an individual. Table 3 clearly shows that year of birth is the only event observed for a large part of the population (42%).

Table 3 *Life-histories: reconstructed sequences of events*

Linked information	Casalguidi	
	N	%
Birth, marriage & death	627	7.4
Birth & marriage	2,057	24.2
Birth & death	2,200	25.9
Only birth	3,574	42.0
Residual combinations	4	0.04
No information	43	0.5
Total	8,505	100.0

Figure 4 *Migration rates, Casalguidi, 1819–59*

The sub-group only observed at birth is very large, because of a high migration rate, which was typical of rural Italian communities where most people did not own land (see Figure 4).

Another benefit of combining parish registers and Status Animarum is the study of migration and mobility, which is little studied in historical demography, especially from an individual perspective (Corsini, 1993; Levi, Fasano, & Della Pina, 1990). Migration, defined as the exit from the parish territory, is measured by the disappearance of a person between two successive Status Animarum without a record in the burial register. This methodology ensures reliable estimates of movements to and from the parish, and it can be used for movements between households in the same parish.<sup>8</sup>

Complete sequences from birth to marriage to death account for only 7.4% of life histories. The short time-span investigated (40 years) and low life expectancy at birth (around 35 years) make coverage of an entire life span very unlikely.

## 6 TWO MORE STEPS: LINKAGE WITH THE TAX REGISTER AND GRAIN PRICES

Recently, the analysis of economic differentials has been one of the most fertile research fields in historical demography. Analysis of the relationship between living standards and demographic events opened new frontiers in the study of demographic processes and their evolution (Allen, Bengtsson, & Dribe, 2005; Bengtsson, Campbell, & Lee, 2004). However, it is not easy to construct or calculate reliable indicators of the living standards and economic conditions of past populations. Occupation is usually the only source of economic information in parish registers, but it is affected by potential distortions (Manfredini, & Breschi, 2008). First, occupation is not recorded in a systematic way, and high-status occupations are sometimes privileged. Second, the socioeconomic categories adopted in the classification of occupations are often ambiguous. The definition of 'farmer' is a case in point, as it includes a multiplicity of different farm workers regardless of landowning and type of contract. Moreover, the occupation does not always reflect the real living standard of a person or a family:

<sup>8</sup> The integration between parish registers and Status Animarum can also be used to analyse return migration. Although not specifically addressed so far, the linkage methodology makes it possible to identify individuals coming back to Casalguidi after a previous departure.

some sharecroppers experienced better economic conditions than many smallholders. Communities with strong seasonal migrations (Fornasin, 2005), in which people frequently had two or more jobs according to the season, are even more difficult to classify. Finally, information on occupations is not updated with sufficient frequency when derived only from parish registers.

To evaluate with more precision the standard of living of individuals and families we integrated the newly reconstructed life histories with information drawn from the tax register. This register was updated annually, and records for Casalguidi are continuous over time. The tax register reports the name and surname of the household head, his occupation, place of residence, household size, and the amount each household had to pay. Each household was assigned to a tax class based on economic and household indicators, such as total family income, number of household members, ownership of land and/or houses, etc. The number of tax classes varied over time.

Operationally, we decided to classify households into four tax categories: households with high, medium, and low tax as well as households exempted from payment for manifest poverty, such as unmarried women with children.<sup>9</sup> The tax register was linked to the Status Animarum by nominative linkage through the head of the household to create a precise and continuous description of the socioeconomic status and living standard of each household. Table 4 shows the distribution of tax categories by household head's occupation. The relationship between occupation and standard of living is not as strong as expected, in particular, the assumption that day laborers lived in worse economic conditions than sharecroppers does not seem to hold.

Table 4 *Households by tax class and household head's occupation (%)*

Occupation	High	Medium	Low	Exempt	Total	
					%	N
Day laborers	0.9	11.6	58.6	28.9	100.0	4,723
Sharecroppers & smallholders	1.3	10.7	59.3	28.8	100.0	8,621
Non-rural activities	1.9	13.6	56.9	27.6	100.0	2,432
Nobles & the bourgeoisie	47.4	23.9	13.5	15.1	100.0	384
No profession	0.3	4.2	13.0	82.4	100.0	2,393
Total %	2.1	10.7	51.9	35.3	100.0	18,557
Total N	386	1,993	9,625	6,549	-	18,557

Finally, the last step was to integrate information on family socioeconomic status with an indicator describing the general economic context. Therefore, we collected information on annual and monthly prices of grain on the Florence market. Widely used in economic history, price series have acquired a key role also in historical demography (Bengtsson & Reher, 1998; Breschi, Fornasin, & Gonano, 2005; Breschi, Fornasin, & Manfredini, 2011). A rise in grain prices is usually an indicator of short-term crisis. Crises may have been purely economic or epidemiological in origin, because epidemics usually had important effects on markets. Analysis of the combined effects of general economic conditions and household socioeconomic status on demographic events has been one of the central issues of the Eurasian Project on Individuals and Households (Bengtsson, Campbell, & Lee, 2004). The results of that project highlighted differences among economic strata in reactions and resilience in times of economic stress.

9 The decision about the number of tax classes to analyze depends obviously on the specific research goals.

## 7 FUTURE PERSPECTIVES

In addition to reconstructions of other Italian populations and communities using the life history methodology described here, our team is working to expand the time-frame for the population of Casalguidi. We have already started to collect and computerize parish registers from the second half of the seventeenth century to 1819 and from 1859 to the first half of the 20th century. This project also involves exploitation of data from post-unification national censuses, in partial compensation for the disappearance of Status Animarum in the 20th century.

For Casalguidi, we are integrating additional sources with the reconstructed life histories, both at the individual and context level. Among the former, we can mention registers of physical examinations for military service, available for all 20-year-old men born from 1841 onwards. This source offers a way to analyze the health of the male population (Fornasin, Breschi, & Manfredini, 2017). In particular, we can use stature to infer the evolution of living standards as well as the role of physical characteristics on the risk of dying or getting married (Manfredini, Breschi, Fornasin, & Seghieri, 2013).

The digitization of cadastral registers will enable us to georeference both individual and household demographic data at the level of single houses. This could be very useful in studies of epidemics and marriage patterns (Corsini & Fornasin, 2017; Fornasin, Breschi, & Manfredini, 2016).

At the contextual level, we are enhancing our database with daily meteorological data, available continuously from the second half of the 18th century in the registers of the Ximenian observatory of Florence. These data will be valuable for evaluating the impact of weather conditions on the mortality of the most fragile individuals (infants and the elderly) (Scalone & Samoggia, 2018).

Future work will exploit the temporal continuity of the Status Animarum to capture dynamic processes within and between families and households. Examples are:

- spatial and economic aspects of relationships and ties among households;
- links between social and cultural changes in the institution of the family and the status of never-married or widowed individuals;
- demographic and economic inequalities within the household.

## 8 CONCLUSIONS

In this paper, we have stressed a new methodology for the reconstruction of individual life histories based on information derived from the integration of different parish registers. These methods make it possible to associate the sequence and timing of demographic events with the structural features of households and with broader contextual and economic factors shaping the lives individuals and households. These elements provide dynamic and temporal perspectives, allowing the adoption of a longitudinal approach in the analysis of demographic processes in historical populations.

In conclusion, the longitudinal database of the population of Casalguidi stands out for the richness and quality of its demographic, economic, and social information. The methods described here produce historical data supporting analyses comparable to those performed on contemporary populations.

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