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We document the participation of women in European academia from the first universities to the eve of the Industrial Revolution. 108 women taught at universities or were members of academies of arts and sciences. Most of them were active in Catholic southern Europe - an unexpected result. We conjecture that Protestantism left less room for women at the top of the distribution of human capital to exercise their talent. The percentage of ever-married female scholars is 79%, but a large fraction of them remained childless. We measure the quality of women in academia through their publications. Comparing them to 52,000 male scholars, we find that they were on average better, suggesting some form of discrimination.

JEL Classification: N33, Z12, I23, J16

Keywords: University, Academy, Protestantism, Publications, gender

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Women in European Academia before 1800 – Religion, Marriage, and Human Capital

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April 6, 2022

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We document the participation of women in European academia from the first universities to the eve of the Industrial Revolution. 108 women taught at universities or were members of academies of arts and sciences. Most of them were active in Catholic southern Europe – an unexpected result. We conjecture that Protestantism left less room for women at the top of the distribution of human capital to exercise their talent. The percentage of ever-married female scholars is 79%, but a large fraction of them remained childless. We measure the quality of women in academia through their publications. Comparing them to 52,000 male scholars, we find that they were on average better, suggesting some form of discrimination.

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1 Introduction

It is well-established that most of the scholars and literati who were members of European universities or academies of sciences and arts during the Middle Ages and the early modern period were men. Nonetheless, these universities and academies numbered some women among their members. In this paper, we identify the women belonging to this group, who they were, whether they were married or nuns, whether they published well, and which institutions opened their doors to them.

It is often presumed that some parts of Europe were more open to women than others. This presumption is best illustrated by the following historical anecdote. The actress Adrienne Lecouvreur died on May 20, 1730 and the clergy refused to bury her. Voltaire, her friend, wrote a stirring poem to express his indignation. This text brings to the foreground the idea that France was asleep under the empire of Superstition, while in England, anyone with talent was recognized as such:

> And Lecouvreur in London would have had tombs
> Among the beautiful minds, kings, and heroes.
> God! Why is my country no longer
> the homeland of glory and talent?[1]

In these verses, Voltaire wanted to contrast two cultural realities: the English one, which was open and appreciative of all forms of talent, and the French one, which was unable to appreciate talent and was tied to religiosity steeped in superstition. This perception is aligned with the opinion that the Protestant Reformation led a modernized northern Europe ahead of a conservative and reactionary South. The Reformation paved the way for further scientific developments (Wootton 2015), and was strongly complementary to the Industrial Revolution (Landes 1999; Weber 1930; Becker and Woessmann 2009; Henrich 2020). Such a clear divide between a modern Europe and a conservative one may have been less true than commonly believed, as our results show.

In this paper, we establish a catalogue of women in academia during the medieval and early modern periods. Throughout the history of universities in Europe from the beginning of the 11th century until the 19th century, very few women held teaching positions at universities. History remember some names, although their very existence is often called into question (Cavazza 1997a; Green 1999; Duranti 2020; Torres 2019; Tappy 2019). The absence of institutional documentation, at least until universities began to have official records, has increased the legendary dimension linked to their person and activity, turning these figures into real myths. This is the case, for example, of Trotula de' Ruggiero whose identity and existence has long been the subject of study and debate.[2] Trotula's status as a university professor must also be reconsid-

[1] Voltaire (1785).

[2] The medieval historian Monica Green has carried out in-depth studies and has demonstrated that the

ered in light of the fact that the Salerno School of Medicine cannot be considered a university to all intents and purposes. As will be shown, even the existence or non-existence of these women can be explained by considering the different religious doctrines that characterized Europe during the historical period considered. Other examples are those of Dorotea Bocchi in Italy, and Beatriz Galindo and Lucia de Medrano in Spain.[3] To understand why some women taught at universities, we sought to determine who they were, how universities and academies were organized, and their reasons for including women. Finally, we wondered how and if the religious changes that came with the Reformation might have affected women in academia.

Following Voltaire's view, we expected to conclude that women were more welcome in the most modern part of Europe, such as the universities of Leiden, Glasgow, Lund, or Göttingen, and in scientific academies such as the Royal Society, the Swedish Academy of Sciences, or the Leopoldina. We were surprised to find very few female academic scholars in the North, whereas they were more numerous in the South. Women taught at the universities of Bologna, Padua, and Salamanca, and were members of academies in Arles, Nancy, Lyon, Beziers, Padua, Rome, and Madrid.

There was certainly no shortage of women scholars in northern European countries. Anna Maria von Schürmann (1607-1678), Maria Cunitz (d. 1604), Maria Sybilla Merian (1647-1717), and Maria Margaretha Winkelmann Kirch (1670-1720) are some illustrious examples of female intellectuals in literature and science, some of them contributing significantly to the development of scientific thought. However, none of them were allowed to teach at a university, even in an informal way, or to be admitted to full membership in an academy of science and letters. This echoes the literature on the historical gender gap (Perrin 2021; Karlsson, Kok, and Perrin 2021). It was wider in Sweden than in France during the nineteenth century, and, as far as Sweden is concerned, it started to shrink late, in the second half of the twentieth century.

An additional dimension we consider is the quality of the women active in academia. We measure their quality by the footprint they have left in the catalogues of libraries across the world. This is obviously an imperfect measure, which might also suffer from an anachronistic bias, but it does allow for comparisons across space and over time. Our results here are in line with expectations. The women who published are on average significantly better than the men who produced some work. This likely reflects a stronger positive selection of women into academia.

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name Trotula refers to a set of treatises on medical subjects and not to a single person (Benton 1985; Green 1999; Green 2013). The treaty *De curis mulierum*(On Treatments for Women) is the only one that has been attributed to a female practitioner of medicine, not a scholar, named Trocta/Trota. The gender identity of the authors of these works is not certain either. It is certain that in Salerno there were women healers *(mulieres salernitanae)*(women of Salerno) who worked within the Medical School of Salerno passing on their knowledge to new generations of healers and leaving some writings.

[3]Even these figures have also been questioned by recent studies, highlighting a certain manipulation of historiographic information (Torres 2019). Although whether these women existed or not cannot be determined with certainty, what caught our attention was the fact that they were in academic institutions in southern Europe.

Finally, we document the marital status of women in academia. Abstracting for the unknown statuses, the percentage of ever-married women is 79%, which is almost in line with the general population. However, the childlessness rate, including ever-single women and married childless women, is 52%, largely above historical childlessness rates (De la Croix, Schneider, and Weisdorf 2019).

The paper is organized as follows. First, we present our methodology to find data on women in academia before 1800 in Europe and provide some statistics on the data collected. We then adopt a more qualitative approach to the phenomenon and develop a critical assessment of the sources. Next, we hint at some reasons explaining the pattern observed, with a focus on the Catholic/Protestant divide. Finally, we report some measures of women's vs. men's publications and interpret the gap identified.

2 Methodology and Global Statistics

The prosopographical database used in this paper is part of the Upper-Tail Human Capital and the Rise of the West (UTHC)[4] project allowing us to have an (almost exhaustive) list of the women who were either teaching at universities or involved in scientific academies. The full database contains information on scholars who were appointed to universities or were nominated to academies over the period 1000-1800. The data were harvested manually from secondary sources on the history of universities and academies. We took the list of universities from Frijhoff (1996) and the list of academies from McClellan (1985), and added to this the language academies, the most important Italian Renaissance academies from British Library (2021), and several other higher education institutions which conferred academic degrees.[5]

In order to verify that we had not missed any important woman who would not have been recorded in secondary sources about universities and academies, we also consulted dictionaries of famous women in science by Ogilvie (1986) and famous women by Abrantês and Straszewicz (1834) and by Robin, Larsen, and Levin (2007). We also considered other more general sources on the role of women in science (Olsen 1994; Frevert, Osterkamp, and Stock 2020; Agnesi, Faini, and de'Rossi 2005). We also consulted ancient works that offer portraits of illustrious women. Indeed, the biographical literature is extensive. Between the 17th and 18th centuries, several works focused primarily on *femmes savantes*(Learned Ladies), thus becoming a literary genre.[6]

[4]This research program is funded by an ERC advanced grant from the European Union.

[5]Since the Renaissance, Italy and France have distinguished themselves from the rest of Europe by their number of academies. Maylender (1930) has collected all the academies present in Italy in 5 volumes. For France, we would like to mention Yates and Chaucheyras (1996) and Roche (2019). In view of the large number of academies, and the ephemeral existence of many of them, we have decided to make a choice. Among the academies indicated by McClellan and those present in the Database of Italian Academies, we considered those that had more than 20 members. This resulted in the exclusion of some women in our analysis. Some academies not considered in our analysis are: *Accademia Trasformati*, *Accademia Cloelia Vigilantium*, *Accademia degli Accesi*, *Accademia dei Forzati di Arezzo*, *Accademia degli Unanimi di Salo'*, *Accademia dei Concordi di Rovigo*, and *Accademia dei Sonnacchiosi di Bologna*.

[6]A famous text is "Prospetto biografico delle donne italiane rinomate in letteratura dal secolo decimoquarto fino a' giorni nostri" by Ginevra Canonici Fachini(1824), who responded to Lady Morgan's insinuations Morgan

Period		nb.	nb.	% birth place	% with	% with
Start	End	women	institutions	known	Wikipedia	Worldcat
1000	1199	3	1	66.7	66.7	33.3
1200	1347	6	3	66.7	50	0
1348	1449	4	2	100	100	0
1450	1526	7	4	100	85.7	57.1
1527	1617	9	7	100	66.7	66.7
1618	1685	24	6	91.7	83.3	83.3
1686	1733	19	9	89.5	57.9	63.2
1734	1800	36	25	94.4	77.8	77.8
1000	1800	108	39	91.7	74.1	65.7
Professors		23	9			
Academicians		77	29			
Both Prof & Acad		5				
"Patrons"		3	3			

Table 1: Summary statistics by period

Table 1 shows some descriptive statistics. We found 23 female professors, 77 female academicians, 5 women who were both professors and academicians, and 3 patrons (see Section 5). A complete list is provided in the Appendix. The whole period is divided into eight sub-periods, corresponding to major historical events: from the urban revolution to the first universities (1000–1199); from the official foundation of Paris and Oxford in 1200 to the Black Death (1200–1347); from the Black Death to the invention of the movable-type printing press (1348–1449); from the printing press to the rise of Protestantism and the foundation of the first Protestant university in Marburg (1450–1526); from Protestantism to the beginning of the Thirty Years' War (1527–1617); from the Thirty Years' War to the revocation of the Edict of Nantes (1618–1684); from this revocation to the rise of Enlightened universities and the foundation of the University of Göttingen (1685–1733); and from Enlightened universities to 1800 (1734–1800).

There are women in all eight periods, but their number is approximatively multiplied by four in the last three periods. The number of institutions welcoming them is low, but markedly increases in the last period. We can explain this increase by the spread of academies and their openness to women. We know the birthplaces, sometimes approximately, of 90.9% of the female scholars.

Finally, 74.7% of the female scholars have a Wikipedia page (in some language), and 66.7% of them have left a footprint in the catalogues of the libraries of the world, Worldcat, either by having published some work, or by having been the subject of published books and articles. For scholars active before the invention of the movable-type printing press in 1450, more have a Wikipedia page than a Worldcat reference, as several publications of that time did not survive

(1821) about the Italian women described as uncultivated, backward, and oppressed. Other works we consulted are Adelaide Gillette Dufrénoy (1820), Mary Hays, (1807), and Alexander Von Ungern-Sternberg, (1848). These texts were useful to confirm or expand information about some figures. They were also helpful in understanding how women participated in the intellectual life of their time.

or are not available in libraries today. Conversely, following the invention of the printing press, there are more female scholars with publications than with Wikipedia pages. These figures also tell us that there has always been an interest in scholarly women and their work. Indeed, their writings have survived time, as have the story of their lives.

The top panel of Figure 1 is a plot of the places of birth of all the female scholars active at any university (for whom the places of birth are known). The bottom panel shows the same information for academies. Paler dots indicate women for whom the link with the institution is "weak": either there is some uncertainty about the existence of the affiliation, or the connection with the university or academy is distant, as it is the case with corresponding members to academies, for example.

3 Women in Universities

Through all the secondary sources used in building the prosopographical database, we found 23 female professors: in some cases they held their own professorships, in others they temporarily replaced their fathers, and in others yet they simply read or gave orations. Among these 23 professors, we have strong evidence of teaching for 12 of them. The other 11 are considered as having weaker or more uncertain links with universities (as written above for Trotula). We find the strongest links respectively at the universities of Bologna, Padua, Salamanca, and Alcalá. In Italy, at the *Alma Mater* (Bologna), we find Laura Bassi (1711-1788), Clotilde Tambroni (1768-1817), Maria Gaetana Agnesi (1718-1799), Novella d'Andrea (d.1333), Maddalena Bonsignori (d.1396), and Bettisia Gozzadini (1209-1261). In Padua, we identify Bettina d'Andrea (d. 1335) and Cassandra Fedele (1465-1558). In Spain, in Salamanca, we find Luisa de Medrano (1484-1527), Beatriz Galindo (1465-1535), and Juana Contreras (16th century). At the university of Alcalá, we find María Isidra de Guzmán y de la Cerda (1767-1803) and Francisca Lebrija (15th century). The universities where these women were able to teach are among the oldest in Europe. Thus, these universities share a long history and a focus on expanding knowledge. Another common element is the Catholic cultural environment in which they developed.

We did not include some scholars in our analysis. This is the case of Dorotea Bocchi, whom historiography has long considered a professor of practical medicine in Bologna in 1436 as a substitute for her father. Recent studies have ruled out the possibility of her teaching at the university and questioned her very existence (Duranti 2020). Other women professors at the University of Bologna whose existence or teaching has been denied are Accursia or Accorsa Accorso (ca. 1230-1281) and Alessandra Giliani (1307-1327).

As has been pointed out by university historian Paul Frederick Grendler, universities in the North differed greatly from those in the South in their teaching, organization, numbers of students and professors, and quality of teaching (Grendler 2004). In general, during the first period of their existence and throughout the Renaissance, Italian and Spanish universities favored the teaching of law and medicine, while northern universities favored the teaching of

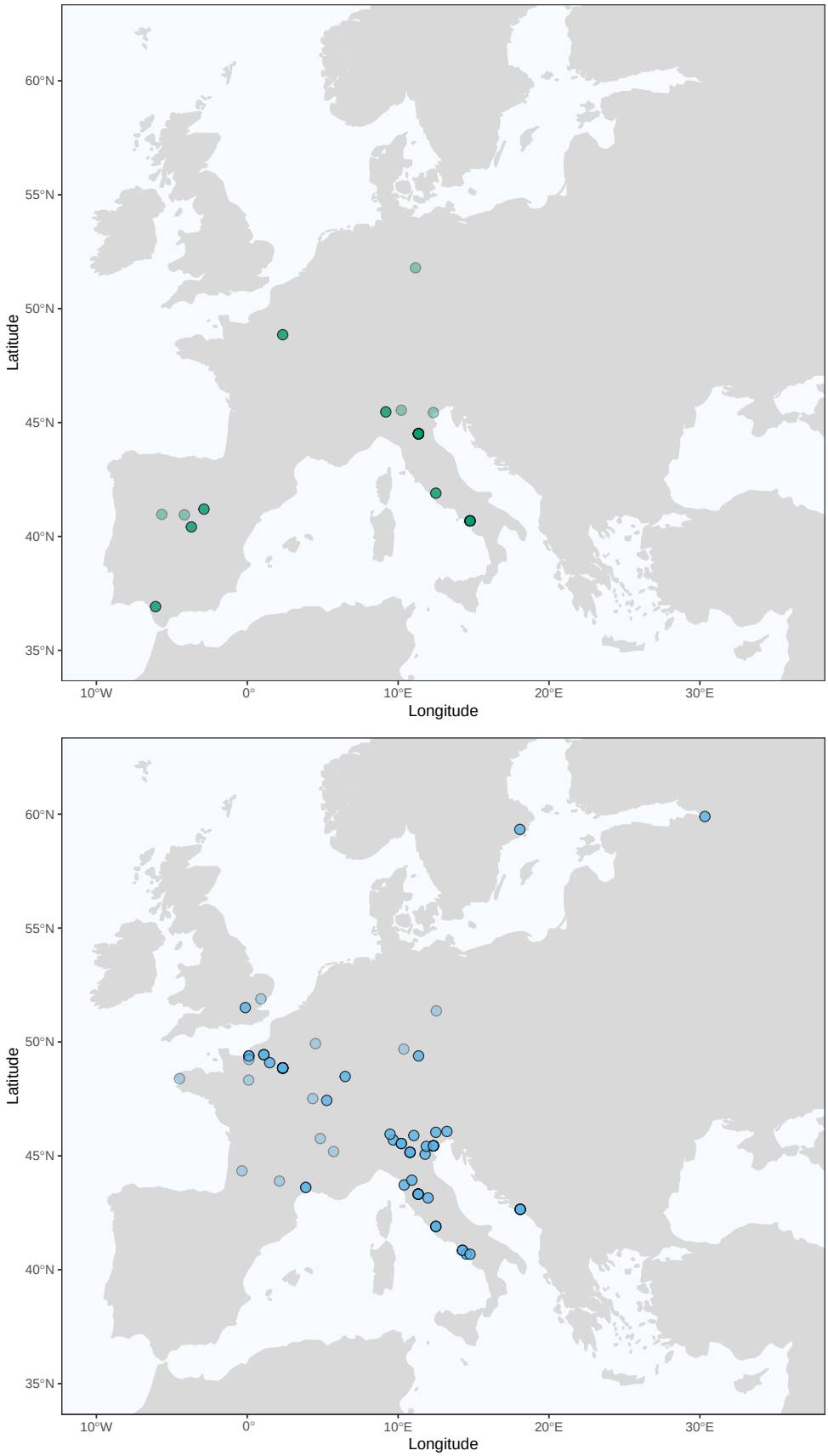

Figure 1: Places of birth of female scholars and literati. Universities: top panel. Academies: bottom panel. Paler dots indicate women for whom the link with the institution is weak.

theology and the arts. In the case of Bologna, this interest in law can be explained by the significant demographic increase and economic development that occurred in Italy during the eleventh century. The need to organize and regulate the city, and to counter the many disputes between citizens and the administration led to an interest in legal disciplines and in particular to the study of Roman law (Grendler 2004).

Another distinctive element is the organization and operation of universities: the universities of the North were characterized by a strict organizational structure, which included rectors, deans, and a senate. In Italy, at least at first, universities were communities of students and professors. The rectors were students elected by student organizations. Their power eventually waned, and by the middle of the sixteenth century in some Italian universities rectors were no longer elected (Grendler 2002). Another relevant aspect in the organization of universities was the influence exerted by the political power. In Germany, for example, the princes intervened directly in the organization and in the most important decisions of universities. For example, it was up to them to decide which professors to hire or to dismiss. The political authorities embraced the new ideas that the Protestant Reformation brought, and this had repercussions on the organization of universities as well. Moreover, the rigid organization left no room for change and openness, even less so when it came to opening doors for women. On the contrary, in the south of Europe, universities were much less subject to governmental pressure: the very fact that universities were often not located in cities which were the seats of political or religious power is a sign of this independence.

As far as the teaching disciplines are concerned, women were not allowed to teach theology, and even the in-depth study of this discipline was also severely limited for them. An exemplary case is that of Elena Lucrezia Cornaro Piscopia, who is famous for being the first woman to have obtained a university degree. Initially, she prepared her thesis in theology in Padua. The Republic of Venice did not hinder her request, knowing that it would bring prestige to the university. Also, the theology professors at Padua, after having consulted their colleagues from Paris and Louvain, gave their agreement, with the clause that she would not be allowed to teach. However, the bishop of Padua, Gregorio Barberigo (1625 – 1697) was opposed to her studying theology, fearful as he was of public criticism. In 1678, after a long mediation that forced Elena Cornaro to change the title of her thesis to make it look like a thesis in philosophy and not in theology, she obtained the title of Doctor of Philosophy (*magistra et doctrix in philosophia*). She was later aggregated to the college of physicians and philosophers, but without being able to participate in the activities (Maschietto 2007).

With regard to the profiles of these female scholars, we have been able to find several commonalities. In fact, even if the existence of some of them remains shrouded in mystery, just as their university education is uncertain, these women who had easy access to the cultural world of their time and to the - rare and expensive - written texts could count on the economic and cultural support of their families. From the biographical study of these scholars, we have seen that their education was always encouraged by their fathers and husbands, who were often also

university teachers or famous scholars. It was the latter who fought with the authorities of the time so that the former could practice teaching in university classrooms. For the aristocratic families of the time, the erudition of a young woman could give opportunities to strengthen alliances with the most influential political forces. The aforementioned cases of Elena Lucrezia Cornaro Piscopia in Padua or of Maria Vittoria Delfini Dosi in Bologna perfectly illustrate the complexity of the social realities and political games that could be hidden behind the assignment of a university title to a woman.[7]

In Spain, however, it was Queen Isabella of Castile who encouraged the erudition of women. This created the conditions that allowed some of them to teach at universities. The Queen surrounded herself with cultured ladies-in-waiting. Beatriz de Galindo belonged to the nobility that supported the royal family. At a very young age, she was called to court to teach the queen and her daughters Latin. Due to her great erudition, she was able to have access to university libraries. On several occasions, she was called a lecturer (De Arteaga 2007). Luisa de Madrano was also under the queen's protection, as well as under that of her brother Luis as a professor and rector of the University of Salamanca.

These erudite women are exemplary cases. In fact, throughout the historical period considered, there were very few women who were able to have access to a form of schooling, whether official or informal (Frova 2019; Grendler 1990). It was mostly women from the upper classes who could go to libraries and enjoy the teachings of preceptors. In most cases, women's education in letters had as its only goal reading devotional literature, missives, and notarial acts. The other possibility for women to have a form of schooling was to join religious communities. Convents were places where women were allowed to teach as well as learn. In many abbeys, Latin, Greek, and Hebrew were taught. There was room for literature and poetry, as well as religious writings.

4 Women in Academies

While the history of women in universities is one of exclusion or relative inclusion, it is not the same for academies (Noordenbos 2002). During the Renaissance throughout Europe numerous scientific, literary, and artistic academies were created. This was the result of humanist culture and the patronage of princes who were eager to increase their power through knowledge and art. Once again, it is Italy that boasts the primacy of the first academies, and of the first female academicians. The number of academies was very high (Maylender 1930): some were composed of a few members and had a strong private character, while others, such as the Academy of the

[7] In 1719, the promoter and father of Maria Vittoria Delfini Dosi asked that his daughter obtain a university degree in law. Behind this request was the desire to strengthen the ties of the Dosi Dolfini family with the Spanish monarchy and to reaffirm the autonomy of the Bolognese aristocracy from the Roman government (Findlen, Roworth, and Sama 2009). Cornaro's doctoral degree, on the other hand, served to redeem her family's honor and luster. In fact, his marriage with a woman of dubious customs excluded Giovan Battista Cornaro, Elena's father, from Venetian noble circles. To obtain titles for his children, he had to pay large sums. His daughter's intellectual gifts and the extraordinary nature of the event allowed him to regain a place in the Venetian society of the time (Maschietto 2007).

Ricovrati or the Crusca, had a large number of scholars. These institutions were an alternative to university classrooms for scholars, allowing them to increase their prestige. Academies were largely financed by the aristocracy (protectors) and this gave scholars the means to acquire the scientific instruments needed to carry out their activities. In our study of university professors, we have shown that universities belonged to both a market and a network through which people and ideas began to circulate, uniting the whole of Europe (De la Croix et al. 2020). With academies, this network was further expanded, allowing those excluded from the university circuit to engage and interact with other scholars. Academies allowed women to enter this network. These institutions also opened their doors to women who did not belong to the aristocracy of the city, or, as we have seen, who had no family support. Another crucial aspect of opening academies to women was the use and promotion of the vernacular language. The knowledge of Latin was no longer a prerequisite to access the world of knowledge, as was the case for universities.

Thanks to the creation of this alternative to universities, the institutionalized presence of women in the knowledge network is significantly greater, although still with limitations. We found 82 women who were members of significant academies in Europe. They were part of them in different ways. In some cases, they were admitted as honorary members, attending meetings and proposing dissertations. In most cases, they were external or corresponding members and their presence was severely limited. However, some of them had the opportunity to publish their work in the proceedings of academies, although they were never admitted. For the purposes of our research, which is mainly concerned with scientific academies, we counted eighty two women, but the number is much larger if one takes into account exclusively literary and artistic academies. One example of a literary academy with a large number of women is the Academy of Arcadia in Italy. This academy consisted of numerous sections found in the country's main urban centers. The Siena section counted about six hundred women during its existence (Paoli 2012).

The question of whether women should participate in the activities of academies became a topic of debate even within Italian academies. Referring to the *querelle des femmes*(the woman question) and the role of women in society, a debate arose as to whether women should be allowed to attend academic meetings and more generally whether they should have access to the study of science and letters. The Academy of the Ricovrati addressed the issue in 1723. The discussion was initiated by physician and university professor Antonio Vallisneri (1661-1730) and lasted a full five years.[8] During these years, male and female scholars from all nations participated. The best contributions were published in a volume that concluded with an essay in favor of women studying written by the young Maria Gaetana Agnesi, who in 1750 was offered a chair of mathematics at the University of Bologna (Volpi 1729).

In northern Europe, women were not so fortunate to participate in the intellectual life of

[8]This debate arose after Maria Vittoria Delfini Dosi failed to obtain her degree. In the same year, some Venetian women attended university lectures by Professor Vallisneri, wearing a *bauta* (Venetian mask) in order not to be recognized (Martini and Sorba 2021).

academies. Their entry was very late and always a source of great reflection and discussion. However, it is worth mentioning two cases: Margaret Cavandish (1623 - 1673) and Maria Winkelmann (1670 - 1720). These two figures, without ever being admitted to the Royal Society and the Prussian Academy of Sciences respectively, associated their names with these two academies. Cavendish was the first woman to visit the prestigious London academy in 1667. She expressed criticisms with respect to the merits of the microscopes used by Henry Power and Robert Hooke (Wilkins 2014; Habinek 2021). She was critical of the experimental method advocated by the two scholars and the academy itself. Her ideas, her eccentricity, and undoubtedly her gender did not allow her to become a member of the Royal Society, however her position as an "outsider" (Wilkins 2014) allowed her to freely express her ideas and question the objectivity of the academy.[9]

Another woman who came close to being admitted to an academy was Maria Kirch Winkelmann. The German astronomer was the wife of mathematician Gottfried Kirch, a member of the Prussian Academy of Sciences. Maria was his assistant and together they produced calendars and almanacs with astronomical information useful for navigation and astronomical studies. The Prussian Academy had a monopoly on the sale of calendars (De la Croix, Eisfeld, and Ganterer 2021). When her husband died, despite the support of Leibniz, the president of the academy, Maria was not admitted. The board claimed that the appointment of a woman would create a precedent contrary to a tacit rule of the academy that prohibited the entry of women (Schiebinger 1987). Winkelmann's case is also interesting in another aspect. Maria grew up in the Protestant environment of 17th century Germany. Her father, a Lutheran minister, wanted to give her an education equal to that of male children. Orphaned by her father's death, she learned her trade from an uncle and then from her husband. For Maria, learning astronomy was possible because this discipline, although not considered a guild, included elements of practice. In fact, it was possible for women to belong to guilds and learn a trade from their fathers or husbands (Crowston 2008). Her position as an assistant allowed her to continue practicing astronomy even after her husband's death. However, the socio-cultural limitations of the time did not allow her to pursue university studies or even to be an official member of the academy.

Finally, the case of Hedvig Gustava Malmsten beautifully illustrates the saying "It is the exception that proves the rule."[10] She was a full member of the academy in Lund, Sweden, but it was by mistake. Hedvig Gustava Malmsten was elected as a member of the Royal Physiographic Society in Lund on June 22, 1789. The reason for this is unclear and there is no motivation for this in the original statutes. She was the wife of Olof Malmsten, a member of the academy, who was the director of Swedish industries for dyeing textiles and died in 1790. In 1795, Hedvig Gustava married Anders Christophersson (1750 – 1804) who was a royal doctor of medicine, and like Hedvig Gustava was elected as a member of the society on June 22, 1789, which seems

[9] Cavendish was posthumously nicknamed *Mad Madge*. This nickname was due to her outlandish sense of style and her exuberant and flirtatious manners (Whitaker 2002).

[10] We warmly thank Per Alm, the Permanent Secretary and Treasurer of the Royal Physiographic Society in Lund for his help with this case.

to be strange coincidence. When they married, Hedvig Gustava was 61 years of age whereas her husband was 41. Apparently, the society made a mistake, or was unaware of its 1778 statutes, in which the third paragraph states that the members of the society were to be men. In 1952, the statutes were changed so that women could be elected as members of the society, and Dora Jacobsohn, a professor of physiology, was elected as a member. Since then, several women have been elected as members and have even been presidents of the society.

5 Women Patrons

In our database, we have also included some women who, in different capacities, founded academies or universities. Patronage was a widespread practice, with the nobility all over Europe displaying generosity by supporting culture and art. Women from the nobility played an important role, providing financial support to numerous academies. These women were often excluded from cultural debates, so that patronage became an opportunity for them to participate in the creation of such cultural debates, and of course, a way to go down in history.

In medieval times, Margaret Beaufort (1443-1509), the mother of Henry VII, was one of the most powerful personalities of her era, devoting herself to scientific and literary patronage during her son's reign. In 1505, she re-founded Christ's College in Cambridge. After her death, St. John's College was founded following her initiative. Lady Margaret also founded other schools, but not at the university level.

In Russia, where the creation of universities and academies came late compared to the rest of Europe, the academies that were founded featured women, such as the Saint Petersburg Academy of Sciences. This institution, created by Peter the Great in 1724, reached its apogee with Catherine I, who appointed the most renowned European scholars at the time as members. Under Catherine II, this academy became a more Russian institution by hiring national scholars (De la Croix and Doraghi 2021). Catherine II also created the Russian Academy in 1783 which was dedicated to the study of the Russian language following the example of the *Académie Française*. Both of these prominent academies were presided over by Ekaterina Dashkova, a very important female figure in 18th century Russia. In fact, Dashkova founded the Russian Academy with the empress, was the director of the Saint Petersburg Academy of Sciences from 1783 to 1796, and became an honorary member of the Royal Academy of Sciences of Sweden in 1783.

6 Marital Status of Female Scholars

Another aspect we considered in our analysis is the marital status of women in academia. Having a small sample allowed us to analyze the biographies of these female scholars and draw additional information from them. The results are presented in Table 2. We know that 66 scholars were married, while 18 women chose religious life, or a solitary, withdrawn life. Two of

them took religious vows. The poetess Arcoliniani Maria Serafina (1734-1803) of the Academy of the Ricovrati (Maggiolo 1983), entered the order of *Dimesse* nuns, and Elena Lucrezia Cornaro Piscopia took the habit of Benedictine oblate without becoming a nun. In the past, there were several reasons that led women to enter the monastic life. In most cases, families forced their daughters to enter convents. In other cases, as with these two female scholars, we know that they did so voluntarily with the support of their families.

Status	Number of women
Married Women with Children	40
Married Childless Women	26
Ever-Single Women	18
Unknown marital status	24
Total	108

Table 2: Women Scholars and Family

Other women, even though they could not become nuns, chose a retired life. This is the case, for example, of Maria Gaetana Agnesi, who at the age of twenty-one asked her father for permission to become a nun. Her father's health forced her to sacrifice her own inclinations, with the vow of no longer taking part in worldly life and of being allowed to go to church whenever she wished (Mazzotti 2007; Vettori Sandor 1988). These sometimes painful choices made it possible to put to rest any negative rumors that might have been circulating about them. The society of the time did not accept that an unmarried woman should frequent public places, academies, or anatomical theaters, conferring with men. Marriage or nunship, even when secular, were solutions that suited learned women and their families.

In the case of marriage, the choice of the groom was also important, and he had to agree to let his wife carry out her research activities. Laura Bassi married a doctor, Giuseppe Veretti, also a professor and researcher, with whom she could share family affections and scientific discoveries (Cavazza 1997b). Some of the female scholars studied were scholars' daughters, sisters, or wives. Kinship ties certainly helped these women gain or maintain their academic standing. It is worth noting that the notoriety they were able to achieve often exceeded that of their fathers or husbands (see Section 8).

It is interesting to compare the female scholars studied to women in other cultural domains, where the situation is different. For example, in the world of painting, out of a comparable (non-exhaustive) sample of 77 women painters, 27 followed the teachings of their fathers or other family members, and 9 were nuns. These almost all lived in the medieval period, when religious women devoted themselves to the art of miniature painting.[11]

Finally, Table 2 shows a very high rate of childlessness among female scholars, equal to 52% $(= (26 + 18)/(26 + 28 + 40))$. This is largely above historical childlessness rates, such as the

[11] To create this list of female painters, we consulted Fachini (1824), Francioni Vespoli (1825), and the "Global Makers" database, available at https://adhc.lib.ua.edu/makers/s/makers/page/home-2-15-2

13% found in pre-industrial England among the upper social class (De la Croix, Schneider, and Weisdorf 2019), or the 12% found among the gentry in pre-industrial Rouen (Brée and de la Croix 2019). Such a high rate echoes the rising childlessness rate observed by Baudin, de la Croix, and Gobbi (2015) in the U.S. census among the highest education category, which the authors interpret as voluntary/opportunity-driven childlessness.

7 Why Do We Not Find Women in Northern European Universities?

The weak presence of women in academies and universities in Protestant Europe is confirmed when computing the barycenter of the places of birth of female scholars vs. male scholars. Figure 2 shows the barycenter, with coordinates R. We restrict the analysis to published scholars with known birthplaces (18,535 male and 82 female). If each scholar i is born in space with coordinates r_i, the barycenter is such that:

$$\sum_i (r_i - R) = 0.$$

It gives equal mass to each scholar. It is the center of mass of a distribution of birthplaces in space, sometimes referred to as the balance point. To fix ideas, the barycenter for men is found at (48.72,8.05), between Strasbourg and Stuttgart. The barycenter for women is at (46.23,8.66), close to Locarno (Switzerland).

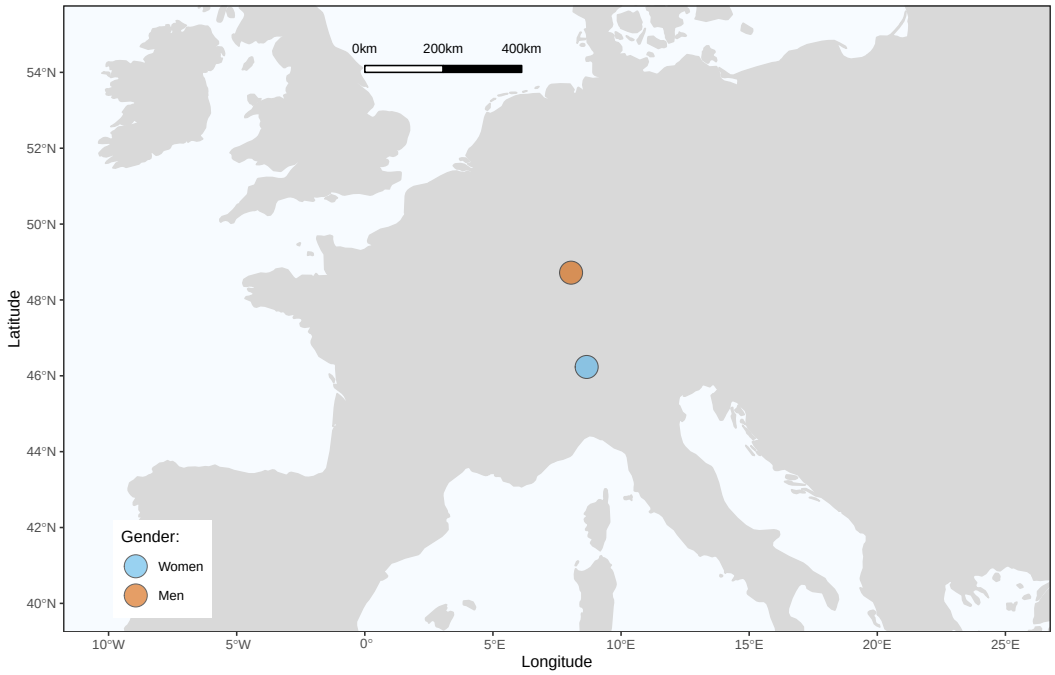

Figure 2: Barycenter of places of birth, by period

The absence of women in academies in northern Europe can be understood by considering one of the cultural aspects that most divided Europe from the 16th century onwards, namely the opposition between Catholic and Protestant Europe. The Protestant Reformation, initiated in 1517 by Luther, brought about a cultural change with strong repercussions on the social and political life of Europe at the time. In fact, the Lutheran doctrine became a political weapon for German princes who saw in it the possibility of escaping imperial authority and obtaining ecclesiastical goods. In France and Flanders, it led to a division between Catholics and Protestants, who competed for state leadership. Until then, the Church of Rome had exercised its monopoly by shaping public and private moral systems, imposing cultural choices, and exerting strong pressure on the political decisions of states.

The literature has long addressed the relationship between Luther's theology and his relationship with women (Jurgens 2020), sometimes crediting the Reformation with a certain degree of women's emancipation (Blaisdell 1972; Davis 1975; Stjerna 2017), and other times questioning its openness towards women (Classen and Settle 1991; Hill 1997; Roper 1989). Clearly, Luther's attitude towards women was ambiguous, and while on the one hand he favored a degree of emancipation, on the other his opinion of women remained negative (Wiesner 1990). Luther allowed for spiritual equality, but saw the possibility of expression only within the family context, where they could read, preach, interpret, and teach their children.[12] The cultural change introduced by the Reformation brought changes to women's living conditions as well, both in the religious and social spheres. Luther promoted literacy without excluding women. The Bible began to be translated into vernacular languages thanks to him, broadening its audience and allowing women to read scripture as well. He allowed women to access public schools and ensured that the basics were taught (reading, writing, and arithmetic) (Becker and Woessmann 2009). In his sermons, he urged families to send their children to school so that they could read the Bible (1530). In general, there were more Protestant women than Catholic women who could read and write, but according to some scholars, their condition underwent only an apparent change towards emancipation. Considering the case of the Augsburg Reformation, Roper (1989) shows how even those women who enjoyed an independent status (nuns and prostitutes) had to adapt to the patriarchal protectorate.

Marriage had to remain the only possible moral, legal, and social institution for women, and was strongly regulated by religious and political authorities. As historian Margaret King notes, during the Renaissance, the sacredness of marriage was reinforced in the Catholic world through a series of regulations concerning marriage decided during the Council of Trent (1545-1563). The Protestant world, which does not recognize the sacred character of marriage, tried to consolidate the marriage institution through the suppression of confession. The figure of the

[12] In a commentary on Genesis written in 1535, Luther explains that Eve is also part of God's image. Luther compares women to the moon, men to the sun, and animals to the stars. Both the sun and the moon play an important role; both have authority but in different ways. Men and women are therefore equal before God and this translates, in the family, into a partnership in governing the home. In daily life and before the law, men and women accomplish different tasks and have different talents, but not before God: salvation is not achieved by following one's role in society but only through faith.

priest confessor was removed from the family circle, encouraging intimacy and mutuality between spouses. However, this further centralized the control of women by their husbands (King 2008). Moreover, since women were not allowed to pursue careers in medicine, law, teaching, or public positions, they were barred from entering universities (Schiebinger 1991). Theology also long remained an exclusively male discipline: women were allowed to teach in the private space of the home and only to their own children.

In the Catholic world, the view of the role of women was not much different, but there was a substantial difference in the regulation of women's lives. Through the formal centralization of decisions, the Church could control the women who occupied public space. This also allowed room for exceptions, influencing, albeit marginally, traditional patterns. This is probably what happened in Italian and Spanish universities. Protestants, on the other hand, defined and regulated the role of women in society primarily through the judgment and will of their husbands or fathers.

Regarding socio-cultural reasons, as we have seen, the culture of the time did not allow women to take care of anything else than their domestic duties. This was true both in the Protestant and Catholic worlds. Luther wondered at length about women, their difference from men, and their role in society. His conclusion was that women had been entrusted with an important task, that of motherhood. This unique prerogative elevated women (Stijerna 2017), and because of this, their main purpose had to be and to remain the care of children and the home.

There were also more practical reasons, which were closely related to the female condition of the time. In order to enter academies, especially scientific ones, a university degree was often required (Schiebinger 1991). The knowledge developed in the private sphere of the home, as was the case for women, did not have the same value as that developed in the public sphere of universities and academies (see the case of Maria Winkelmann). This, again, excluded them from the circles of knowledge. Furthermore, the possibility for women to be remunerated through intellectual work was inconceivable, as they were supposed to be supported by their husbands and fathers (Noordenbos 2002). However, these proposed explanations apply both to Catholic and Protestant culture, and do not take into account the specific influence of Protestant culture.

A more political motivation can also be identified. In some cases, the need to count women among the distinguished figures of universities had a political significance. Including a few exceptionally learned women in the history of a university was a way of exalting its greatness and an effective strategy for promoting university and governmental institutions. Cardinal Lambertini (1675 – 1758)[13] was an attentive promoter of the university and the city of Bologna.

[13]Prospero Lambertini was the Archbishop of the city of Bologna from 1731 to 1740, before being elected pope under the name Benedict XIV (1740-1758). He was a figure of great importance for the Catholic Church and for the city of Bologna. He is remembered as a man of conciliatory character. During his pontificate, he concluded a series of concordats and ecclesiastical conventions with many European sovereigns, striving not to exacerbate those jurisdictional conflicts that were one of the characteristics of the 18th century. He showed the same balance in the dispute between Jesuits and anti-Jesuits and, without going against the theological

The decision to assign a professorship to Laura Bassi was part of a strategy to reinforce the prestige of the university, drawing on the medieval tradition of women teachers. Even though the Catholic world disapproved of the presence of women in universities, she was assigned a teaching position. In the resolutions authorizing teaching for Laura Bassi, the senators limited her activity in the Archiginnasio, with the restriction *ratione sexus* (on the basis of gender) (Cavazza 1997a). This operation was very successful: in fact, many scholars and students from all over Europe came to Bologna to listen to and confer with the young mathematician (Fantuzzi and Bazzani 1778). For this reason, therefore, some female figures were invented or their roles within the institutions was exaggerated. In Spain, in the same time period, King Charles III (1716 – 1788) implemented a policy very similar to that of Cardinal Lambertini. In fact, he allowed Maria Isdra Guzman to be admitted to the University of Alcalá where in 1785 she obtained her doctorate (the first woman in Spain to receive this title), and later was elected honorary professor of Modern Philosophy and advisor for life at the same university. In 1784, the king himself gave his consent to admit her as an honorary member of the Royal Academy of Spain. This interest in Guzman was part of a political strategy to shape the public image of Charles III and show the greatness of his reign (Fernández Quintanilla 1979). Before Charles III, Queen Isabel I of Castile had promoted the cultural growth of Spain by involving a number of Spanish and Italian women scholars. She was the main inspiration for the Castilian humanist movement, and it is thanks to her that Lucia de Medrano was able to practice in university classrooms.

We cannot exclude that another reason for the difference in openness to women between the Protestant North and the Catholic South can be found in religious practice, and particularly in devotional practice. Protestants do not share Catholics' practices of Marian devotion, and in general, they condemn all forms of veneration of saints, which they consider to be a form of idolatry. In particular, Mary lost her character of mediatrix of God and is not considered by Protestants as an exceptional case, unique in the history of the church. Not finding a reference to a female figure out of the ordinary in scripture leads Protestants to think that such an individual cannot exist in real life. Catholics, on the other hand, accept the possibility that a woman may have uncommon gifts, which may give her notoriety and consideration equal to men. It should be noted that in the Catholic tradition, an abbess (the head of an abbey) has the same rank as a bishop. Such practices probably allowed some women to become university professors, and to acquire a form of "secular sanctity" throughout the history of universities. This can still be found today in some universities, where adoration practices of statues of women professors are observed, as if they were endowed with supernatural powers. In Padua, for example, the statue of Elena Lucrezia Cornaro Piscopia is touched by new graduates in a gesture of good luck for their future careers.

Finally, different dispositions towards women can also be observed in iconography. In medieval

and moral doctrines of the Society, he condemned (1742 and 1744) the Jesuit practice concerning the Chinese and Malabar rites. As temporal prince, he established freedom of trade between the various parts of the Papal States. His name is essentially linked to his work in canon law.

iconography, especially Catholic, it is possible to find a woman in her capacity as a reader and educator. In later centuries, women were also represented while reading. Their portraits were meant to represent the ideal of the "woman of the palace" (Castiglione 1822), that is a virtuous and intellectual woman. On the contrary, seventeenth-century Flemish painting, which was influenced by the Protestant Reformation, is characterized by the representation of domestic life, as a mirror of the morality of its inhabitants. Women are therefore represented in the private space of the home, writing letters or keeping the household accounts (Graziani 2019; Miglio 2019).

8 Women and their Publications

A novelty of our approach consists in constructing an *index of human capital* q_i for each scholar. Our index proxies individual notability as seen today in contemporary sources, Worldcat and Wikipedia. Worldcat provides a comprehensive measure of scientific output and citations, as books about the person are included in the measure. Wikipedia supplements this measure by putting more weight for those who had few or no publications. To combine the information provided by Worlcat and Wikipedia into one measure, we compute the first principal component of five indicators: (i) the log of the number of characters of the longest Wikipedia page across all languages, (ii) the log of the number of languages in which a Wikipedia page exists, (iii) the log of the number of works (by or about) in Worldcat, (iv) the log of the number of publication languages in Worldcat, and (v) the log of the number of library holdings in Worldcat. To include observations with missing Wikipedia and/or Worldcat pages, we assume that having no Wikipedia page is similar to having one page with a length of 60 characters and that having no Worldcat page is similar to having a page with one work in one language held by one library.

The first principal component explains 80.6% of the variance, hence it is enough to build the index. The results lead to: The individual human capital index q_i of an individual i is given by:

$$\begin{aligned} q_i \;=\; & -1.28 + 0.43\ln(\text{nb. of characters of the longest Wikipedia page}) \\ & +0.40\ln(\text{nb. of Wikipedia pages in different languages}) \\ & +0.47\ln(\text{nb. of works in Worldcat}) \\ & +0.45\ln(\text{nb. of publication languages in Worldcat}) \\ & +0.47\ln(\text{nb. of library holdings in Worldcat}) \end{aligned}$$

The constant -1.28 normalizes q_i at 0 when there is neither a Wikipedia page, nor a Worldcat page.

Figure 3 shows the names of all the female scholars with a positive human capital index, i.e. with either a Worldcat or a Wikipedia page, or both. The top panel concerns university scholars from 1050 to 1800CE. The bottom panel shows academicians from 1550 to 1800CE.

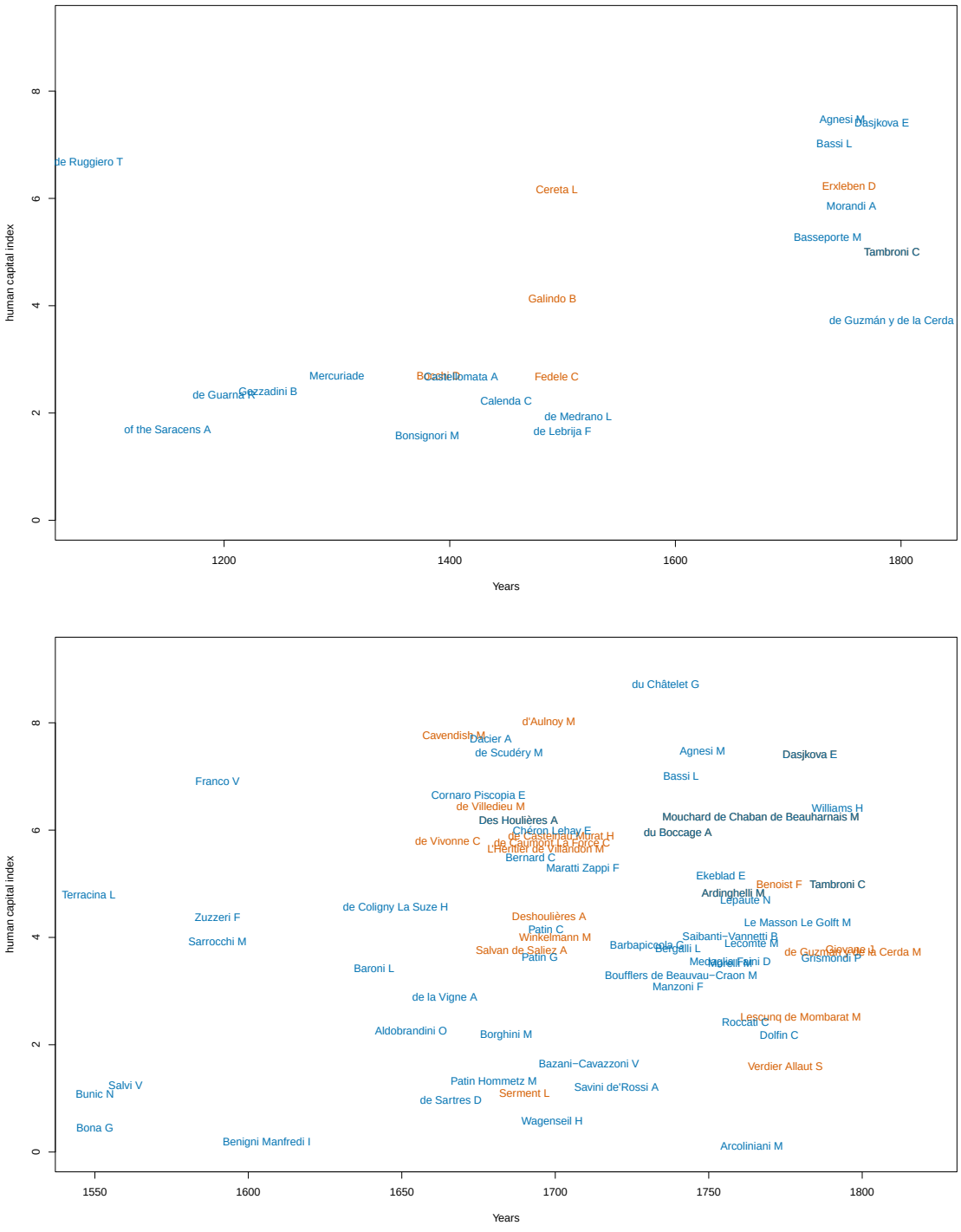

Figure 3: Human capital index of female scholars and literati. Universities: top panel. Academies: bottom panel. Weak links in orange.

We note that the women who published the most are French. The exceptions are Helen Maria Williams (1759 -1827), who nevertheless spent a good part of her life in France, and Yekaterina Dashkova (1743-1810), whose Memoirs were a great success in France (a first incomplete version was published in Paris in 1804) and in Great Britain (published after her death in 1840). Their publications date mostly from the Age of Enlightenment. In fact, while the previous century was characterized by austerity, and the main publications had a scientific or religious character, the eighteenth century was a century of opulence and refinement, both for economic reasons and due to the evolution of mentalities and morals. This opening allowed more women to publish their works and see them circulate in the cultural environment of the time.[14]

Among the scholars considered, Madame de Scudéry is the one who published the most. Her production is very extensive, especially considering that several of her writings were published under the name of her brother, Georges de Scudéry, also a writer and novelist. She was a corresponding member of the Academy of the Ricovrati, and in 1671 received an award for eloquence from the *Académie Française* for her "Discours de la Gloire," a prize of great value given that the first woman admitted to the academy was Marguerite Yourcenar in 1980. Most of the scholarly publications considered are works of literature, novels, plays, or essays. The exceptions are Madeleine Françoise Basseporte, who participated in the publication of books on botany as an illustrator, Gaetana Agnesi, who wrote treatises on mathematics, and Laura Bassi, with her numerous scientific dissertations presented at the Academy of Sciences in Bologna.

The human capital index built can be used to assess the relative "quality" of women vs men in our database. Among the 51,324 men in our database, 20,984 have a positive human capital index (reflecting their presence either in Wikipedia or Worldcat). The kernel density estimate of this index is shown in Figure 4. Among the 105 women (excluding the sponsors), 84 have a positive human capital index. The kernel density estimate is shown in green. It lies clearly to the right of the density for men. The median human capital for women is 3.91, while it is 2.85 for men.[15]

To interpret this difference, we may rely on the various theories of discrimination. It could reflect statistical discrimination (Lang and Lehmann 2012): women are expected to be worse along some unobserved criteria. To be hired, a woman had to compensate for this negative view by being better along other dimensions, translated here into additional publications.

Finally, let us consider the couples in which both spouses were in academia. There are 13 such couples. Figure 5 shows a scatter plot of their human capital index. Here, women are on average of the same quality as men, with an average index of 2.81 compared to 2.71 for men. The correlation in the index between spouses is small, 0.26. There are some wives who are better than their husbands, represented by the points below an imaginary 45-degree line:

[14]Having one's work published long remained the privilege of an intellectual aristocracy, and the publication of a novel or a work that was not scientific or religious was met with negative judgment. For this reason, a pseudonym was often used, or the high morality and usefulness of the work were argued in the preface.

[15]The difference in median is significant at the 1% confidence level, as a Wilcoxon rank sum test rejects that the two distributions do not differ by a location shift ($W = 658809$, p-value=0.00).

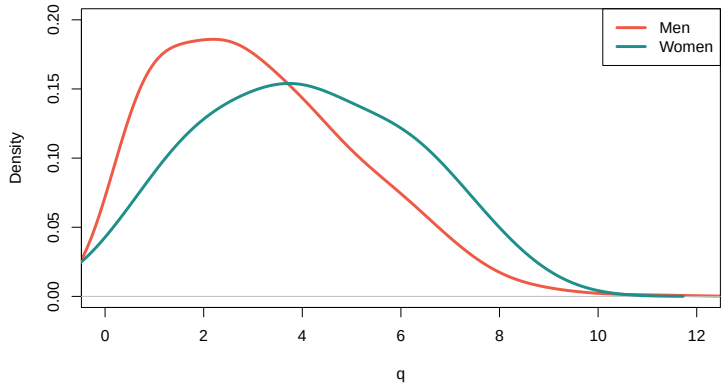

Figure 4: Distribution of human capital: men vs women

Trotula, Bassi, Dacier, Bonsignori, Saibanti, and Bunić.

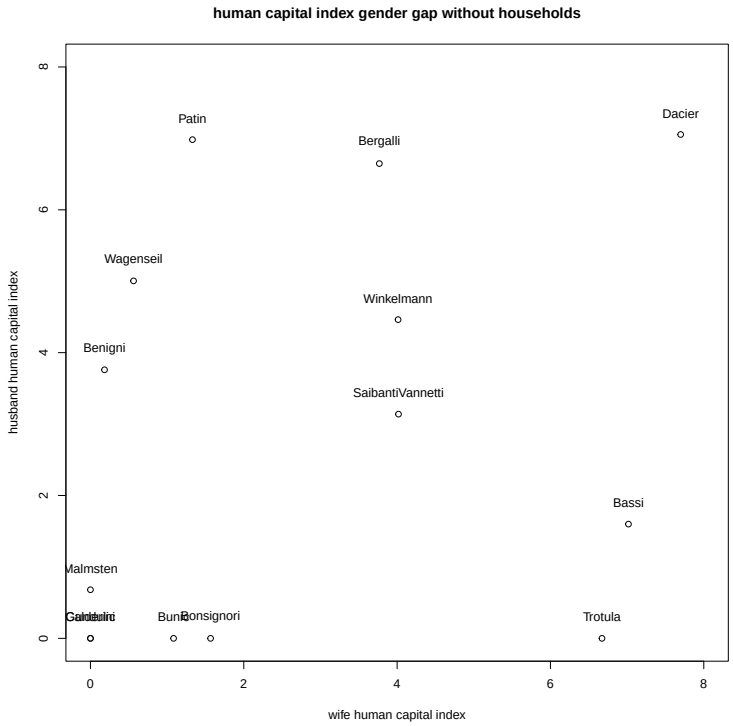

Figure 5: Human capital within couples: men vs women

9 Conclusion

Few women had the opportunity to teach at universities and participate in the intellectual activities of academies across Europe from the founding of the first universities until 1800. By analyzing the data collected in the database, we have found that some academic institutions in southern Europe allowed women to practice teaching, although the number remained extremely small and restrictions were imposed, whereas in northern countries, women accessed universities

and academies very late. We have explained this finding by considering religion as the main vector of socio-cultural change in Europe. In particular, we have observed that the Protestant religion had a closed attitude (in that it did not tolerate exceptions) towards the possible participation of women in higher education. In the Catholic world, we have found exceptions determined by the holistic personalities of the time, historical events, and the social position of women.

In order to understand what their contributions were in the development of scientific knowledge in Europe, we have measured the quality of these erudite women through their publications. Specifically, we have considered the works that can still be found in the catalogues of libraries today. We have observed that on average they published more than men. On the one hand, this can be explained by the stronger positive selection of women into academia. On the other hand, the preservation of their publications shows that there has always been an interest in women scholars and their work.

Acknowledgments

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Appendix - List of female scholars

Note: ▶ indicates standard affiliation, ▷ indicates weak link.

1. **Mercuriade** (Salerno – 14th-century)
   Wikipedia page: https://it.wikipedia.org/wiki/Mercuriade
   - ▶ Schola Medica Salernitana-1231 (De Renzi 1852; Ogilvie 1986)

2. **Maria Gaetana Agnesi** (Milan 1718 – Milan 1799)
   Wikipedia page: https://it.wikipedia.org/wiki/Maria_Gaetana_Agnesi
   Worldcat page: https://www.worldcat.org/identities/lccn-n93067591/
   - ▶ University of Bologna-1088 (1750) (Mazzetti 1847; Michaud 1811)
   - ▶ Academy of Sciences of Bologna-1714 (1747) (Ercolani 1881; Istituto dell'Enciclopedia Italiana 1929)

3. **Olimpia Aldobrandini** (Rome 1623 – Rome 1681)
   Wikipedia page: https://it.wikipedia.org/wiki/Olimpia_Aldobrandini
   Worldcat page: https://www.worldcat.org/identities/viaf-406015032553271009009/
   - ▶ Academy of the Humorists-1600 (British Library 2021)

4. **Maria Serafina Arcoliniani** (Udine 1734 – Udine 1803)
   Worldcat page: https://www.worldcat.org/identities/np-arcoloniani,%20giulia$countess/
   - ▶ Academy of Ricovrati-1599 (1755) (Maggiolo 1983)

5. **Maria Angela Ardinghelli** (Naples 1728 – Naples 1825)
   Wikipedia page: https://en.wikipedia.org/wiki/Maria_Angela_Ardinghelli
   Worldcat page: https://www.worldcat.org/identities/lccn-no2011070726/
   - ▶ Società Botanica di Cortona-1754 (Boutier 2005; BCAE)
   - ▷ French Academy of Sciences-1666 (Fachini 1824)

6. **Marie-Catherine d'Aulnoy** (Barneville 1650 – Paris 1705)
   Wikipedia page: https://fr.wikipedia.org/wiki/Marie-Catherine_d%27Aulnoy
   Worldcat page: https://www.worldcat.org/identities/lccn-n50072218/
   - ▶ Academy of Ricovrati-1599 (1698) (British Library 2021; Accademia Galileiana 2017; Maggiolo 1983)

7. **Giulia Baitelli** (Brescia 1706 – Brescia 1768)
   - ▶ Academy of Ricovrati-1599 (1739) (Maggiolo 1983)

8. **Giuseppina Eleonora Barbapiccola** (Salerno 1700 – Naples 1740)
   Wikipedia page: https://it.wikipedia.org/wiki/Giuseppa_Eleonora_Barbapiccola
   Worldcat page: https://www.worldcat.org/identities/lccn-no2006101591/
   - ▶ Academy of Arcadia-1690 (Istituto dell'Enciclopedia Italiana 1929)

9. **Caterina Baroni** (Mantua 1610 –)
   - ▶ Academy of the Humorists-1600 (British Library 2021)

10. **Leonora Baroni** (Mantua 1611 – Rome 1670)
    Wikipedia page: https://it.wikipedia.org/wiki/Eleonora_Baroni
    Worldcat page: https://www.worldcat.org/identities/lccn-no2018008938/
    - ▶ Academy of the Humorists-1600 (Milton 2007)

11. **Madeleine, Françoise Basseporte** (Paris 1701 – Paris 1780)
    Wikipedia page: https://fr.wikipedia.org/wiki/Fran%C3%A7oise_Basseporte
    Worldcat page: https://www.worldcat.org/identities/lccn-no2010140675/
    - ▶ Jardin Royal des Plantes Médicinales-1635 (1735) (Jaussaud and Brygoo 2019)

12. **Laura Maria Caterina Bassi** (Bologna 1711 – Bologna 1778)
    Wikipedia page: https://it.wikipedia.org/wiki/Laura_Bassi
    Worldcat page: https://www.worldcat.org/identities/lccn-n85824830/
    - ▶ University of Bologna-1088 (1732) (Mazzetti 1847)
    - ▶ Academy of Sciences of Bologna Institute-1714 (1732) (Ercolani 1881)
    - ▶ Società Botanica di Cortona-1754 (Boutier 2005; BCAE)
    - ▶ Academy of Dissonanti-1680 (1732)(Frize 2013)
    - ▶ Academy of Arcadia-1690 (1737)(Frize 2013)

- ▶ Academy of Agiati-1752 (1754)(Frize 2013)

13. **Virginia Bazani-Cavazzoni** (Mantua 1681 – Guastella 1715)
    Worldcat page: https://www.worldcat.org/identities/lccn-no2019135846/
    - ▶ Academy of Gelati-1588 (Fachini 1824)

14. **Margaret Beaufort** (Bletsoe 1443 – London 1509)
    Wikipedia page: https://fr.wikipedia.org/wiki/Marguerite_Beaufort_(1443-1509)
    Worldcat page: https://www.worldcat.org/identities/lccn-n81070586/
    - ▶ University of Cambridge-1209 (Reynolds 2005; Linehan 2011)

15. **Marie-Anne-Françoise Mouchard de Chaban de Beauharnais** (Paris 1737 – Paris 1813)
    Wikipedia page: https://fr.wikipedia.org/wiki/Fanny_de_Beauharnais
    Worldcat page: https://www.worldcat.org/identities/lccn-n82234106/
    - ▶ Academy of Sciences, Humanities and Arts of Lyon-1700 (1782) (Marion 2019)
    - ▶ Academy of Arcadia-1690 (1788)(Marion 2019)
    - ▶ Académie de Villefranche et du Beaujolais-1677 (de Montjouvent 2005)

16. **Ippolita Benigni Manfredi** (Padua 1575–)
    Worldcat page: https://www.worldcat.org/identities/np-manfredi,%20hippolita%20benigni/
    - ▶ Academy of Insensati-1561 (British Library 2021)

17. **Françoise Albine Benoist** (Lyon 1724 – Lyon 1809)
    Wikipedia page: https://fr.wikipedia.org/wiki/Fran%C3%A7oise-Albine_Benoist
    Worldcat page: https://www.worldcat.org/identities/lccn-n87897552/
    - ▷ Academy of Ricovrati-1599 (1773) (Maggiolo 1983)

18. **Berdefolia** (Salerno – 14th-century)
    - ▶ Schola Medica Salernitana-1231 (Capparoni 1924)

19. **Luisa Bergalli** (Venice 1703 – Venice 1779)
    Wikipedia page: https://en.wikipedia.org/wiki/Luisa_Bergalli
    Worldcat page: https://www.worldcat.org/identities/lccn-n99041618/
    - ▶ Academy of Ricovrati-1599 (1740) (Maggiolo 1983)

20. **Catherine Bernard** (Rouen 1662 – Paris 1719)
    Wikipedia page: https://fr.wikipedia.org/wiki/Catherine_Bernard
    Worldcat page: https://www.worldcat.org/identities/lccn-n80015915/
    - ▶ Academy of Ricovrati-1599 (Accademia Galileiana 2017; Michaud 1811)

21. **Anne-Marie du Boccage** (Rouen 1710 – Paris 1802)
    Wikipedia page: https://fr.wikipedia.org/wiki/Anne-Marie_du_Boccage
    Worldcat page: https://www.worldcat.org/identities/lccn-nr93017267/
    - ▶ Academy of Sciences of Bologna Institute-1714 (1757) (Ercolani 1881)
    - ▷ Academy of Sciences, Humanities and Arts of Lyon-1700 (1758) (Marion 2019)

- ▶ Academy of Ricovrati-1599 (1758) (Accademia Galileiana 2017; Maggiolo 1983)
- ▶ Academy of Rouen-1744

22. **Dorotea Bocchi** (Bologna 1360 – Bologna 1436)
    Wikipedia page: https://it.wikipedia.org/wiki/Dorotea_Bucca
    - ▷ University of Bologna-1088 (1390)(Mazzetti 1847)

23. **Giulia Bona** (Dubrovnik – 17th-century)
    - ▶ Akademija Složnih-1550 (British Library 2021)

24. **Maddalena Bonsignori** (Bologna 14th-century – Bologna 1396)
    Wikipedia page: https://en.wikipedia.org/wiki/Maddalena_Buonsignori
    - ▶ University of Bologna-1088 (1380) (Mazzetti 1847)

25. **Maria Selvaggia Borghini** (Pisa 1654 – Pisa 1731)
    Wikipedia page: https://fr.wikipedia.org/wiki/Maria_Selvaggia_Borghini
    Worldcat page: https://www.worldcat.org/identities/np-selvaggia%20borghini,%20maria/
    - ▶ Academy of Ricovrati-1599 (1689) (Maggiolo 1983; Accademia Galileiana 2017)
    - ▶ Academy of Arcadia-1690 (Maggiolo 1983)

26. **Marie Françoise Catherine Boufflers de Beauvau-Craon** (Luneville 1711 – Scey-sur-Saône-et-Saint-Albin 1787)
    Wikipedia page: https://fr.wikipedia.org/wiki/Marie-Fran%C3%A7oise-Catherine_de_Beauvau-Craon
    Worldcat page: https://www.worldcat.org/identities/viaf-125315923409830370791/
    - ▶ Académie de Stanislas-1750 (Marion 2019)

27. **Boulieres** (17th-century)
    - ▷ Academy of Ricovrati-1599 (1699) (Maggiolo 1983)

28. **Clode-Elisabeth Bretonvilliers Perrot** (1631 – Paris 1710)
    - ▷ Academy of Ricovrati-1599 (1699)(British Library 2021; Maggiolo 1983)

29. **Bettina Calderini** (Bologna 1311 – Padova 1355)
    - ▶ University of Bologna-1088 (Istituto dell'Enciclopedia Italiana 1929)
    - ▶ University of Padua-1222 (Istituto dell'Enciclopedia Italiana 1929; Facciolati 1757)

30. **Novella Calderini** (Bologna 1312 – Bologna 1386)
    - ▶ University of Bologna-1088 (Istituto dell'Enciclopedia Italiana 1929)

31. **Costanza Calenda** (Salerno 1415 –)
    Wikipedia page: https://en.wikipedia.org/wiki/Constance_Calenda
    - ▶ Schola Medica Salernitana-1231 (De Renzi 1852)

32. **Charlotte Camus de Melsons** (– 1702)
    - ▶ Academy of Ricovrati-1599 (1699) (Michaud 1811; Maggiolo 1983)

33. **Abella Castellomata** (Rome 1380 –)
Wikipedia page: https://en.wikipedia.org/wiki/Abella
   - ▶ Schola Medica Salernitana-1231 (De Renzi 1852)

34. **Henriette Julie de Castelnau Murat** (Brest 1670 – Change 1716)
Wikipedia page: https://fr.wikipedia.org/wiki/Henriette-Julie_de_Castelnau_de_Murat
Worldcat page: https://www.worldcat.org/identities/lccn-n81072249/
   - ▷ Academy of Ricovrati-1599 (1702)(British Library 2021; Maggiolo 1983)

35. **Laura Cereta** (Brescia 1469 – Brescia 1499)
Wikipedia page: https://it.wikipedia.org/wiki/Laura_Cereta
Worldcat page: https://www.worldcat.org/identities/lccn-n81131481/
   - ▷ University of Padua-1222 (Cocchetti 1880)

36. **Charlotte-Rose de Caumont La Force** (Prechac 1654 – Paris 1724)
Wikipedia page: https://fr.wikipedia.org/wiki/Charlotte-Rose_de_Caumont_La_Force
Worldcat page: https://www.worldcat.org/identities/lccn-n80164399/
   - ▷ Academy of Ricovrati-1599 (1699)(Accademia Galileiana 2017; Maggiolo 1983)

37. **Margaret Lucas Cavendish** (Colchester 1623 – Nottinghamshire 1673)
Wikipedia page: https://en.wikipedia.org/wiki/Margaret_Cavendish,_Duchess_of_Newcastle-upon-Tyne
Worldcat page: https://www.worldcat.org/identities/lccn-n83206596/
   - ▷ Royal Society of London for the Promotion of Natural Knowledge-1660

38. **Gabrielle-Emilie du Châtelet** (Paris 1706 – Luneville 1749)
Wikipedia page: https://fr.wikipedia.org/wiki/\'Emilie_du_Ch\^atelet
Worldcat page: https://www.worldcat.org/identities/lccn-n50051708/
   - ▶ Academy of Sciences of Bologna Institute-1714 (1746) (Ogilvie 1986; Ercolani 1881)
   - ▶ Académie de Stanislas - 1750 CTHS-www

39. **Elizabeth-Sophie Chéron Lehay** (Paris 1648 – Paris 1711)
Wikipedia page: https://fr.wikipedia.org/wiki/%C3%89lisabeth-Sophie_Ch%C3%A9ron
Worldcat page: https://www.worldcat.org/identities/lccn-n93010523/
   - ▶ Academy of Ricovrati - 1599 (1699) (British Library 2021; Maggiolo 1983)

40. **Henriette de Coligny La Suze** (Paris 1618 – Paris 1673)
Wikipedia page: https://fr.wikipedia.org/wiki/Henriette_de_Coligny_de_La_Suze
Worldcat page: https://www.worldcat.org/identities/lccn-nb98032175/
   - ▶ Academy of Ricovrati - 1599 (British Library 2021; Maggiolo 1983)

41. **Juana Contreras** (Segovia 15th-century)
   - ▷ University of Salamanca - 1218

42. **Elena Lucrezia Cornaro Piscopia** (Venice 1645 – Padua 1684)
Wikipedia page: https://fr.wikipedia.org/wiki/Elena_Cornaro_Piscopia
Worldcat page: https://www.worldcat.org/identities/lccn-nr95046943/
    - ▶ Academy of Ricovrati - 1599 (1679) (Accademia Galileiana 2017; Maggiolo 1983)
    - ▶ Academy of the Humorists - 1600 (British Library 2021)
    - ▶ Academy of Intronati-1525 (British Library 2021; Maggiolo 1983)

43. **Elisabetta Credi nei Fortini** (Siena 15th-century)
    - ▶ Academy of Intronati - 1525 (British Library 2021)

44. **Anne Dacier** (Grandchamp 1645 – Paris 1720)
Wikipedia page: https://fr.wikipedia.org/wiki/Anne_Dacier
Worldcat page: https://www.worldcat.org/identities/lccn-n85196209/
    - ▶ Academy of Ricovrati - 1599 (1679) (Accademia Galileiana 2017; Maggiolo 1983)

45. **Ekaterina Romanovna Dasjkova** (Saint-Petersburg 1743 – Moscow 1810)
Wikipedia page: https://fr.wikipedia.org/wiki/Catherine_Dachkov
Worldcat page: https://www.worldcat.org/identities/lccn-n85052514/
    - ▶ Academy of Sciences Leopoldina - 1652 (1789) (Leopoldina Nationale Akademie der Wissenschaften 2022)
    - ▶ Imperial Moscow University - 1755 (1783)
    - ▶ Academy of St Petersburg - 1724 (1783) (Shemivot 1873)
    - ▷ Royal Swedish Academy of Sciences-1739 (1783) (Kungl. Vetenskapsakademien 2022; Dahlgren 1915)

46. **Antoinette-Thérèse Deshoulières** (Rocroi 1659 – Paris 1718)
Wikipedia page: https://fr.wikipedia.org/wiki/Antoinette-Th%C3%A9r%C3%A8se_Des_Houli%C3%A8res
Worldcat page: https://www.worldcat.org/identities/lccn-no96048768/
    - ▷ Academy of Ricovrati-1599 (1698) (British Library 2021; Maggiolo 1983)

47. **Caterina Dolfin** (Venice 1736 – Venice 1793)
Wikipedia page: https://en.wikipedia.org/wiki/Caterina_Dolfin
Worldcat page: https://www.worldcat.org/identities/viaf-479915947690627990003/
    - ▶ Academy of Ricovrati - 1599 (1773) (Maggiolo 1983)

48. **Eva Ekeblad** (Stockholm 1724 – Lidkoping 1786)
Wikipedia page: https://sv.wikipedia.org/wiki/Eva_Ekeblad
Worldcat page: https://www.worldcat.org/identities/lccn-n96083854/
    - ▶ Royal Swedish Academy of Sciences-1739 (1748) (Dahlgren 1915)

49. **Dorothea Christiane Erxleben** (Quedlinburg 1715 – Quedlinburg 1762)
Wikipedia page: https://en.wikipedia.org/wiki/Dorothea_Erxleben
Worldcat page: https://www.worldcat.org/identities/lccn-no2006051169/
    - ▷ University of Halle-1694 (Ogilvie 1986)

50. **Angiola Maria Fabreschi** (Siena 18th-century)

    ▶ Academy of Ricovrati-1599 (1725) (Maggiolo 1983)

51. **Cassandra Fedele** (Venice 1465 – Venice 1558)
    Wikipedia page: https://it.wikipedia.org/wiki/Cassandra_Fedele
    Worldcat page: https://www.worldcat.org/identities/viaf-46615032364510997015 7/

    ▷ University of Padua-1222 (Istituto dell'Enciclopedia Italiana 1929)

52. **Vittoria Franchini-Clementini** (18th-century)

    ▶ Società Botanica di Cortona-1754 (Boutier 2005; BCAE)

53. **Veronica Franco** (Venice 1546 – Venice 1591)
    Wikipedia page: https://en.wikipedia.org/wiki/Veronica_Franco
    Worldcat page: https://www.worldcat.org/identities/lccn-n85256501/

    ▶ The Academy of Domenico Venier-1548 (British Library 2021)

54. **Beatriz Galindo** (Salamanca 1474 – Madrid 1534)
    Wikipedia page: https://en.wikipedia.org/wiki/Beatriz_Galindo
    Worldcat page: https://www.worldcat.org/identities/lccn-nb99154235/

    ▷ University of Salamanca-1218 (1486) (Vidal y Díaz et al. 1869)

55. **Juliane Herzogin Giovane** (Wurzburg 1766 – Buda 1805)
    Wikipedia page: https://en.wikipedia.org/wiki/Juliane_Giovane
    Worldcat page: https://www.worldcat.org/identities/lccn-no2009165737/

    ▷ Royal Prussian Academy of Sciences-1700 (1794) (BBAW 2022)

56. **Bettisia Gozzadini** (Bologna 1209- Bologna 1261)
    Wikipedia page: https://it.wikipedia.org/wiki/Bettisia_Gozzadini

    ▶ University of Bologna-1088 (Paradisi 1704)

57. **Paolina Grismondi** (Bergamo 1746 – Bergamo 1801)
    Wikipedia page: https://it.wikipedia.org/wiki/Paolina_Secco_Suardo
    Worldcat page: https://www.worldcat.org/identities/lccn-no97014363/

    ▶ Academy of Dissonanti-1680 (Fachini 1824)
    ▶ Academy of Arcadia-1690 (Fachini 1824)
    ▶ Academy of Agiati-1752 (Fachini 1824)

58. **Rebecca de Guarna** (18th-century)
    Wikipedia page: https://fr.wikipedia.org/wiki/Rebecca_de_Guarna

    • (Fachini 1824) Schola Medica Salernitana-1231 (De Renzi 1852)

59. **María Isidra de Guzmán y de la Cerda** (Madrid 1767 – Cordoba 1803)
    Wikipedia page: https://en.wikipedia.org/wiki/Mar\'ia_Isidra_de_Guzm\'an_y_de_la_Cerda
    Worldcat page: https://www.worldcat.org/identities/lccn-no2004059699/

    • (Fachini 1824) University of Alcala-1499 (1785) (Torrecilla, Arboniés, and Torres 2013)

▷ Royal Spanish Academy-1713 (1784)(Real Academia de la Historia 2022)

60. **Marie-Jeanne L'Héritier de Villandon** (Paris 1664 – Paris 1734)
Wikipedia page: https://fr.wikipedia.org/wiki/Marie-Jeanne_L%27H%C3%A9ritier_de_Villandon
Worldcat page: https://www.worldcat.org/identities/lccn-nr93017476/

▷ Academy of Ricovrati-1599 (1697) (Accademia Galileiana 2017; Maggiolo 1983)

61. **Antoinette Des Houlières** (Paris 1638 – Paris 1694)
Wikipedia page: https://fr.wikipedia.org/wiki/Antoinette_Des_Houli%C3%A8res
Worldcat page: https://www.worldcat.org/identities/lccn-nr93017499/

▶ Académie royale d'Arles-1666 (1689)

▷ Academy of Ricovrati-1599 (1688) (Accademia Galileiana 2017; Maggiolo 1983)

62. **Sophie Frédérique Augusta Katharina II** (Szczecin 1729 – Saint-Petersburg 1796)
Wikipedia page: https://fr.wikipedia.org/wiki/Catherine_II
Worldcat page: https://www.worldcat.org/identities/lccn-n80046091/

▶ Royal Prussian Academy of Sciences-1700 (1767) (BBAW 2022)

63. **Francisca de Lebrija** (Lebrija 16th-century)
Wikipedia page: https://es.wikipedia.org/wiki/Francisca_de_Nebrija

▶ University of Alcala-1499 (De Los Ríos et al. 1862)

64. **Marguerite Lecomte** (Paris 1717 – Paris 1800)
Wikipedia page: https://en.wikipedia.org/wiki/Marguerite_Lecomte
Worldcat page: https://www.worldcat.org/identities/lccn-no2017092462/

▶ Academy of Sciences of Bologna Institute-1714 (1764) (Ercolani 1881)

65. **Nicole-Reine Lepaute** (Paris 1723 – Paris 1788)
Wikipedia page: https://fr.wikipedia.org/wiki/Nicole-Reine_Lepaute
Worldcat page: https://www.worldcat.org/identities/viaf-56851391/

▶ Académie des Sciences et belles lettres-1723 (Le Lay 2004)

66. **Marie-Josephine Lescunq de Mombarat** (Montbard 1750-1826)
Worldcat page: https://www.worldcat.org/identities/lccn-nr2001022007/

▷ Academy of Ricovrati-1599 (1778) (Maggiolo 1983)

67. **Costanza Mammana** (18th-century)

▶ Schola Medica Salernitana-1231 (Capparoni 1924)

68. **Francesca Manzoni** (Barzio 1710 – Cereda 1743)
Wikipedia page: https://it.wikipedia.org/wiki/Francesca_Manzoni
Worldcat page: https://www.worldcat.org/identities/viaf-49631161/

▶ Academy of Ricovrati-1599 (1738) (Maggiolo 1983)

▶ Academy of Arcadia-1690 (Maggiolo 1983)

69. **Faustina Maratti Zappi** (Rome 1679 – Rome 1745)
Wikipedia page: https://en.wikipedia.org/wiki/Faustina_Maratti
Worldcat page: https://www.worldcat.org/identities/lccn-no97072467/

    ▶ Academy of Intronati-1525 (British Library 2021)

70. **Marie Le Masson Le Golft** (Le-Havre 1749 – Rouen 1826)
Wikipedia page: https://fr.wikipedia.org/wiki/Marie_Le_Masson_Le_Golft
Worldcat page: https://www.worldcat.org/identities/lccn-n2006027252/

    ▶ Academy of Rouen-1744 (Marion 2019)

71. **Diamante Medaglia Faini** (Brescia 1724 – SalÃ² 1770)
Wikipedia page: https://it.wikipedia.org/wiki/Diamante_Medaglia_Faini
Worldcat page: https://www.worldcat.org/identities/viaf-42895552/

    ▶ Academy of Arcadia-1690 (Istituto dell'Enciclopedia Italiana 1929)

72. **Luisa de Medrano** (Atienza 1484 – Atienza 1527)
Wikipedia page: https://es.wikipedia.org/wiki/Luisa_de_Medrano

    ▶ University of Salamanca-1218 (1508) (Vidal y Díaz et al. 1869)

73. **Maria Maddalena Morelli** (Pistoia 1727 – Florence 1800)
Wikipedia page: https://it.wikipedia.org/wiki/Maria_Maddalena_Morelli
Worldcat page: https://www.worldcat.org/identities/lccn-no00065204/

    ▶ Academy of Arcadia-1690 (1747) (Istituto dell'Enciclopedia Italiana 1929)
    ▶ Academy of Agiati-1752 (1751) (Istituto dell'Enciclopedia Italiana 1929)

74. **Anna Morandi** (Bologna 1714 – Bologna 1774)
Wikipedia page: https://it.wikipedia.org/wiki/Anna_Morandi_Manzolini
Worldcat page: https://www.worldcat.org/identities/lccn-n85056642/

    ▶ University of Bologna-1088 (1756) (Mazzetti 1847; Ogilvie 1986)

75. **Charlotte-Catherine Patin** (Paris 1667 – 1744)
Wikipedia page: https://fr.wikipedia.org/wiki/Charlotte-Catherine_Patin
Worldcat page: https://www.worldcat.org/identities/lccn-nr2001049234/

    ▶ Academy of Ricovrati-1599 (1683) (British Library 2021; Maggiolo 1983)

76. **Gabrielle-Charlotte Patin** (Paris 1665 – Padua 1751)
Wikipedia page: https://fr.wikipedia.org/wiki/Gabrielle-Charlotte_Patin
Worldcat page: https://www.worldcat.org/identities/viaf-45245497/

    ▶ Academy of Ricovrati-1599 (1679) (British Library 2021; Maggiolo 1983)

77. **Madeleine Patin Hommetz** (Paris 1640 – Padua 1682)
Wikipedia page: https://fr.wikipedia.org/wiki/Madeleine_Patin
Worldcat page: https://www.worldcat.org/identities/viaf-309603058/

    ▶ Academy of Ricovrati-1599 (Maggiolo 1983)

78. **Giulia Polcenigo** (Polcenigo 18th-century)
    - ▶ Academy of Ricovrati-1599 (Maggiolo 1983)

79. **Luisa-Ulrika Preussen** (Berlin 1720 – Svartsjo 1782)
    Wikipedia page: https://fr.wikipedia.org/wiki/Louise-Ulrique_de_Prusse
    - ▶ Royal Swedish Academy of Sciences-1739 (1753)

80. **Isabella Renier Lombria** (Venice 18th-century)
    - ▶ Academy of Ricovrati-1599 (1732) (Maggiolo 1983)
    - ▶ Academy of Arcadia-1690 (Maggiolo 1983)

81. **Cristina Roccati** (Rovigo 1732 – Rovigo 1797)
    Wikipedia page: https://it.wikipedia.org/wiki/Cristina_Roccati
    Worldcat page: https://www.worldcat.org/identities/viaf-89402291/
    - ▶ Akademija Složnih-1550 (1749) (Maggiolo 1983)
    - ▶ Academy of Ricovrati-1599 (1753) (Maggiolo 1983)
    - ▶ Academy of Arcadia-1690 (1753) (Maggiolo 1983)
    - ▶ Academy of Agiati-1752 (Maggiolo 1983)

82. **Roussereau** (17th-century)
    - ▷ Academy of Ricovrati-1599 (British Library 2021; Maggiolo 1983)

83. **Delphine de Sartres** (Montpellier 1634 – Arles 1685)
    Worldcat page: https://www.worldcat.org/identities/lccn-no2004048996/
    - ▶ Académie royale d'Arles-1666 (1666) (Rance-Bourrey 1890)

84. **Bianca Laura Saibanti-Vannetti** (Rovereto 1727 – Rovereto 1797)
    Wikipedia page: https://en.wikipedia.org/wiki/Bianca_Laura_Saibante
    Worldcat page: https://www.worldcat.org/identities/lccn-no2011144119/
    - ▶ Academy of Ricovrati-1599 (1753) (Maggiolo 1983; Istituto dell'Enciclopedia Italiana 1929)
    - ▶ Academy of Arcadia-1690 (Maggiolo 1983)
    - ▶ Academy of Agiati-1752 (1752) (Maggiolo 1983)

85. **Antoinette Salvan de Saliez** (Salies 1638 – Salies 1730)
    Wikipedia page: https://en.wikipedia.org/wiki/Antoinette_de_Sali%C3%A8s
    Worldcat page: https://www.worldcat.org/identities/lccn-no2005027774/
    - ▷ Academy of Ricovrati-1599 (1689) (British Library 2021; Maggiolo 1983)

86. **Virginia Salvi** (Siena 1510 – Rome 1571)
    Worldcat page: https://www.worldcat.org/identities/lccn-nr99033284/
    - ▶ Academy of Intronati-1525 (British Library 2021)

87. **Adelle of the Saracens** (12th-century)
    Wikipedia page: https://en.wikipedia.org/wiki/Adelle_of_the_Saracens
    - ▶ Schola Medica Salernitana-1231 (Ogilvie 1986)

88. **Margharita Sarrocchi** (Gragnano 1560 – Rome 1617)
Wikipedia page: https://it.wikipedia.org/wiki/Margherita_Sarrocchi
Worldcat page: https://www.worldcat.org/identities/lccn-n2006023675/

- ▶ Accademy of Oziosi-1611 (British Library 2021)
- ▶ Academy of the Humorists-1600 (British Library 2021)

89. **Aretafila Savini de'Rossi** (Siena 1687 – Siena 1731)
Worldcat page: https://www.worldcat.org/identities/np-savini%20de%20rossi,%20aretafila/

- ▶ Academy of Arcadia-1690 (Findlen, Roworth, and Sama 2009)

90. **Madeleine de Scudéry** (Le-Havre 1607 – Paris 1701)
Wikipedia page: https://fr.wikipedia.org/wiki/Madeleine_de_Scud%C3%A9ry
Worldcat page: https://www.worldcat.org/identities/lccn-n50004885/

- ▶ Academy of Ricovrati-1599 (1685) (Accademia Galileiana 2017; Maggiolo 1983)

91. **Louise Anastasie Serment** (Grenoble 1641 – Paris 1692)
Wikipedia page: https://en.wikipedia.org/wiki/Louise-Anastasia_Serment

- ▷ Academy of Ricovrati-1599 (British Library 2021; Maggiolo 1983)

92. **Anna Sermini Tommasi** (Cortona 18th-century)

- Società Botanica di Cortona-1754 (Boutier 2005; BCAE)

93. **Clotilde Tambroni** (Bologna 1758 – Bologna 1817)
Wikipedia page: https://it.wikipedia.org/wiki/Clotilde_Tambroni
Worldcat page: https://www.worldcat.org/identities/lccn-no2009100384/

- ▶ University of Bologna-1088 (1793) (Mazzetti 1847)
- ▷ Royal Spanish Academy-1713 (1798) (Mazzetti 1847)
- ▷ University of Parma-1412 (1798) (Rizzi 1953)
- ▶ Academy of Arcadia-1690 (1792) (Istituto dell'Enciclopedia Italiana 1929)

94. **Laura Terracina** (Naples 1519 – Naples 1577)
Wikipedia page: https://it.wikipedia.org/wiki/Laura_Terracina
Worldcat page: https://www.worldcat.org/identities/lccn-n82204410/

- ▶ Academy of Incogniti-1546 (1546) (Maylender 1930; Istituto dell'Enciclopedia Italiana 1929; British Library 2021)

95. **Maria Settimia Tolomei Marescotti** (Siena 1659 – 1715)

- ▶ Academy of Gelati-1588 (1696) (British Library 2021)
- ▶ Academy of Ricovrati-1599 (1696) (British Library 2021; Maggiolo 1983)

96. **Suzanne Verdier Allaut** (Montpellier 1745 – Uzes 1813)
Wikipedia page: https://fr.wikipedia.org/wiki/Suzanne_Verdier

- ▷ Academy of Ricovrati-1599 (1770) (Maggiolo 1983)

97. **Trotula de Ruggiero** (Salerno 1050 – 1097)
Wikipedia page: https://fr.wikipedia.org/wiki/Trotula_de_Salerne
Worldcat page: https://www.worldcat.org/identities/lccn-n80148985/

    ▶ Schola Medica Salernitana-1231 (1080) (Ogilvie 1986; Rashdall 2010; Dulieu 1975)

98. **Anne de la Vigne** (Vernon 1634 – Paris 1684)
Wikipedia page: https://fr.wikipedia.org/wiki/Anne_de_La_Vigne
Worldcat page: https://www.worldcat.org/identities/viaf-76425877/

    ▶ Academy of Ricovrati-1599 (Maggiolo 1983; British Library 2021)

99. **Marie-Catherine de Villedieu** (Alencon 1632 – StRemy 1683)
Wikipedia page: https://fr.wikipedia.org/wiki/Marie-Catherine_Desjardins,_dite_de_Villedieu
Worldcat page: https://www.worldcat.org/identities/viaf-98282308/

    ▷ Academy of Ricovrati-1599 (1679) (Accademia Galileiana 2017; Maggiolo 1983)

100. **Catherine de Vivonne** (Rome 1588 – Paris 1665)
Wikipedia page: https://en.wikipedia.org/wiki/Catherine_de_Vivonne,_marquise_de_Rambouillet
Worldcat page: https://www.worldcat.org/identities/lccn-nr89003345/

    ▶ Academy of Ricovrati-1599 (British Library 2021; Maggiolo 1983)

101. **Helena Sybilla Wagenseil** (Altdorf 1669 – Altdorf 1735)
Wikipedia page: https://de.wikipedia.org/wiki/Helena_Sibylla_Moller

    ▶ Academy of Ricovrati-1599 (British Library 2021)

102. **Helen Maria Williams** (London 1762 – Paris 1827)
Wikipedia page: https://fr.wikipedia.org/wiki/Helen_Maria_Williams
Worldcat page: https://www.worldcat.org/identities/lccn-n50015768/

    ▶ Académie des arts et belles lettres-1705 (Marion 2019)

103. **Maria Winkelmann** (Panitzsch 1670 – Berlin 1720)
Wikipedia page: https://fr.wikipedia.org/wiki/Maria_Winkelmann
Worldcat page: https://www.worldcat.org/identities/lccn-no2016103307/

    ▷ Royal Prussian Academy of Sciences-1700

104. **Clotilde Zamboni** (Bologna 18th-century)

    ▶ University of Bologna-1088 (Mazzetti 1847)

105. **Flora Zuzzeri** (Dubrovnik 1552 – Ancona 1648)
Wikipedia page: https://en.wikipedia.org/wiki/Cvijeta_Zuzori%C4%87
Worldcat page: https://www.worldcat.org/identities/lccn-no00016045/

    ▶ Akademija Složnih-1550 (British Library 2021)

106. **Hedvig Gustava Malmsten** (1734–1809)

    ▶ Royal Physiographic Society in Lund-1778 (1789) (Gertz 1940)

107. **Nada Bunic**, (Dubrovnik 16th-century)
Wikipedia page: https://hr.wikipedia.org/wiki/Nada_Buni%C4%87

- ▶ Akademija Složnih-1550 (Hawkesworth 2001)

108. **Mara Gundulic Gucetic**, (Dubrovnik 16th-century)

- ▶ Akademija Složnih-1550 (Sinko-Depierris 2009)

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