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WHAT WAS IN A NAME? CULTURE, NAMING PRACTICES AND LITERACY IN THE PAST

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JEL Classification: N13, I20, I25, O10, Z10

Keywords: Culture, Education, Literacy

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What was in a name?
Culture, naming practices and literacy in the past

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Abstract

Given names hide crucial information about cultural attitudes and beliefs that sheds light on how parents raised their children and the importance they attached to education and other values. Relying on the 1860 Population census for the province of Zaragoza (Spain; almost 400,000 observations), this article shows that naming practices, captured by whether children bear more or less common names and/or were named after their parents, help predicting their educational outcomes, even after controlling for a host of individual-, household- and community-level confounders. Crucially, these results differ by sex, birth-order, socio-economic status and the urban-rural divide, which allows identifying the mechanisms in place. In particular, bearing a common name is negatively associated with the likelihood of girls attending school and being literate in rural areas. By contrast, being named after parents had a positive influence on boys' education, a pattern that is especially visible for the eldest son from families who have access to land. In addition, the results reported here are stronger in more complex household arrangements. These results therefore stress the role played by inheritance customs and the continuity of the family line on both naming practices and the way that parents allocated resources between their siblings, as well as highlighting the different expectations around the role that sons and daughters played in these societies.

Keywords: Culture, Naming practices, Education, Literacy, Schooling.

1 Introduction

Culture, defined as a set of customary values and beliefs that are transmitted across generations, is crucial for understanding human behaviour and has thus been widely studied in many fields, especially by psychologists, sociologists, anthropologists, political scientists and economists[1]. Cultural attitudes shape familial dynamics, religiosity, individualism, inter-personal trust and gender roles, among many other dimensions, and therefore influence a wide range of demographic, economic, social, political and even psychological outcomes.[2] Historians have also long been interested in cultural traits, as well as cultural persistence and change, but the lack of systematic information on cultural attitudes across regions and over time implies that their analyses are often exploratory and mostly descriptive.[3] Discussing infant mortality, Breschi, Derosas, and Manfredini (2004, 212) argue that the historical influence of cultural factors on children's outcomes is often mentioned but has rarely been measured. Analysing the names that parents bestowed to their children, however, provides a methodological tool that allows overcoming these limitations.

Gifting a baby with a personal name is a universal cultural phenomenon that is attached with a profound symbolical value (Murdock 1945; Alford 1988). Naming a child is part of the process of bringing the child into the social order and confer him or her with a social identity, usually through a highly institutionalised ceremony. Although the pool of potential names is theoretically infinite, the range of names traditionally used has been quite limited because the choice of a specific name was bound by the existing cultural practices. In historical Europe, for instance, many children were named after their close relatives or cherished religious figures (Wilson 1998). The weight of tradition therefore implied that many individuals shared the same names, a circumstance that was transmitted across generations. Parents had nonetheless the last word and the degree to which they conform to those practices speaks a great deal about their identity and preferences. Those parents who deviated from the social norm explicitly distinguished themselves from the rest, a decision who is probably related to other individual factors, such as their social, religious and political values. Indeed, the stock and variety of names expanded, slowly and unevenly, from the 18th century onwards as the importance of religious considerations and the need to transmit names within families declined in response to the underlying societal changes that Europe was undergoing. Naming practices thus reflect the cultural context underpinning a particular society, together with the values and beliefs of the parents themselves, thus offering a unique opportunity to study cultural variation, persistence and change.

Despite that names, as a "pure" expression of cultural identity (Lieberson 2000), have been widely studied in other fields,[4] historical studies tracing how naming practices differed across regions and changed over time are limited (Dupâquier 1981; Smith 1984, 1985; Tebbenhoff 1985; Main 1996; Smith-Bannister 1997; Van Poppel et al. 1999; Gerhards 2005; Berecz 2020). As Wilson stresses (1998, x), "most historians have not been very interested in the names of those whose lives and activities they study" and the field "still remains very patchily worked". Previous efforts are not only scarce and limited in scope, but they also tend to use aggregate data obtained from relatively small samples of the population.[5] Likewise, methodologically speaking, most

[1] See Cavalli-Sforza and Feldman (1981), Goody (1983), Elster (1989), Sahlins (2000), Inglehart and Baker (2000), Putnam (2000), Boyd and Richerson (2005), Heine (2007), Bowles and Gintis (2011), Gelfand (2018), Oto-Peralias (2018), Henrich (2020), Persson and Tabellini (2021), Giuliano and Nunn (2021), Muthukrishna, Henrich, and Slingerland (2021), Bau and Fernández (2022), among many others.

[2] Culture affects a wide variety of outcomes, ranging from cooperation and innovation, to marriage patterns, fertility rates and female labour participation, as well as education, crime and intimate partner violence, among many others (for a review, see Spolaore and Wacziarg 2013). Regarding psychological domains, recent research shows that culture shapes individualism, conformity, attention, emotion and morality (Atari and Henrich 2023).

[3] See, for instance, several classical works such as Weber (1976), Macfarlane (1978), McNeill (1992), Landes (1998) or Mitterauer (2010).

[4] See, for instance, Schonberg and Murphy (1974), Zweigenhaft (1981), Lieberson and Bell (1992), Besnard (1995), Carsten (2004), Bruck and Bodenhorn (2006), Edwards and Caballero (2008), Finch (2008), Varnum and Kitayama (2010), Twenge, Abebe, and Campbell (2010), Mateos (2013), Ogihara et al. (2015), Abramitzky, Boustan, and Eriksson (2020) and Algan et al. (2021), among others.

[5] An exception is Smith-Bannister (1997) who examined 122,710 observations from 40 English parishes between 1538 and 1700.

of the existing literature remains merely descriptive, is not able to properly distinguish between competing explanations and does not fully exploit the wealth of individual-level information that historical records contain. In addition, names provide crucial insights about parents' cultural identity and preferences that can shed light on the care they devoted to their children, the way they raised them and the importance they attached to education and other values. Although studies focusing on current naming practices have found that the information conveyed by given names predicts many future outcomes, such as education, fertility, labour productivity or even happiness (Fryer and Levitt 2004; Edwards and Caballero 2008; Gureckis and Goldstone 2009; Aura and Hess 2010), the historical implications of bearing particular names on individual and societal outcomes remain largely unexplored with very few exceptions. In a pioneering study, Hacker (1999) showed that individuals with biblical names, capturing parental religiosity, had higher marital fertility in 19th century US.

More recent research has revitalised this topic of study exploring how the information provided by given names can shed light on important historical processes. Focusing on six urban parishes in north-eastern Italy between 1816 and 1865, Minnello, Dalla Zuanna, and Alfani (2021) not only show that the number of children with multiple given names increased during the period of study, but also that those children who were given more names enjoyed lower rates of neonatal mortality.[6] These authors argue that the number of given names captures parental characteristics that translated into greater attention to children. The growing number of multiple names throughout the period of study therefore signals cultural changes that help explaining the spread of new caring practices that reduced early-life mortality during the demographic transition. Likewise, analysing the name and career of thousands of university students and famous authors during the last millennium, Andersen and Bentzen (2022) show that individuals who share their first name with a major religious figure were less likely to become engineers, doctors or scientists. Similarly, Knudsen (2019) argues that less common names reveal how individualistic parents were. According to her analysis, those Scandinavians who migrated to the US during the second half of the 19th- and the early 20th-century were raised by families that, on average, did not conform to the shared naming rules. Likewise, Bazzi, Fiszbein, and Gebresilasse (2020) find that the prevalence of rare names, as a proxy for individualistic traits, was higher on the US frontier between 1790 and 1890, even after accounting for the greater presence of immigrants.

Names therefore have an immense potential to capture crucial information about cultural values and beliefs. This article relies on the full-count 1860 Population census of the province of Zaragoza in North-eastern Spain (almost 400,000 observations). As well as names and other demographic and socio-economic characteristics, this source reports whether each individual was able to read and write and whether children were attending school or not. We can thus test whether naming practices were associated with both the likelihood of attending school and being literate. Our results indeed show that naming practices, captured by whether children bear more or less common names and/or were named after their parents, help predicting their educational outcomes, even after controlling for a host of individual-, household- and community-level confounders. These patterns are not driven by the behaviour of the upper classes but form part of a generalized cultural system that attached an important meaning to naming practices.

Crucially, the link between naming practices and education differs by sex, birth-order and socio-economic status, as well as by family type and the urban-rural divide, which allows identifying the mechanisms in place. In particular, bearing a common name is negatively associated with the likelihood of girls attending school and being literate in rural areas. Therefore, traditional attitudes, arising either from religious or familial considerations, seem to have been detrimental for female education. By contrast, not only the popularity of

[6] Similarly, studying the longevity of African American men in four US states between 1802 and 1907, Cook, Logan, and Parman (2016) show that those with distinctive black names enjoyed more than one year of life. Also, studying the sons of migrants in the US during the age of Mass Migration, Abramitzky et al. (2020) find that those who were given American-sounding names attained more years of schooling, earned more and experienced higher levels of employment, thus suggesting that those families that tried to assimilate culturally were somewhat different than those who kept foreign-sounding names.

their names does not appear to have influenced male educational outcomes, but being named after parents had a positive influence on boys' schooling and ability to read and write. The latter is especially visible for the eldest son from families who have access to land, thus stressing the role played by inheritance customs and the continuity of the family line on both naming practices and the way that parents allocated resources between their siblings. Likewise, these patterns are stronger in multi-generational households where the first-born male tended to be designated as the main heir and co-reside with his parents. Taking together, these results stress how the choice of names provide crucial information about parental attitudes and contributes explaining their children's outcomes later in life.

As well as relating to the wider literature on how culture shapes individual behaviour (Inglehart and Baker 2000; Boyd and Richerson 2005; Nunn 2012; Giavazzi, Petkov, and Schiantarelli 2019; Henrich 2020; Muthukrishna, Henrich, and Slingerland 2021; Giuliano and Nunn 2021), this article directly contributes to a better understanding of the explanatory factors behind educational levels in historical perspective (Mitch 2013; Goldin 2014; Becker 2018; Paglayan 2022; Cappelli et al. 2023). Rather than stressing the importance of the supply of schooling or the constraints imposed by socio-economic status on the demand for education, our work puts the focus on how cultural attitudes shaped the amount of resources that parents devoted to educate their children (Becker and Woessmann 2009; Salah 2015; Carvalho, Koyama, and Sacks 2017; Squicciarini 2020).[7] Studying Spanish regional literacy rates around 1887, together with micro-census data and in-depth interviews of elderly informants, Reher (2022) argues that traditional explanations cannot account for the enormous regional disparities and the large gender inequalities in education that have plagued Spanish history. Instead, this author stresses how the perceived value of education played (and still does) a crucial role in explaining educational outcomes. Contemporary commentators indeed blamed the abysmal educational levels on the "apathy" of the parents (Lisón-Tolosana 1983, 105). Our paper expands on this idea by identifying parental attitudes affecting the care and attention they invested in educating their children. In this regard, the prevalence and subsequent expansion of this sort of values and beliefs would partly explain the initial disparities and the unequal rhythms in the expansion of schooling and literacy that took place during the 19$^{\text{th}}$ century and the first decades of the 20$^{\text{th}}$ century.

By exploring the historical implications of naming practices on education, this article therefore enhances our knowledge on the link between cultural change and long-term economic development during the period under study. It can actually be argued that cultural attitudes are a neglected "ingredient" contributing to explaining modern economic growth (Tabellini 2010; Gorodnichenko and Roland 2017; Mokyr 2018; Henrich 2020), including the crucial changes that led to the decline in mortality and fertility during the demographic transition (Brown and Guinnane 2002; Blanc and Wacziarg 2020; Spolaore and Wacziarg 2022), and to increasing investments in education during the same period. This also relates to the long-standing debate on the decline of religious beliefs and the emergence of "modern" family sentiments linked to the "discovery" of children and the consolidation of the nuclear family as the main family type (Ariès 1962; Shorter 1976; Stone 1977; Todd 1985), as well as the changes in gender roles (Hufton 1995; Inglehart and Norris 2003; Goldin 2021) and the rise of individualism that this period also witnessed (Macfarlane 1978; Greif 1994; Hofstede 2001; Bazzi, Fiszbein, and Gebresilasse 2020).

2 Background, sources and methods

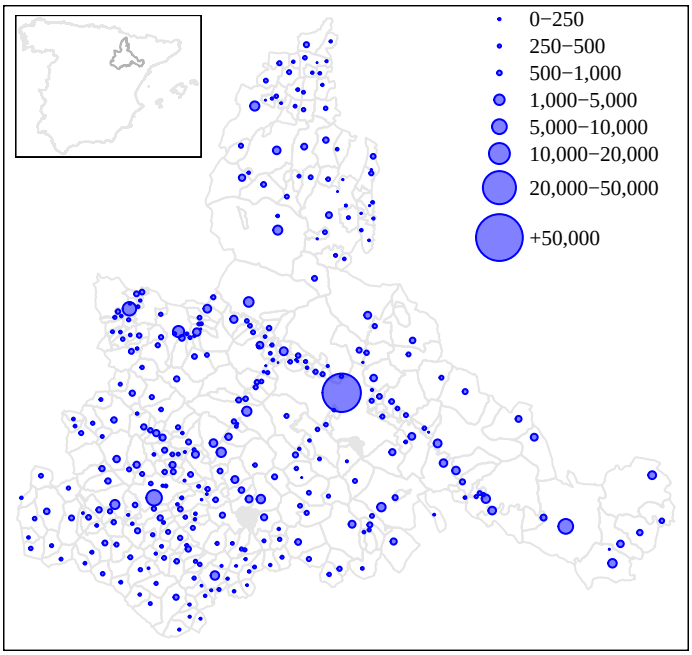
2.1 Naming practices

This article relies on the full-count 1860 Population census of the province of Zaragoza in North-eastern Spain (almost 400,000 observations). With the exception of two small villages whose records have disappeared (out of 313 municipalities), this source provides demographic and socioeconomic information for all the population living in this province (an example of one of these registers is provided in Figure A1 in the

[7] These articles put the focus on how religion shapes investments in human capital. See also Botticini and Eckstein (2007), Becker and Woessmann (2008), West and Woessmann (2010) and Boppart, Falkinger, and Grossmann (2013).

Appendix).[8] Figure 1 below shows the spatial distribution of the population in the area of study. Except for the city of Zaragoza which hosted almost 70,000 inhabitants, this regions was eminently rural. The median population was 689 (apart from the capital city, only four villages exceeded 5,000 inhabitants) and agriculture constituted the main economic activity: our records show that, outside the city of Zaragoza, almost 80 per cent of the households were engaged in the agricultural sector, either as landowners, sharecroppers, shepherds or labourers; or as a combination of them).[9] Although nuclear households constituted the main familiar arrangement in this area, several generations lived together in a non-negligible fraction of households: 10.8 per cent of the households were composed by multiple conjugal units of the same family.[10]

Figure 1: Area of study: Province of Zaragoza, Spain. Population in 1860.



Source: 1860 Population Census of the province of Zaragoza (Spain).
Note: Some municipalities have multiple settlements. The shaded areas correspond to the two municipalities whose records have not been preserved (Encinacorba and Torrecilla de Valmadrid).

The 1860 Population Census contains 2,460 unique names (1,324 males and 1,160 females). Although the stock of names was relatively varied, a few names clearly dominated over the rest. Figure 2 displays the relative frequencies of the 25 most common names for males and females (Figure A3 in the appendix depicts the absolute frequency). While the most common males names are *Manuel*, *José*, *Mariano*, *Francisco*, *Antonio*, *Pedro* and *Juan*, the female repertoire is clearly dominated by *María* (more than 13 per cent of women were

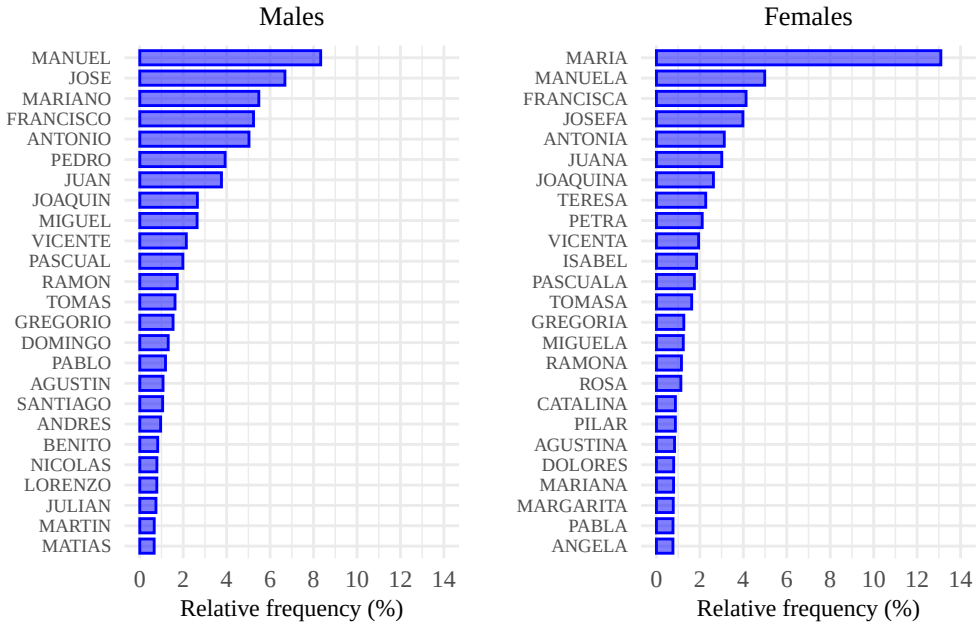
[8] The municipalities whose records have dissapeared are Encinacorba and Torrecilla de Valmadrid.

[9] The rest were registered as artisans, merchants or liberal occupations, as well as a heterogeneous group of low- and semi-skilled occupations. Apart from the capital city of Zaragoza, the largest municipalities were Calatayud (12,299), Caspe (9,950), Tarazona (8,394) and Borja (5,769).

[10] Although multi-generational households could be found all across the province of Zaragoza, they were more common in the norther and eastern part of the province (Figure A2). While the older generation headed around 60 per cent of these households, they appear as dependents of the household head (either their own children or their son- or daughter-in-law) in the remaining ones. Other kin (siblings, aunts, nieces, etc.) could also co-live in the same household (extended families) due to varied demographic, economic and social considerations.

named after the Virgin), followed by *Manuela*, *Francisca*, *Josefa*, etc.[11] In total, 30.8 and 29.3 per cent of the male and the female population, respectively, shared the five most common names. Interestingly, the propensity for parents to rely on a limited stock of names shows clear spatial patterns (see Figure A4 in the appendix), thus reinforcing the idea that names are not just capturing noise but some underlying socio-cultural structure. It is important to stress that, contrary to birth or baptismal registers which often listed two, three or even more given names, census records only recorded the name in use.[12] In this regard, only one of a person's multiple first names was actually used in practice (or two at most). The number of individuals reporting more than one given name was indeed very small in the census under study here (only 1.9 per cent of the registers).[13]

Figure 2: Relative frequency of most common names, 1860.



Source: 1860 Population Census of the province of Zaragoza (Spain).
Note: Only the 25 most frequent names (for each sex) are depicted here.

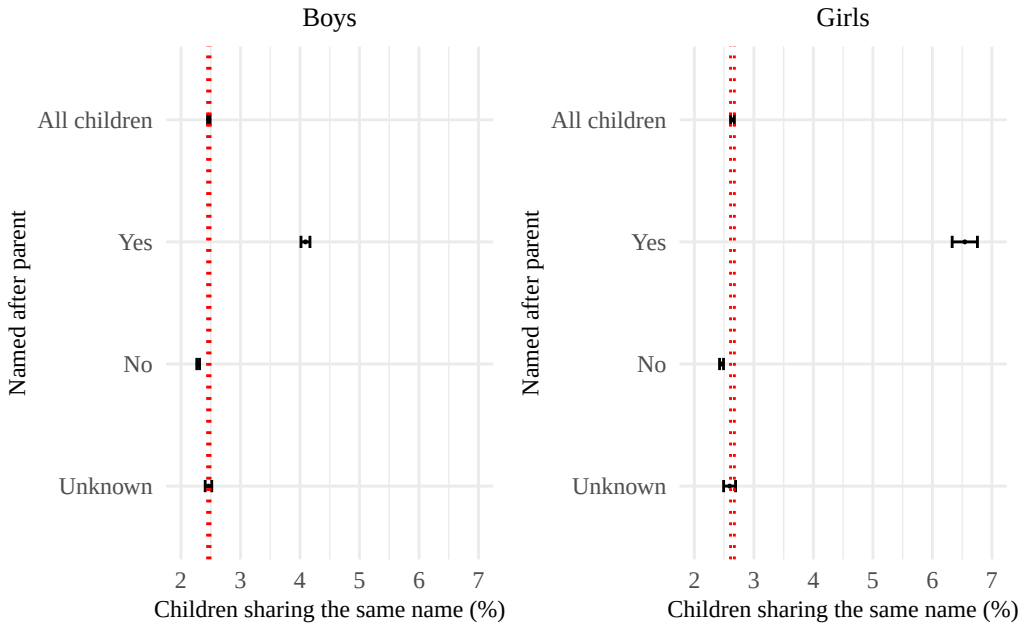
Religious considerations and the need to transmit names within families were the main forces responsible for the limited repertoire and the high concentration of names in the Old Regime (Wilson 1998).[14] In traditional societies, naming after religious figures signals their use both as models of behaviour and as special protectors and advocates before God. The Catholic church prescribed that parents should rely on the name of saints from the liturgical calendar.[15] Virtually all the names in our dataset conform to this religious prescription, so it is very difficult to directly discriminate names according to their "religiosity". It was also common to give children the name of the saint of whose day they were born or baptised. However, strictly respecting

[11] On the disproportionate presence of "Mary" in the corpus of female names, see Dupâquier (1981, 138) or Wilson (1998, 187).
[12] This was also the case in marriage and death records, which only reported the name(s) in everyday use (Castro 2014, 64–66).
[13] The most common multiples names were *Juan Antonio*, *Juan José* and *José María* for men and *María Antonia*, *María Cruz* and *Ana María* for women.
[14] On traditional naming practices in Spain, see García Gallarín (2014), Castro (2014) and Shiba (2020). Accounts on how parents named their children in our area of study can be found in Jarque Martínez and Salas Auséns (2007, 85–91). In particular, it was also common to reuse names after dead siblings (Marco-Gracia 2017).
[15] The religious prescriptions that surrounded baptismal choices in the province of Zaragoza are described in *La familia regulada* (Arbiol 1739, 441–45), an influential religious text that was printed repeatedly during the period of study. More generally, Canon Law (Can. 855) established that parents should avoid gifting non-Christian names.

this custom would produce a much more even distribution of names, which was far from being the case as shown above.

It is however possible to identify whether children were named after their parents or not. As well as reflecting the importance placed on tradition, giving a child the name of a parent may signal the importance of continuing the family line and other inheritance considerations. Not doing so, by contrast, may serve to stress the child's individuality (Wilson 1998; Van Poppel et al. 1999). Our data shows clear gender differences in this dimension: while 10 per cent of boys aged 0-14 were named after their fathers, only 4.6 per cent of girls the same age followed their mothers' name, despite the ubiquity of *María*. Likewise, being named after your parents is indeed associated with receiving more common names, measured by assigning to each children the percentage of individuals of the same sex sharing the same name. While, on average, a typical name was shared by around 2.55 per cent of children,[16] being named after your parent increased this score to 4.1 for boys and 6.5 for girls (see Figure 3). It should be mentioned that it is not always possible to capture this feature because a non-negligible fraction of parents were missing either due to premature death or to being away at enumeration, an issue that especially affected fathers.[17] We were therefore not able to identify the name of the father or the mother for 14.4 and 10.0 of boys and girls, respectively. However, as shown in Figure 3, there were hardly any difference regarding how common the names of these children were in comparison with those whose parents are recorded in the source.

Figure 3: Common names and naming after parents (children aged 0-14).



Note: The dotted lines reflect the upper and lower bounds of the confidence intervals associated with the average common name for all children (regardless of we know the name of the parents or not).

Naming practices responded to socio-economic dimensions, gender and birth order. Figure A5 in the Ap-

[16]This corresponds to be named *Miguel* for boys and *Joaquina* for girls. As shown above, other names were obviously more common: the scores for *Manuel* and *María*, the most common names, were 8.3 and 13.1 per cent, respectively. Among the lest common names, we can find, for instance, *Teofilo* and *Pascasia* that were only gifted to 9 boys and 8 girls (out of 121,292 children).

[17]While 9.7 per cent of ever-married women aged 40 or younger were widows or had their spouse absent, this issue affected 5.5 per cent of married men in the same age-group.

pendix shows whether children (aged 0-14) were gifted more or less common names depending on individual, household and contextual characteristics. In particular, we have classified children according to father's occupation, living in an urban area (the capital city of Zaragoza), family type,[18] being the eldest and sex.[19]

On the one hand, it is clear that the elites tended to differentiate themselves from the other classes and they were more likely to use rare names (a tendency that is also visible among merchants and artisans).[20] There is however hardly any difference between socio-economic groups in terms of how often parents named their children after themselves. Likewise, living in a relatively big city as Zaragoza also increased the likelihood of possessing a less common name. In addition to socio-economic differences between rural and urban areas and a higher exposure to other naming practices, this link probably reflects how migration weakens familial ties and therefore frees parents from naming their children after relatives. In this regard, urban children were less likely to inherit their parents' names. By contrast, the type of family does not seem to matter in terms of choosing more or less common names. Moreover, despite that Wilson (1998, 226) argues that naming after the immediate generation was more congruent with the nuclear family, our data shows that, if anything, children were more likely to bore their parents' name in multi-generational households.

On the other hand, birth order also influenced how names were determined and firstborn children tended to both receive more common names and be named after their parents more often. In this regard, the choice of a name for firstborn children was usually more strictly controlled because it carried special significance due to inheritance practices and/or the responsibility for the care and socialisation of younger brothers and sisters (Van Poppel et al. 1999; Lieberson 2000). According to Wilson (1998, 223), naming the eldest son after the father often signified him as the privileged heir[21]. Lastly, while boys carried more rare names, they were also more likely to continue the naming tradition within the family. Previous research has actually stressed how the different ways in which boys and girls were named signal underlying attitudes about the role of men and women in society and their relative status (Rossi 1965; Gerhards 2005).[22]

Traditional practices were nonetheless changing in response to the economic, social and political transformations set in motion from the late 18th century onwards. Plotting the percentage of the population sharing the five most common names by year of birth confirms that naming practices were evolving and the concentration of names was decreasing significantly (Figure A6). While almost 40 per cent of the population was carrying the same five names at the turn of the 19th century, this figure had declined to almost 25 per cent by 1860 (this trend is very similar for men and women and remains virtually identical if we exclude those individuals from the upper socio-economic strata (artisans, merchants and elites). It is argued that secularization and the dissolution of familial ties allowed the liberation of the individual personality and is therefore linked to the decline in the practice of naming after religious figures and relatives (Wilson 1998; Lieberson 2000).

Studying names therefore offers an excellent opportunity to shed light on how different dimensions shaped cultural attitudes at the individual level. Bearing different names provides crucial insights about parents' cultural identity and preferences and, by extension, the way they raised their children. In particular, given that our source provides information on schooling and literacy, we can explore whether naming choices are related to the importance parents attached to education.

[18] In contrast to purely nuclear households, we have identified children living in multi-generational households where multiple conjugal units of the same family lived together and/or in the presence of other kin (siblings, aunts, nieces, etc.).

[19] Occupations have been classified into eight groups: labourers, farmers, tenants, semi-skilled occupations, artisans, military and elites (keeping the category "Others" for those who could not be classified).

[20] Higher educational levels also exposed parents to a much wider variety of names through newspapers, novels, etc. (Wilson 1998; Lieberson 2000).

[21] In this regard, names can be regarded as a symbolic patrimony to be passed on to new members of the family (Wilson 1998, 221–22).

[22] Sons, for instance, were more closely linked to familial continuity and hence were more likely to be named after a relative, an association that weakened over time (Rossi 1965, 499). Similarly, the different expectations surrounding boys' and girls' roles in German society during the 19th and early 20th century led parents to disproportionately gift German names to boys and religious ones to girls (Gerhards 2005, 112).

2.2 Literacy and schooling

Literacy levels in 19th-century Spain lagged behind its Western counterparts and the lack of education was especially visible for women (Beltrán Tapia and Martínez-Galarraga 2018; Beltrán Tapia et al. 2021a; Reher 2022).[23] While 41.7 per cent of men was able to read and write in 1860, only 11.9 per cent of women could do the same. The funding of schooling was the responsibility of local councils and the parents of the children who attended school. Child labour was widespread, so the opportunity cost of sending children to school was relatively high, especially for poor families. Many contemporary reports were indeed warning about the shortage of schools, the lack of pedagogical resources and the quality of the teachers. Local differences in any case affected the demand and supply of education, thus translating into stark regional disparities in literacy rates.[24] The Moyano Act (1857) attempted to mitigate these problems but it had little, if any, effect in offsetting these disparities, at least between 1860 and 1900 (Beltrán Tapia et al. 2021a). The province of Zaragoza exhibited literacy rates below the national average, especially for men: 32.4 and 10.1 per cent of adult males and females, respectively, were able to read and write in 1860. Studying this province therefore provides an unique opportunity to shed light on the factors that limited the accumulation of human capital in pre-industrial Spain.

As well as names, age, marital status, position within the household and occupation, the census registers report two columns stating whether each individual knew how to (1) read and (2) read and write (see Figure A1 in the Appendix). Our source shows that while 32.8 per cent of adult men (aged 16+) were literate, the corresponding figure for women was only 9.5 per cent. Regional differences were nonetheless pronounced. Literacy rates in the city of Zaragoza, for instance, were much higher: 52.1 and 23.2 for adult men and women, respectively. Although the occupational and socio-economic structure of the regional capital helps explaining these figures, educational achievements in the rest of the province still exhibited substantial variation, especially regarding male literacy (see Figure A7 and Figure A8 in the Appendix).

Likewise, the source also indicates whether children were attending school or not. It is important to note that education was seggregated by sex. Boys and girls were not schooled together unless the municipality could not afford sustaining both a male and a female schoolteacher. The Moyano Act itself discriminated against girls because it established that, while it was compulsory for every municipality to have a school for boys, only those with more than 500 inhabitants should have one for girls. The latter often meant that girls were not able to attend school because there was none in their village: while only 6 municipalities in our study area did not have a school for boys (or girls for that matter), 119 villages lacked one for girls. The existence of *mixed schools* in very small municipalities somewhat compensated this unbalance and allowed schooling girls even if there was not a specific school for them.

In order to track schooling enrollments, we will therefore only focus on municipalities having at least one school for the corresponding sex (or a mixed school), so we can explore which children were sent to school when parents actually had the chance to do so. Coverage of schooling enrolment at the individual-level, however, is not perfectly complete. Some municipalities did not record this information and a few others did not do so consistently. These issues affect around 20-25 per cent of the municipalities who had school (see Table A1 and Figure A9 in the Appendix).[25] Although the children living in municipalities with good

[23] For more details on the expansion of schooling and literacy in 19th- and early-20th-century Spain, see Guereña (1989), Viñao (1990), Núñez (1992), Viñao (1998), Pérez Moreda (1997), Reher (1997), Sarasúa (2002), Núñez (2023), Quiroga (2003), Beltrán Tapia (2013), Gabriel (2013), Beltrán Tapia and Miguel Salanova (2017), Beltrán Tapia and Martínez-Galarraga (2018), Juif and Quiroga (2019), Beltrán Tapia et al. (2021a), Beltrán Tapia and Miguel Salanova (2021), Beltrán Tapia et al. (2021b), Cappelli and Quiroga (2021), Palacios-Mateo (2023), Cinnirella, Naghavi, and Prarolo (2023), Fernández (2024) and Palacios-Mateo (2024).

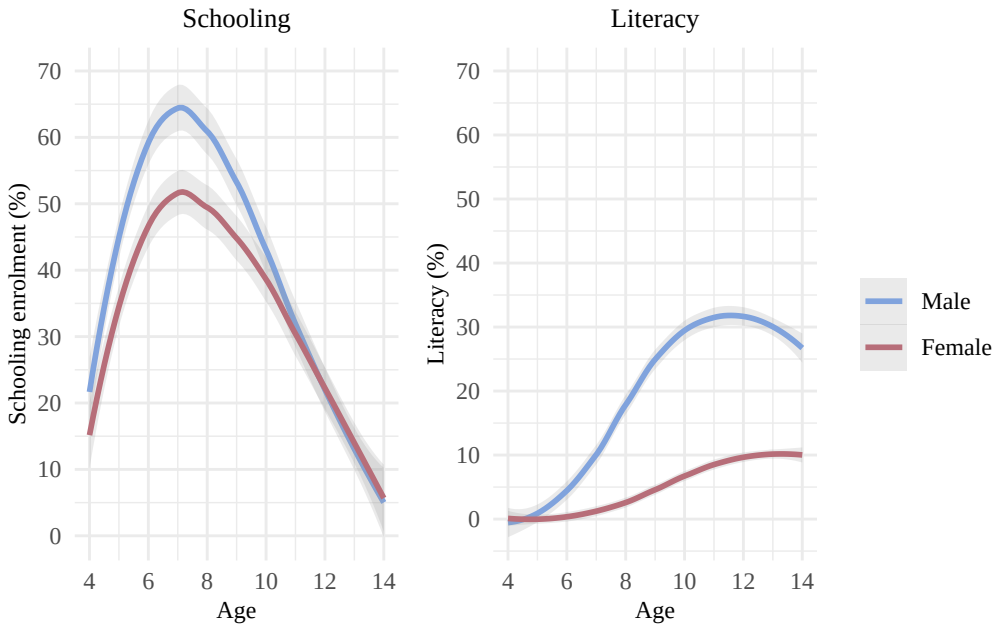
[24] While in the province of Álava, for instance, 53 per cent of the adult population was literate, only 14 per cent was able to read and write in Almería.

[25] Out of the 302 municipalities with school, 63 did not report boys attending it (or did so badly). For girls, this issue affects 48 municipalities (out of 190 that at least had a school for girls or a mixed school). Crucially, the individual records of Zaragoza, the capital city, did accurately register boys attending school but did not so consistently for girls.

registration procedures exhibit slightly higher literacy rates (especially for boys), the differences between the two groups are very small and not statistically significant, so we can consider those municipalities as a representative sample of the full data set (see Figure A10).

Despite that the Moyano Act (1857) had made schooling compulsory for those children age 6-9, this was far from being the case according to the 1860 population census. Focusing only on those municipalities that consistently recorded schooling attendance (and excluding also the capital city of Zaragoza because it did not report girls' schooling), it appears that while 60.0 per cent of boys aged 6-9 attended school, the corresponding figure was reduced to 48.8 per cent for girls. The gender disparities in schooling enrolments were not so pronounced as with literacy rates (the literacy rates for boys and girls aged 6-9 in this sample of villages is 13.7 and 2.0 per cent, respectively). This pattern is explained by the different values attached to educating girls. Not only schools were seggregated by sex, but by curricular content: while boys were mostly taught reading, writing and numerical skills (plus the Catholic doctrine and, if possible, basic notions of history and geography), girls' training prioritised domestic skills, such as sewing, embroidery and knitting, thus reducing the time available for reading and writing.

Figure 4: Schooling enrolment and literacy (by age and sex), 1860.



Note: These plots only use information on children living in municipalities that did have a school and reported schooling attendance systematically.

These patterns are illustrated in Figure 4 depicting how schooling and literacy evolved as children grew up. A non-negligible fraction of children were sent to school very early on, so schoolteachers could take care of them while the parents worked. Attendance to school increased significantly during these early years and reached a maximum around 7 years old, when around 65 and 52 per cent of boys and girls were attending school. Enrollment rates however started to drop at that age as soon as children could start helping their families, a pattern that is especially faster for boys. By age 12, only around 20 per cent of boys and girls were still attending school, a figure that keeps declining as they grew even older. Literacy rates, by contrast, show a steady increase that is significantly pronounced for boys. While more than 30 per cent of boys had learned how to read and write by age 12, only 10 per cent of girls had managed to do so. Schooling therefore did not automatically translate into becoming literate, which further testifies to the deficiencies stressed above:

lack of qualified (and motivated) teachers, lack of materials, etc. Girls were especially penalised because not only female teachers possessed lower skills, but they were not supposed to prioritise writing (and numerical) skills.

2.3 Methodology

As argued above, names provide crucial information about parental characteristics and are therefore likely to reflect the care that they devote to their children, the way they raise them and the importance they attach to education. Given the information provided by the 1860 Population census, this hypothesis can be assessed by linking naming practices to the probability of attending school and being literate, dimensions that are likely to reflect the amount of resources that parents put into educating their children.

We therefore conduct econometric analyses that rely on the individual-level information contained in our source. These models, estimated using OLS, link the probability of (1) being literate and (2) attending school to an indicator of how common (or rare) a name was. The latter assigns to each children the fraction of individuals sharing the same name. Given that religious and familial considerations constitute the main factors explaining why parents relied on a limited set of names, this variable reflects the weight of tradition. This indicator captures the degree to which each set of parents is conforming to (or deviating from) the common norm.

Having a common or rare name, however, may imply different things depending on the underlying motivation behind the choice of name, namely familial or religious considerations. We thus extend this model by also including a variable indicating which children were named after their parents or not. Although this indicator does not fully capture the weight of familial considerations when naming children (they could also be named after grandparents, godparents and other kin), it allows shedding light on the importance of more concrete mechanisms behind naming practices, such as inheritance rules and continuing the family line. Accounting for this variables implies that the indicator measuring how common a name was now only reflects the residual effect of tradition, after netting out the direct effect of being named after parents.

Methodologically speaking, assessing the distinct influence of names on individual outcomes requires being able to compare individuals that are similar otherwise. As shown in the previous section, naming practices differed by sex, birth order, origin and socio-economic status, among other dimensions. Likewise, it is also likely that the effect of names on individual outcomes was highly heterogenous and varied according socio-economic status, family type, birth order and other contextual characteristics, including the rural-urban distinction. Therefore, as well as conducting separate analyses by gender and urban-rural areas, all the specifications control for a set of individual and household characteristics, such as age, parity, number of same-sex siblings, father's occupational category and family type.[26] Lastly, all models include municipal fixed-effects and robust standard errors clustered at the municipal level.[27]

It should be stressed that our research design does not allow deeming our results as strictly causal. Although we consider a wide range of individual, household and contextual features, it is still possible that we are not taking into account all the relevant dimensions. For instance, even if we compare children whose fathers had the same occupation, it may be the case that income levels varied within those occupations. The effect of bearing a particular name might therefore capture that unobserved feature: for instance, high-income families (within the same occupation) may have named their children differently, so their individual outcomes might have not been shaped by parental cultural values (captured by names), but by having been raised in a wealthier family. In order to further mitigate this concern, we also include the number of servants working

[26] Parity and the number of same-sex siblings also accounts for differences in fertility and infant mortality. Having more surviving children forces parents to expand their repertoire of names, instead of repeating names after dead siblings (Wilson 1998, 232). Family type is captured by two dummies variables that identify those children living in multiple-generational households and/or in the presence of other kin (uncles, aunts, cousins, etc.).

[27] The specifications that only focus on the city of Zaragoza do not cluster the standard errors.

for each household.[28]

In order to have information on all the dimensions mentioned above, we restrict the analysis to school-age children, that is those aged 4-14: 42,226 boys and 40,008 girls. However, not all of these children are directly related to the father or the mother heading these families and are therefore excluded from the analysis (i.e. nephews and other kin, servants, etc.), which slightly reduces the total number of observations available for the analysis. Table A3 in the appendix reports summary statistics. Exploring how the results change according to gender, origin, birth-order and socio-economic dimensions allows us to better identify the motivations behind these practices and the different mechanisms linking cultural attitudes and parental behaviour.

3 Results

Table 1 reports the results of estimating the association between naming practices and the probability of being able to read and write: columns 1 and 4 perform the analysis separately for all boys and girls aged 4-14 and the remaining columns split the respective samples between urban and rural areas. Likewise, while Panel A only puts the focus on how common a name was, Panel B explores whether being named after your parents also exerted a distinctive influence on our variable of interest.

The estimated coefficients in Panel A show that having a common name is clearly negatively associated with girls' literacy, both in the countryside and the capital city. In rural areas, a one-standard deviation change in how common a girl's name is associated with an increase in the likelihood of being literate by 0.8 percentile points. Taking into account that only 6 per cent of girls in our sample are literate, this is indeed a sizable effect. This coefficient is even bigger in the capital city of Zaragoza but we should bear in mind that average literacy was also much larger there. Adding, however, the variable *Name after parents* is extremely informative: not only the negative effect of bearing a common name on girls' literacy is not affected, but it also becomes visible for boys living in rural areas. In addition, being named after your parents also had an independent effect on the likelihood of being literate. In the countryside, sharing the same name with your parents implied a 2.1 and 1.1 percentile points increase in the probability of being literate for boys and girls, respectively.

Replicating the analysis focusing now on whether children attended school or not helps qualifying the results above. This analysis however can only be implemented on the subsample of children living in municipalities offering a school. As explained in the previous section, the sample is also restricted because the enumerators did not always report schooling at the individual-level (or did so systematically for all children living in the same location). Although the resulting sample is representative of the full population, this procedure significantly reduces sample size and therefore the accuracy of our estimates. Table 2 below reports the results of this exercise. Although we can assess how the estimates differ between boys living in rural areas and those living in Zaragoza (columns 1 and 2), the same is not possible for girls, whose sample is restricted to only those living in the countryside (column 3). Two main findings arise from this analysis. On the one hand, the negative link between common names and schooling is only visible for girls and the size of the effect is much smaller given that enrollment rates were higher than literacy rates. On the other hand, it appears that being named after parents does not have a clear effect on attending school, neither for boys, nor for girls.

Therefore, it seems that the main connection between parental attitudes (captured by naming practices) and children's education does not pertain to whether children were sent to school or not, but to the efforts that parents devoted to actually educate them. The oral testimonies of elderly informants, born in northern Spain in the 1920s, suggest not only that children learned how to read at home, but also that they were greatly

[28] This variable is operationalised as a categorical variable containing four values (0, 1, 2 or more than 3) which are included as separate dichotomical variables in the regressions.

Table 1: Naming practices and literacy (children aged 4-14).

	Dep. variable: Being literate (0/1)					
	Boys			Girls		
	All	Urban	Rural	All	Urban	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Only common name						
Common name	-0.001	0.003	-0.001	-0.002***	-0.004***	-0.001***
	(0.001)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
Adj. R-squared	0.276	0.377	0.254	0.189	0.287	0.141
Observations	38619	4566	34053	36357	4421	31936
Panel B: Common name and named after parents						
Common name	-0.001	0.002	-0.002*	-0.002***	-0.004***	-0.002***
	(0.001)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
Named after parent	0.022***	0.026	0.021***	0.012***	0.034	0.010**
	(0.006)	(0.020)	(0.007)	(0.004)	(0.026)	(0.004)
Adj. R-squared	0.28	0.38	0.26	0.187	0.288	0.139
Observations	34824	4016	30808	34866	4218	30648

* p < 0.1, ** p < 0.05, *** p < 0.01

Note: All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

Table 2: Naming practices and schooling (children aged 4-14).

	Dep. variable: Attending school (0/1)		
	Boys		Girls
	Urban	Rural	Rural
	(1)	(2)	(3)
Panel A: Only common name			
Common name	-0.001	-0.002	-0.002**
	(0.002)	(0.001)	(0.001)
Adj. R-squared	0.134	0.305	0.28
Observations	4581	25687	19776
Panel B: Common name and named after parents			
Common name	-0.001	-0.002	-0.001
	(0.002)	(0.001)	(0.001)
Named after parent	-0.024*	0.008	-0.010
	(0.014)	(0.009)	(0.013)
Adj. R-squared	0.12	0.307	0.28
Observations	4029	23190	19031

* p < 0.1, ** p < 0.05, *** p < 0.01

Note: All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

influenced by watching their parents reading books or writing letters (Reher 2022, 41:101–9). An interviewee tellingly indicates how his parent had hired an individual tutor to help him during the evenings because the schoolteacher was terrible. He continues by explicitly stressing the great support he received from his family. This lack of connection between schooling and literacy also reflects the quality of schooling itself. As explained above, teachers' qualifications were lacking, and especially so in the rural areas, an issue that especially affected girls if we take into account that their teachers were supposed to prioritise other skills. Becoming literate therefore did not hinge on being sent to school, but on other efforts ensuring that children actually learned their letters.

The results reported above are robust to different specifications (see Table A4 and Table A5 in the Appendix). On the one hand, they remain virtually identical if, instead of OLS, we rely on a logit model. On the other hand, the coefficients hardly change if we exclude those observations bearing very rare names (only 5 or less children carrying them) or multiple names, thus reassuring that our results are not driven by very rare names or by issues with the quality of the transcription. Lastly, the results mostly hold if we exclude first-born children and those children belonging to the upper socio-economic groups (artisans, merchants and elites). There are however two exceptions: the negative association between bearing a common name and literacy is less stable for sons and the positive effect of being name after parents on literacy is no longer visible for daughters as soon as the upper classes are excluded from the analysis.

Taking together, the results reported above powerfully suggest that naming practices provide important information about the effort that parents put into educating their children. In particular, they stress the penalty that bearing a common name exerted on daughters' literacy and the push that being named after parents had on sons' ability to read and write. These patterns are not driven by the behaviour of the upper classes but form part of a generalized cultural system that attached an important meaning to naming practices.

4 Birth order, access to land and family type

The previous analysis illustrates that the link between naming practices and education differed by sex and the rural-urban divide. This section further explores the mechanisms behind this relationship by considering how birth order, access to the land and family type shape the results.

As mentioned before, birth order influenced how names were determined because choosing a name for first-born children usually carried especial significance due to inheritance practices, especially for boys. However, succession norms only matter when there is patrimony to be bequeathed. If these issues are important, comparing children raised by farmers or landless labourers would allow identifying different outcomes depending on whether children are expected to inherit land or not. Focusing on these two social classes is not only theoretically justified, but it also makes sense in practice because they were the most numerous groups and therefore assure that the the underlying number of observations is large enough for this kind of analysis. Similarly, assessing how boys and girls fared based on these dimensions, as well as depending on whether they lived in the capital or not, further helps understanding the role of inheritance patterns.

Table 3 therefore reports the results of estimating the link between naming practices and literacy for farmers and landless labourers separately. In order to identify the role of birth order, Panels A and C rely on the whole sample and Panels B and D restrict the analysis by excluding the oldest living son or daughter.[29] Although splitting the analysis by father's occupation makes the results noisier due to reduced samples, the coefficients clearly suggest that access to land and primogeniture played a crucial role on explaining the results for boys but not for girls. In farmers' families, the link between being named after your parents and literacy run mostly through the first-born son. This effect is also visible when the oldest children is excluded

[29]The nature of our source does not allow us to identify whether an even older child died before the enumeration. However, this issue hardly affects our exercise due to the custom of reusing the name of dead siblings (Jarque Martínez and Salas Auséns 2007, 85–91; Marco-Gracia 2017).

from the analysis but the coefficient is reduced and subject to more random noise. Likewise, having a more or less common name did not appear to have had an independent effect on boys raised in these families. Farmers' daughters, by contrast, were subject to a completely opposite pattern: while being named after your parents does not show any significant association with literacy, receiving a common name implied being less likely to be able to read and write. This negative penalty is larger for first-born girls, a pattern that may reflect the fact that the eldest daughter was often left in charge of the household and acted as a surrogate mother for her younger siblings (Reher 2022, 41:102).

By contrast, the educational outcomes of children raised by landless labourers do not appear to be connected to their names. Except for the coefficients on children living in the capital city of Zaragoza which shows inconsistent results probably due to both the noise resulting from very small samples and its intrinsic heterogeneity,[30] receiving a more or less common name or being named after parents does not alter the probability of being literate. These patterns are very similar regardless of whether first-born children are included in the specification or not, which reinforces the idea that these families did not put special attention to differentiating their children. Alternatively, it is also plausible that the economic constraints they suffered did not give them enough room to maneuver and influence the children's prospects. In this regard, it is worth mentioning that their chances of becoming literate were generally very low: while only 13.0 per cent of boys aged 10-14 and raised in landless families were able to read and write, this figure increased to 38.4 for the sons of farmers. This pattern is even more striking for daughters: only 2 per cent of landless girls aged 10-14 were literate (in comparison to 10.1 per cent for those raised in families with access to land).

Replicating the analysis on the likelihood of attending school further supports the interpretation outlined above. Table 4 reports the results of this exercise.[31] The results show a clear positive association between being named after parents and attending school but only for first-born sons born in farmers' families in rural areas.[32] Neither daughters, nor higher-parity sons, born in these families shared this pattern which testifies to the role played by inheritance patterns and the continuity of the family line to both naming practices themselves and how they signal the social ascendancy of the eldest son. These boys enjoyed an almost 4 percentile-point advantage in the likelihood of being sent to school.

The positive link between being named after the father and schooling is not visible in boys raised by landless labourers, which again reinforces this interpretation. Naming practices in these disadvantaged families, however, still appear to signal some information regarding how they cared about their daughters: girls receiving more common names are significantly less likely to attend schooling. This result contrasts with that of girls brought up in land-owning families whose attendance to school was unrelated to their names. This disparity conforms with their relative status: while farmers' daughters hardly work outside home, the daughters of landless labourers often worked as servants in other households (Lisón-Tolosana 1983, 86), which obviously prevented them for enrolling in school. As shown in Table 3, the disadvantage that landless girls bearing common names suffered did not translate into lower literacy rates, a result which probably arises from the small role that schooling played in teaching girls to write, as well as their extremely low literacy rate in general.

The way families were organised also relates to how the patrimony was transmitted across generations and the expectations about the future roles of each member of the family. In 19th-century Spain, family systems were closely tied to inheritance practices (Mikelarena 1992; Reher 1997). In particular, when impartible succession was in place, one member of the family was expected to inherit the family farm and co-reside with

[30] It is plausible that urban contexts exerted a very different influence on both naming practices and literacy rates. The social diversity prevalent in urban settings makes it likely that the coefficients are mixing up very different influences. Likewise, not only was inheritance much less important in urban than in rural areas for most residents, but many towns were actually filled with rural migrants who had been excluded from inheriting the family farm (Reher 1997, 37).

[31] As explained above, we cannot explore what happened to those girls living in the city of Zaragoza due to the peculiarities of the source.

[32] The negative coefficient estimated for higher-parity boys living in the capital is probably an artifact of the low number of observations (only 253 children).

Table 3: Naming practices and literacy. Birth order and access to land.

	Dep. variable: Being literate (0/1)					
	Boys			Girls		
	All	Urban	Rural	All	Urban	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Farmers						
Common name	-0.002	-0.004	-0.002	-0.002***	-0.006**	-0.002***
	(0.001)	(0.008)	(0.002)	(0.001)	(0.003)	(0.001)
Name after parent	0.047***	0.069	0.047***	0.002	0.023	0.000
	(0.015)	(0.065)	(0.016)	(0.009)	(0.098)	(0.010)
Adj. R-squared	0.279	0.246	0.281	0.148	0.253	0.141
Observations	8721	387	8334	8549	371	8178
Panel B: Farmers - Excluding first-borns						
Common name	-0.001	-0.012	-0.001	-0.002**	-0.007*	-0.001**
	(0.002)	(0.010)	(0.002)	(0.001)	(0.004)	(0.001)
Name after parent	0.032*	0.068	0.033*	0.005	0.012	0.002
	(0.018)	(0.088)	(0.019)	(0.012)	(0.122)	(0.012)
Adj. R-squared	0.273	0.23	0.276	0.144	0.243	0.14
Observations	6194	253	5941	6043	229	5814
Panel C: Labourers						
Common name	0.000	0.004	-0.001	0.000**	-0.001*	0.000
	(0.001)	(0.003)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.004	0.002	0.004	0.001	-0.017***	0.002
	(0.006)	(0.029)	(0.007)	(0.004)	(0.006)	(0.004)
Adj. R-squared	0.107	0.082	0.111	0.033	0.033	0.033
Observations	16541	1432	15109	16215	1524	14691
Panel D: Labourers - Excluding first-borns						
Common name	0.001	0.009**	0.000	0.000*	-0.002***	0.000
	(0.001)	(0.004)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.003	0.045	0.001	0.000	-0.009	0.001
	(0.009)	(0.047)	(0.009)	(0.004)	(0.007)	(0.005)
Adj. R-squared	0.12	0.079	0.126	0.049	0.046	0.054
Observations	9984	782	9202	9879	799	9080

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

Table 4: Naming practices and schooling. Birth order and access to land.

	Dep. variable: Attending school (0/1)					
	All children			Excluding first-born		
	Boys		Girls	Boys		Girls
	Urban	Rural	Rural	Urban	Rural	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Farmers						
Common name	0.004	-0.001	0.000	0.004	0.001	0.002
	(0.004)	(0.002)	(0.002)	(0.006)	(0.003)	(0.002)
Name after parent	-0.011	0.039**	-0.003	-0.069**	0.023	0.009
	(0.037)	(0.017)	(0.032)	(0.031)	(0.022)	(0.040)
Adj. R-squared	0.058	0.327	0.285	0.053	0.329	0.281
Observations	387	6320	4722	253	4497	3341
Panel B: Labourers						
Common name	0.002	-0.001	-0.002**	0.002	-0.002	-0.002*
	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)
Name after parent	-0.017	0.000	0.010	0.002	-0.012	0.011
	(0.014)	(0.013)	(0.018)	(0.028)	(0.019)	(0.026)
Adj. R-squared	0.025	0.258	0.264	0.031	0.259	0.267
Observations	1442	11206	9134	789	6816	5624

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

his or her parents, which resulted in more complex family arrangements. By contrast, partible inheritance was conducive to the formation of new households and was therefore associated with the predominance of nuclear families. Although equal inheritance predominated in our region of study, it was possible to favour one heir who would inherit most of the family patrimony (Jarque Martínez and Salas Auséns 2007).[33] Likewise, some areas both in the northern and eastern part of the province followed the legal practice of designating a universal heir, usually the eldest son (or daughter if there were no male heirs).[34]

It is therefore plausible that the incentives to discriminate among the offspring were stronger when one heir was supposed to inherit the family farm and take care of his or her parents. Although all the previous exercises account for the presence of different family types, exploring how the results change when we study these family arrangements separately helps shedding more light on the factors that really mattered when parents were signalling information through names. We have therefore replicated the previous exercise but restricting the analysis to children raised in nuclear households, understood as those only formed by a married couple (or either the father or mother) with their offspring. More complex families, composed of multiple conjugal units, are therefore excluded.[35] Again, contrasting the behaviour of landowning and landless families is especially telling because signalling which child carries particular responsibilities through naming especially matters when there is patrimony to pass on, a decision that is also shaped by birth order and gender.

The results of these analyses are reported in Table A6 and Table A7 in the Appendix. Interestingly, although the main patterns reported previously hold, the coefficients on the variables of interest are attenuated, thus suggesting that the role of naming practices on educational outcomes is stronger in households where one sibling was expected to be designated as the main heir and co-reside with his or her parents. This finding therefore stresses the importance of the transmission of property and the related responsibilities of caring for the elderly as a crucial mechanism behind this link. It is nonetheless argued that the weight of tradition is heavier in more complex families due to the importance of family ties and obligations. In this regard, the dissolution of family ties is associated with increasing individualism, a pattern that also influenced the names that parents chose to their children (Wilson 1998; Van Poppel et al. 1999; Lieberson 2000). These processes might also be related to the different meaning that children may entail in nuclear and more complex families due to the different role they played in them, both economically and affectively (Ariès 1962; Shorter 1976; Stone 1977; Todd 1985). According to the latter interpretation, the more intimate contact with children characteristic of nuclear households would affect how parents perceived their offspring, which in turn would increase their intrinsic value, regardless of inheritance considerations and the distinctions associated with birth order and gender. In any case, although weaker, the link between naming practices and education is still visible in nuclear families, which suggest that they were by no means free of the weight of tradition.[36]

5 Conclusion

This article stresses the importance of culture for our understanding of human behaviour in the past. Given that historical information on cultural practices is not available systematically, the article relies on names as expressions of cultural identity that allow capturing parental values and beliefs (i.e. about the importance that parents attached to tradition, familial ties, etc.). As well as tracing how naming practices in mid-19th-century Spain differed across several dimensions (i.e. gender, birth-order, socio-economic status, family type and the rural-urban divide), this article shows that the information conveyed by names helps shedding light

[33] Aragonese Civil Law gave testators almost free will on how to distribute their patrimony (Jarque Martínez and Salas Auséns 2007, 153).

[34] As well as avoiding the fragmentation of the familial property, these practices constituted an old-age insurance, since the favoured heir had to take care of the parents in their old age (REF).

[35] Nuclear households could sometimes host other kin (siblings, aunts, uncles, cousins, etc.) due to varied demographic, economic and social reasons, which were mostly unrelated to inheritance issues (Reher 1997, 43).

[36] Family ties indeed kept different generations relatively close even when they did not live in the same household: children were still expected to set up their new households near their parents' home, assist them in agriculturals tasks and care for them in their old age (Reher 1997, 64).

on how parents raised their children and therefore shaped their individual outcomes.

Naming practices are associated with the likelihood of attending school and being literate, even when we compare children that are otherwise equal according to a set of observed dimensions at the individual-, household- and community-level. In particular, bearing a common name is negatively associated with the likelihood of girls attending school and being literate in rural areas, thus suggesting that traditional attitudes, arising either from religious or familial considerations, did indeed penalise female education. Naming practices, however, had different implications for boys. While the popularity of their names is not generally associated with educational outcomes, being named after parents fostered their chances of both attending school and becoming literate.

These results are mostly driven by the role played by inheritance customs and the continuity of the family line on both naming practices and the different ways in which parents prioritised the eldest son when allocating resources within families. This is consistent with property and inheritance rules favouring the first-born son who would then take over the family farm, provide parents with old-age security, and ensure the continuity of the family name, a pattern that is stronger in more complex families where the designated male heir lived with his parents.

Gender considerations, however, also played an important role. Bearing more common names reduced girls' educational prospects but did so differently depending on their families' socio-economic status: while these girls had less chances of attending school when raised in landless families, those brought up in families with access to land suffered lower literacy rates. Devoting less attention to girls in poor families implied not sending them to school, probably due to the opportunity cost of child labour. In land-owning households, by contrast, sending girls to school was more widespread but assuring they actually became literate implied an additional effort. Boys did not face these penalties, which clearly speaks about the different value that was attached to educate boys and girls.

In general, the link between parental attitudes, captured through names, and educational outcomes is much more visible in terms of literacy than of schooling. Although sending children to school was starting to be considered the norm during this period, it did not automatically translate into actual learning. Becoming literate actually hinged on something else. According to Reher (2022), the family was the most important factor influencing education in 19th and early 20th century Spain, both before a child even reached school-age and during his schooling. Although families can also influence the demand for education at the community-level and therefore politically (and financially) contribute to funding schooling, this article shows that parents had a direct impact on the education of their children, regardless of the quality of the schooling system surrounding them. The explicit support of the family, as well as the values instilled around education, would therefore play a crucial role on shaping the educational outcomes of their children.

This study, however, presents several limitations. On the one hand, despite having accounted for many potential confounders, our research design does not allow considering our results as strictly causal due to unobserved heterogeneity. It should be noted nonetheless that, even if it is not possible to observe all the relevant dimensions (i.e. income), studying the effect of names is still highly relevant because they are conveying crucial information that is not captured by the other characteristics that are observed (i.e. occupation, number of servants, etc.). In fact, it can be argued that names would actually be a proxy for the unobserved dimension and therefore crucially contribute to our understanding of those features in other contexts. It is important nonetheless to assess whether the results reported here hold under other research settings.

On the other hand, the data analysed here does not allow to fully disentangle the distinct role that religious and familial considerations may play on both naming practices and educational outcomes. Bearing a common name reflect both dimensions and therefore the overall weight of tradition. Although identifying children named after parents captures the importance attached to property, inheritance and continuing the family line, we are not able to capture other ways of transmitting names within families (i.e. after grandparents,

godparents and other kin). The residual influence of bearing a common name therefore reflects both religious attitudes and more general family values, including the importance of the extended family. Given that religious and familial values are likely to have different implications on how parents raised their children, more research is needed to better identify the underlying motivations behind the choice of a particular name.

Lastly, this work only constitutes a picture of a point in time, so we cannot properly model the dynamics behind cultural change and educational outcomes. Although our data shows that naming practices were becoming less traditional over time, it is not possible to assess whether this trend is related to a decline in religious beliefs or the consolidation of the nuclear family as the main family type, not to mention other processes such as urbanisation, changes in gender roles or even the formation of a national identity, among others. It is also unclear how this tendency would interact with parents' propensity to educate their children, especially taking into account that the state was also fostering education and literacy. The fact that bearing a common name and being named after parents also shows conflicting effects, and that they differ by sex and other dimensions, further complicates any linear interpretation of the links studied here. It is, in any case, no longer possible to avoid explicitly integrating culture within our explanations of the transition to mass schooling and universal literacy.

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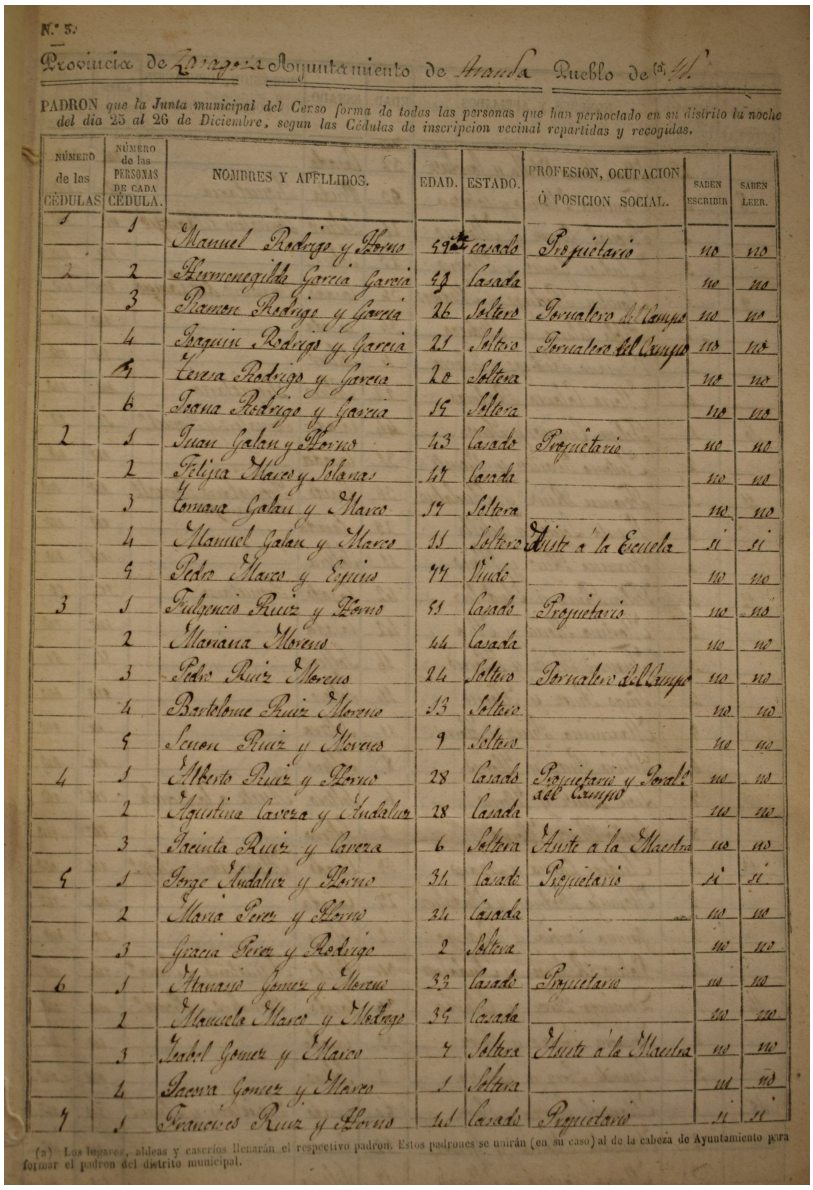
A SUPPLEMENTARY MATERIALS

Figure A1: Sample household card. 1860 Population Census, Zaragoza (Spain)



N.º 5.

Provincia de Zaragoza Ayuntamiento de Aranda Pueblo de (a) [illegible]

PADRON que la Junta municipal del Censo forma de todas las personas que han pernoctado en su distrito la noche del dia 25 al 26 de Diciembre, segun las Cédulas de inscripcion vecinal repartidas y recogidas.

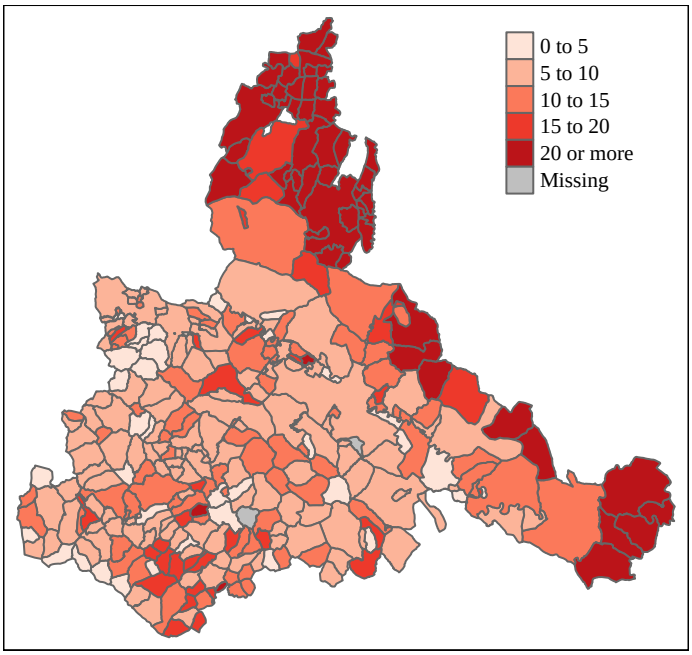
NÚMERO de las CÉDULAS	NÚMERO de las PERSONAS DE CADA CÉDULA.	NOMBRES Y APELLIDOS.	EDAD.	ESTADO.	PROFESION, OCUPACION Ó POSICION SOCIAL.	SABEN ESCRIBIR	SABEN LEER.
1	1	Manuel Rodrigo y Blorno	59	casado	Propietario	no	no
2	2	Hermenegilda Garcia Garcia	43	Casada		no	no
	3	Ramon Rodrigo y Garcia	26	Soltero	Jornalero del Campo	no	no
	4	Joaquin Rodrigo y Garcia	21	Soltero	Jornalero del Campo	no	no
	5	Teresa Rodrigo y Garcia	20	Soltera		no	no
	6	Joana Rodrigo y Garcia	15	Soltera		no	no
2	1	Juan Galan y Blorno	43	Casado	Propietario	no	no
	2	Felipa Marco y Solana	41	Casada		no	no
	3	Tomasa Galan y Marco	17	Soltera		no	no
	4	Manuel Galan y Marco	11	Soltero	Asiste á la Escuela	si	si
	5	Pedro Marco y Egeas	74	Viudo		no	no
3	1	Fulgencio Ruiz y Blorno	51	Casado	Propietario	no	no
	2	Mariana Moreno	44	Casada		no	no
	3	Pedro Ruiz Moreno	24	Soltero	Jornalero del Campo	no	no
	4	Bartolome Ruiz Moreno	13	Soltero		no	no
	5	Leonor Ruiz y Moreno	9	Soltera		no	no
4	1	Alberto Ruiz y Blorno	28	Casado	Propietario y Jornal del Campo	no	no
	2	Agustina Cavera y Andaluz	28	Casada		no	no
	3	Jacinta Ruiz y Cavera	6	Soltera	Asiste á la Maestra	no	no
5	1	Jorge Andaluz y Blorno	31	Casado	Propietario	si	si
	2	Maria Perez y Blorno	31	Casada		no	no
	3	Gracia Perez y Rodrigo	2	Soltera		no	no
6	1	Mariano Gomez y Moreno	33	Casado	Propietario	no	no
	2	Manuela Marco y Noltrop	35	Casada		no	no
	3	Isabel Gomez y Marco	7	Soltera	Asiste á la Maestra	no	no
	4	Jacinta Gomez y Marco	1	Soltera		no	no
7	1	Francisco Ruiz y Blorno	41	Casado	Propietario	si	si

(a) Los lugares, aldeas y caserios llenarán el respectivo padron. Estos padrones se unirán (en su caso) al de la cabeza de Ayuntamiento para formar el padron del distrito municipal.

Source: Archivo de la Diputación Provincial de Zaragoza, *Sección Estadística*, boxes 1382, 1383, 1390-1395.

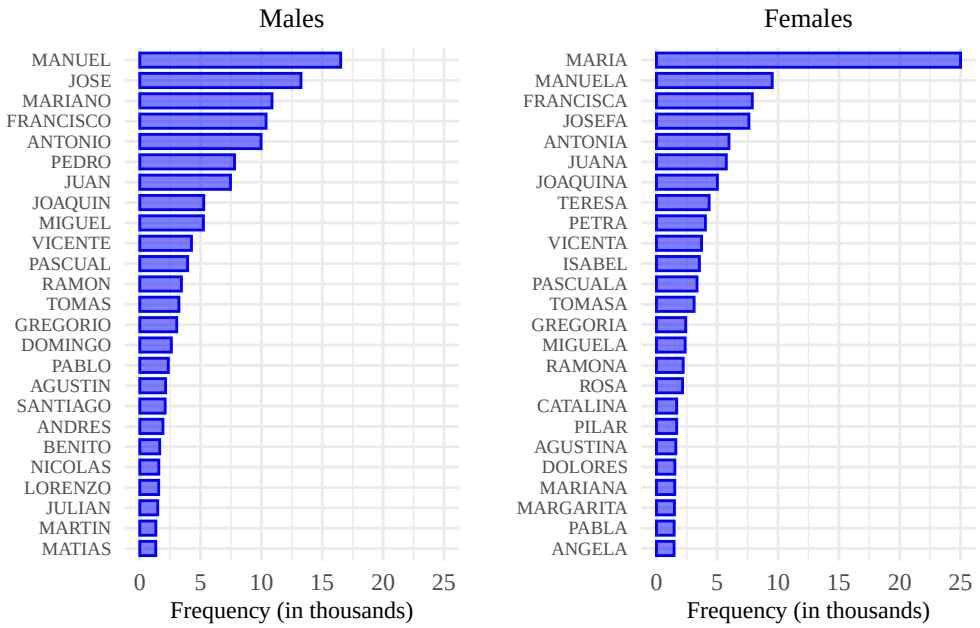
Note: This record corresponds to the municipality of *Aranda de Moncayo*.

Figure A2: Percentage of multi-generational households, 1860.



Source: 1860 Population census. Zaragoza (Spain).
Note: The areas in grey correspond to the two municipalities whose records have not been preserved.

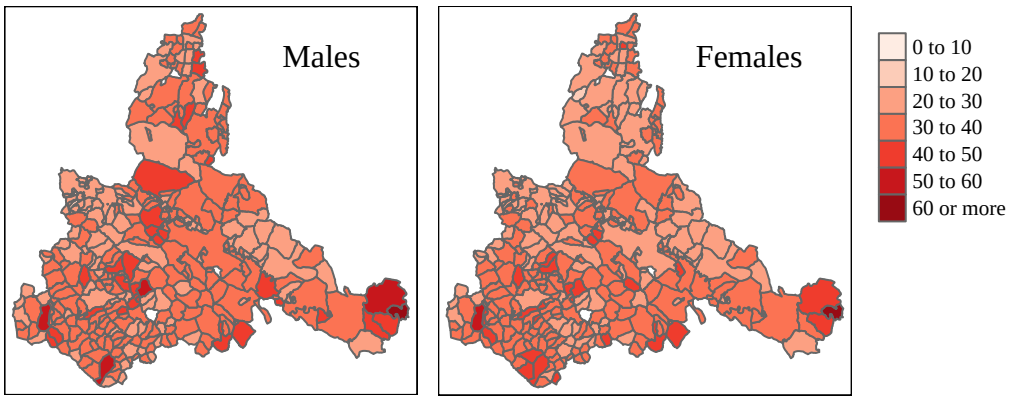
Figure A3: Frequency of most common names, 1860.



Source: 1860 Population census. Zaragoza (Spain).

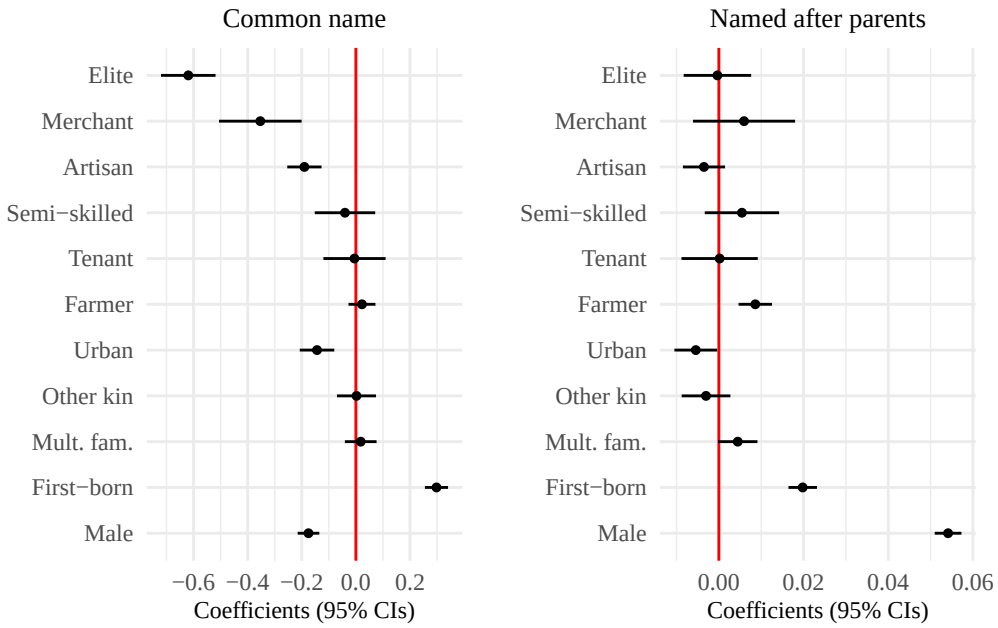
Note: Only the 25 most common names are reported here.

Figure A4: Percentage of the population sharing the five most common names, 1860.



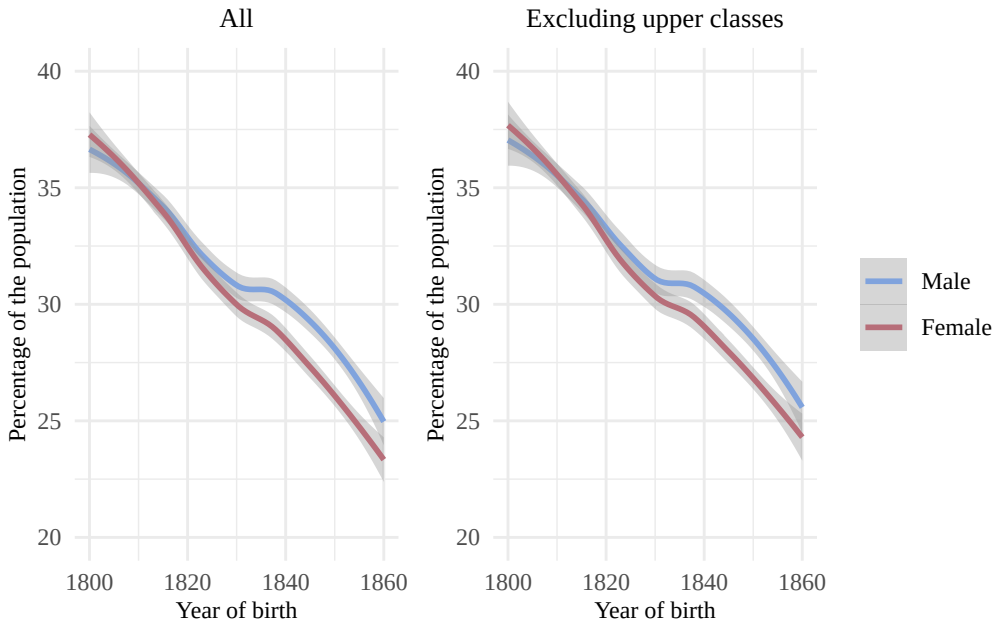
Source: 1860 Population census. Zaragoza (Spain).
Note: The areas in white correspond to the two municipalities whose records have not been preserved.

Figure A5: Variation in common names, 1860.



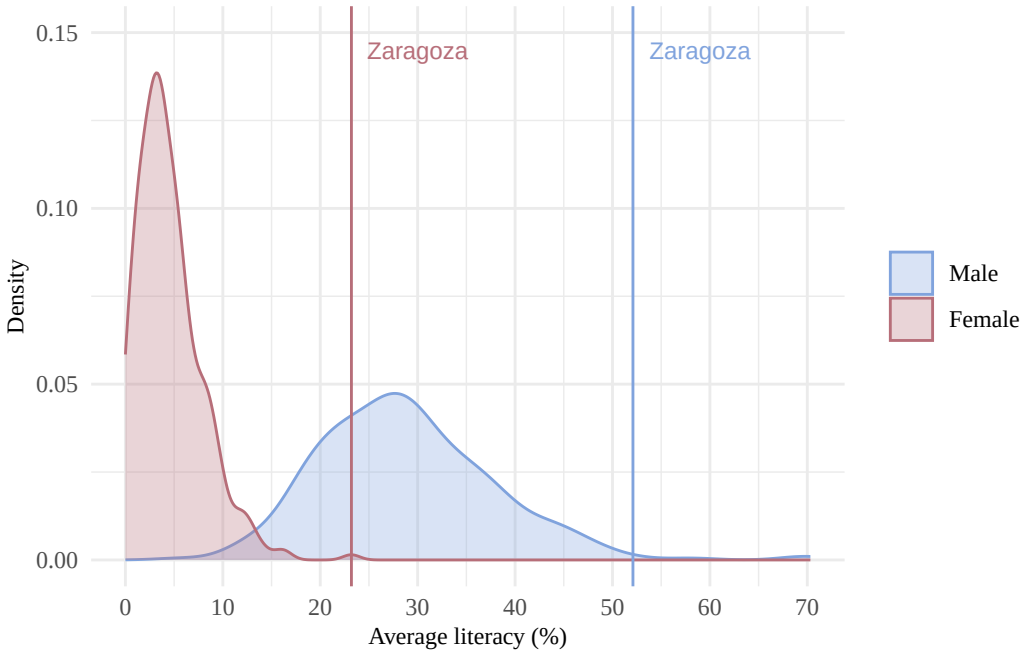
Source: 1860 Population census. Zaragoza (Spain).
Note: The coefficients on the different occupational categories are interpreted against children raised by *labourers*' families. Likewise, while the variable *urban* refers to those children living in the capital city of Zaragoza (almost 70,000 inhabitants at that time), *other kin* and *mult. fam.* distinguish these family types from nuclear households. Lastly, *first-born* and *male* capture birth-order and gender.

Figure A6: Evolution in the frequency of the five most common names, 1800-1860.



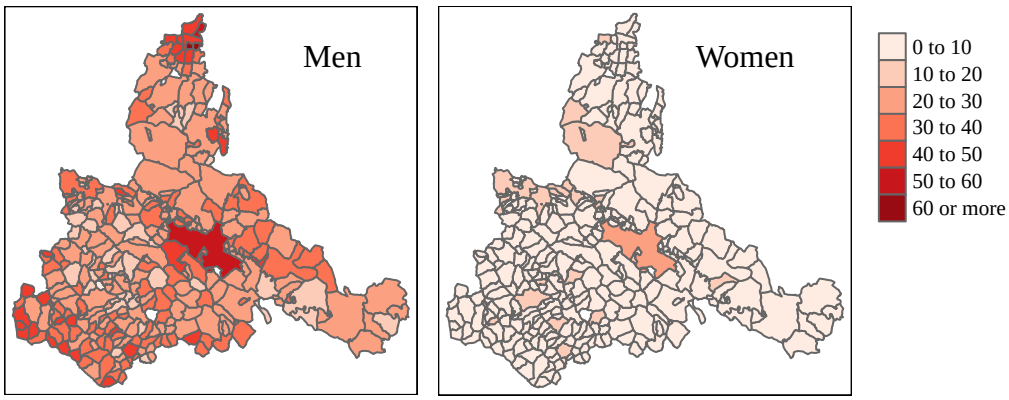
Source: 1860 Population census. Zaragoza (Spain).
Note: The right-hand panel replicates the graph excluding individuals belonging to the upper classes: artisans, merchants and elites.

Figure A7: Distribution of literacy rates (aged +16) by municipality, province of Zaragoza (1860).



Source: 1860 Population census. Zaragoza (Spain).
Note: The vertical line reflects average literacy (for both men and women) in the capital city of Zaragoza.

Figure A8: Percentage of the adult population (age 16+) who are able to read and write, 1860.



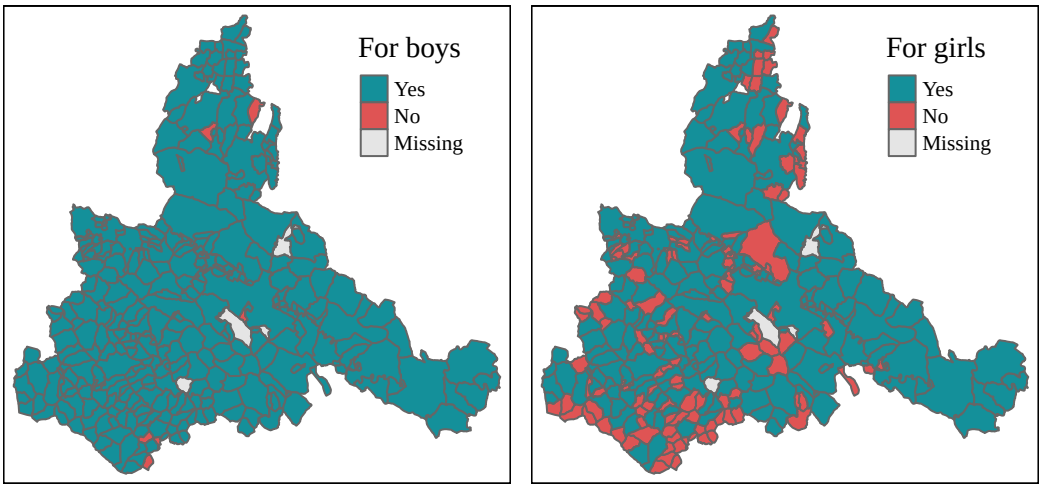
Source: 1860 Population census. Zaragoza (Spain).
Note: The areas in white correspond to the two municipalities whose records are missing.

Table A1: Number of municipalities with school (by sex), 1860.

School	Boys	%	Girls	%
Yes	303	97.4	190	61.1
No	6	1.9	119	38.3
Unkown	2	0.6	2	0.6
Total	311	100.0	311	100.0

Source: 1860 Population census. Zaragoza (Spain).

Figure A9: Municipalities with school, 1860.



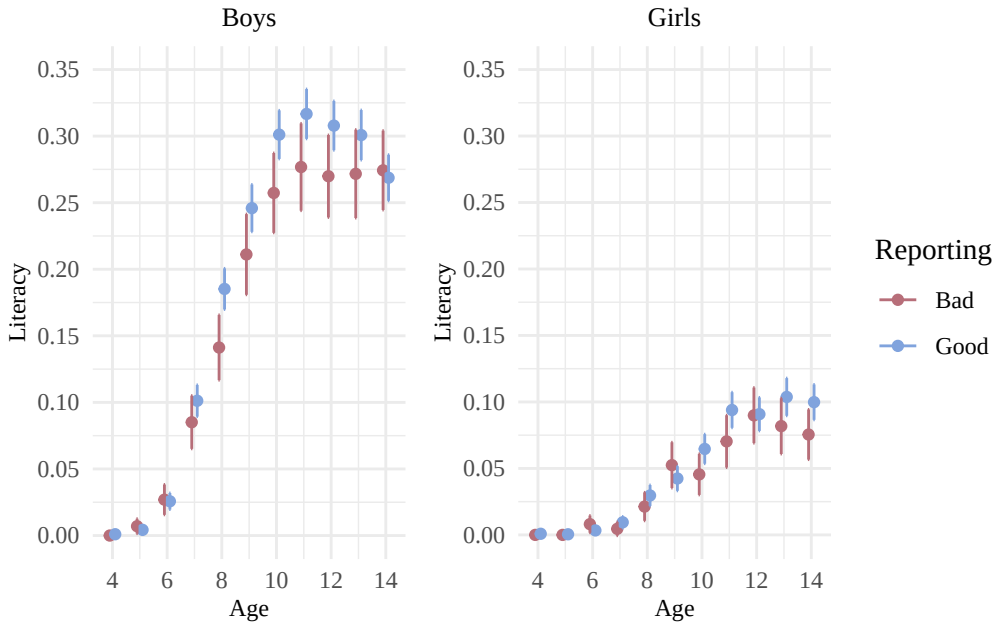
Note: The areas in light grey correspond to the municipalities whose records are missing.

Table A2: Registration quality: Schools, children (aged 4-14) and literacy rates, 1860.

Reg. quality	Boys	%	Girls	%	Boys	Lit. (%)	Girls	Lit. (%)
Good	240	79.2	142	74.7	27,560	17.9	21,488	4.7
Defficient	63	20.8	48	25.3	8,635	16.2	7,881	4.0
Total	303		190		36,195		29,369	

Source: 1860 Population census. Province of Zaragoza (Spain).
Note: The municipalities classified as having a *bad* registration quality are those who either did not report schooling attendance or did not so consistently for all children.

Figure A10: Schooling enrolment and literacy (by registration quality), 1860.



Source: 1860 Population census. Province of Zaragoza (Spain).
Note: The municipalities classified as having a "bad" registration quality are those who either did not report schooling attendance or did not so consistently for all children.

Table A3: Summary statistics. Children aged 4-14, 1860.

	Boys					Girls				
Variable	Obs.	Mean	St. dev.	Min	Max	Obs.	Mean	St. dev.	Min	Max
Common name	42,226	2.52	2.67	0	8.33	40,008	2.68	3.99	0	13.09
Multiple name	42,226	0.01	0.12	0	1.00	40,008	0.02	0.13	0	1.00
Name after parent	34,839	0.10	0.30	0	1.00	34,886	0.05	0.21	0	1.00
Being literate	42,212	0.20	0.40	0	1.00	39,992	0.06	0.23	0	1.00
Attending school	42,229	0.27	0.45	0	1.00	40,008	0.18	0.38	0	1.00
Sex (male)	42,229	1.00	0.00	1	1.00	40,008	0.00	0.00	0	0.00
Age	42,229	8.88	3.24	4	14.00	40,008	8.87	3.24	4	14.00
Birth order	38,634	2.25	1.27	1	6.00	36,371	2.25	1.27	1	6.00
Male siblings	38,634	1.28	1.12	0	7.00	36,371	1.28	1.12	0	7.00
Female siblings	38,634	1.18	1.07	0	8.00	36,371	1.15	1.07	0	7.00
Labourer	42,229	0.44	0.50	0	1.00	40,008	0.44	0.50	0	1.00
Farmer	42,229	0.25	0.43	0	1.00	40,008	0.25	0.43	0	1.00
Artisan	42,229	0.13	0.34	0	1.00	40,008	0.13	0.33	0	1.00
Elite	42,229	0.05	0.22	0	1.00	40,008	0.05	0.22	0	1.00
Merchant	42,229	0.02	0.14	0	1.00	40,008	0.02	0.13	0	1.00
Semi-skilled	42,229	0.03	0.18	0	1.00	40,008	0.03	0.18	0	1.00
Tenant	42,229	0.03	0.18	0	1.00	40,008	0.03	0.18	0	1.00
Servants	42,229	1.19	0.56	1	4.00	40,008	1.19	0.54	1	4.00
Multiple family	42,229	0.13	0.34	0	1.00	40,008	0.13	0.33	0	1.00
Other kin	42,229	0.11	0.32	0	1.00	40,008	0.12	0.32	0	1.00

Source: 1860 Population census. Province of Zaragoza (Spain).

Note: The records of two municipalities (out of 313) have not been preserved (Encinacorba and Torrecilla de Valmadrid).

Table A4: Common names and literacy. Robustness checks.

	Dep. variable: Being literate (0/1)					
	Boys			Girls		
	All	Urban	Rural	All	Urban	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Logit estimation						
Common name	-0.011	0.013	-0.015**	-0.063***	-0.061***	-0.065***
	(0.007)	(0.019)	(0.008)	(0.008)	(0.018)	(0.010)
Name after parent	0.198***	0.270	0.187***	0.271***	0.332	0.273**
	(0.056)	(0.168)	(0.063)	(0.097)	(0.261)	(0.135)
Adj. R-squared	0.349	0.404	0.334	0.381	0.382	0.339
Observations	34824	4016	30808	34866	4218	30648
Panel B: Excluding rare names						
Common name	-0.001	0.002	-0.001*	-0.002***	-0.004***	-0.001***
	(0.001)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.022***	0.026	0.022***	0.011**	0.035	0.009**
	(0.006)	(0.020)	(0.007)	(0.004)	(0.026)	(0.004)
Adj. R-squared	0.278	0.378	0.259	0.185	0.286	0.138
Observations	34629	3974	30655	34668	4176	30492
Panel C: Excluding multiple names						
Common name	-0.001	0.002	-0.001	-0.002***	-0.004***	-0.002***
	(0.001)	(0.002)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.022***	0.023	0.022***	0.012***	0.038	0.010**
	(0.006)	(0.020)	(0.007)	(0.004)	(0.026)	(0.004)
Adj. R-squared	0.278	0.378	0.258	0.183	0.284	0.137
Observations	34331	3950	30381	34255	4165	30090
Panel D: Excluding first-born children						
Common name	0.000	0.004	-0.001	-0.002***	-0.008***	-0.001***
	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.000)
Name after parent	0.017**	0.026	0.016*	0.020***	0.074**	0.014**
	(0.008)	(0.028)	(0.008)	(0.007)	(0.037)	(0.006)
Adj. R-squared	0.28	0.398	0.259	0.18	0.316	0.125
Observations	22377	2308	20069	22307	2331	19976
Panel E: Excluding elites, merchants and artisans						
Common name	0.000	0.004	-0.001	-0.001***	-0.002*	-0.001***
	(0.001)	(0.003)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.024***	0.039	0.023***	0.004	0.024	0.002
	(0.007)	(0.025)	(0.007)	(0.004)	(0.026)	(0.004)
Adj. R-squared	0.209	0.221	0.211	0.112	0.198	0.096
Observations	28135	2298	25837	28537	2495	26042

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

Table A5: Common names and schooling. Robustness checks.

	Dep. variable: Attending school (0/1)		
	Boys		Girls
	Urban	Rural	Rural
	(1)	(2)	(3)
Panel A: Logit estimation			
Common name	-0.011	-0.010	-0.009*
	(0.024)	(0.006)	(0.005)
Name after parent	-0.327	0.053	-0.061
	(0.224)	(0.056)	(0.090)
Adj. R-squared	0.184	0.263	0.249
Observations	4029	23190	19031
Panel B: Excluding rare names			
Common name	-0.001	-0.001	-0.001
	(0.002)	(0.001)	(0.001)
Name after parent	-0.024*	0.008	-0.010
	(0.014)	(0.009)	(0.013)
Adj. R-squared	0.119	0.307	0.28
Observations	3987	23070	18944
Panel C: Excluding multiple names			
Common name	-0.001	-0.001	-0.001
	(0.002)	(0.001)	(0.001)
Name after parent	-0.025*	0.007	-0.009
	(0.013)	(0.009)	(0.013)
Adj. R-squared	0.119	0.307	0.28
Observations	3963	22847	18675
Panel D: Excluding first-born children			
Common name	0.002	-0.002	-0.001
	(0.002)	(0.001)	(0.001)
Name after parent	-0.023	0.004	-0.003
	(0.020)	(0.013)	(0.017)
Adj. R-squared	0.141	0.305	0.279
Observations	2316	15075	12302
Panel E: Excluding elites, merchants and artisans			
Common name	0.001	-0.001	-0.001
	(0.002)	(0.001)	(0.001)
Name after parent	-0.013	0.011	-0.004
	(0.014)	(0.010)	(0.014)
Adj. R-squared	0.021	0.298	0.278
Observations	2308	19359	15978

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

Table A6: Naming practices and literacy. Birth order and access to land in nuclear families.

	Dep. variable: Being literate (0/1)					
	Boys			Girls		
	All	Urban	Rural	All	Urban	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Farmers						
Common name	0.000	-0.002	0.000	-0.003***	-0.008**	-0.002***
	(0.002)	(0.009)	(0.002)	(0.001)	(0.003)	(0.001)
Name after parent	0.035**	0.059	0.035**	0.007	0.070	0.004
	(0.016)	(0.068)	(0.017)	(0.010)	(0.117)	(0.010)
Adj. R-squared	0.273	0.251	0.275	0.16	0.251	0.153
Observations	7120	331	6789	6965	320	6645
Panel B: Farmers - Excluding first-borns						
Common name	0.001	-0.014	0.001	-0.002**	-0.008*	-0.001
	(0.002)	(0.010)	(0.002)	(0.001)	(0.004)	(0.001)
Name after parent	0.013	0.027	0.014	0.007	-0.004	0.005
	(0.019)	(0.088)	(0.020)	(0.013)	(0.122)	(0.013)
Adj. R-squared	0.271	0.212	0.274	0.16	0.286	0.152
Observations	5104	221	4883	4977	195	4782
Panel C: Labourers						
Common name	0.001	0.006**	0.000	0.000**	-0.001	0.000*
	(0.001)	(0.003)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.000	-0.014	0.001	0.002	-0.019***	0.004
	(0.007)	(0.030)	(0.007)	(0.004)	(0.006)	(0.004)
Adj. R-squared	0.105	0.087	0.109	0.027	0.018	0.031
Observations	14861	1315	13546	14575	1430	13145
Panel D: Labourers - Excluding first-borns						
Common name	0.001	0.009**	0.001	0.000*	-0.002***	0.000
	(0.001)	(0.004)	(0.001)	(0.000)	(0.001)	(0.000)
Name after parent	0.000	0.038	-0.002	0.002	-0.010	0.002
	(0.009)	(0.051)	(0.010)	(0.005)	(0.007)	(0.005)
Adj. R-squared	0.124	0.089	0.13	0.034	0.007	0.041
Observations	8996	717	8279	8970	758	8212

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.

Table A7: Naming practices and schooling. Birth order and access to land in nuclear families.

	Dep. variable: Attending school (0/1)					
	All children			Excluding first-born		
	Boys		Girls	Boys		Girls
	Urban	Rural	Rural	Urban	Rural	Rural
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Farmers						
Common name	0.005	-0.001	0.001	0.005	0.002	0.003
	(0.005)	(0.002)	(0.002)	(0.006)	(0.003)	(0.002)
Name after parent	-0.006	0.034*	-0.018	-0.072**	0.013	-0.007
	(0.040)	(0.020)	(0.035)	(0.036)	(0.025)	(0.044)
Adj. R-squared	0.049	0.325	0.283	0.048	0.328	0.276
Observations	331	5096	3810	221	3666	2721
Panel B: Labourers						
Common name	0.002	0.000	-0.002*	0.001	-0.001	-0.002
	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)	(0.001)
Name after parent	-0.015	-0.002	0.013	0.006	-0.016	0.014
	(0.015)	(0.014)	(0.019)	(0.031)	(0.020)	(0.028)
Adj. R-squared	0.003	0.256	0.268	0	0.264	0.273
Observations	1322	10002	8155	721	6114	5068

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Note: Children aged 4-14. All specifications include age, parity, family type, father's occupation and municipal fixed-effects, as well as number of same-sex siblings and number of servants. Robust standard errors clustered at the municipal level.