
ARTÍCULOS / ARTICLES

THE MAP AND ITS WRITING. CADASTRAL SCALES FROM MILAN TO VIENNA (1^{ÈRE} HALF 18TH CENTURY)

Christine Lebeau

IHMC / University of Paris 1 Panthéon-Sorbonne

christine.lebeau@univ-paris1.fr

ORCID ID: <https://orcid.org/0009-0007-6815-1752>

Recibido: 26/12/2022; Aceptado: 29/01/2023; Publicado: 16/01/2024

Cómo citar este artículo/citation: Lebeau, Christine. (2023). The map and its writing. Cadastral scales from Milan to Vienna (1ère half 18th century). *Estudios Geográficos*, 84 (295), e138. <https://doi.org/10.3989/estgeogr.2023143.143>

Abstract: This article looks at the spatial representations suggested by old land registers, using the example of the Milanese *censimento* initiated in 1718. Drawn up in an imperial context, this cadastral map and the tax assessment associated with it were produced from different points of view. A wide range of documentation preserved in Milan, Vienna and Paris shows how administrators and citizens at different levels were able to modify and even shape the territory. Territorial administration, local claims and the imperial eye overlap and communicate to produce, each in their own way, an "interested image". But the maps and the way they are written also federate these three scales, ultimately revealing an imperial dynamic, a negotiated and shared project of commutative justice.

Key words: Habsburg Monarchy, Land register, Milan, Censimento 18th Century, Territory, State Knowledge.

El mapa y su escritura. Escalas catastrales de Milán a Viena (primera mitad del siglo XVIII)

Resumen: En este artículo se analizan las representaciones espaciales contenidas en los catastros antiguos, tomando como ejemplo el *censimento* milanés, iniciado en 1718. Elaborada en un contexto imperial, esta cartografía catastral y la evaluación fiscal asociada a él fueron elaborados desde diferentes puntos de vista. Una amplia gama de documentación conservada en Milán, Viena y París muestra cómo funcionarios y ciudadanos de diferentes niveles pudieron modificar e incluso moldear el territorio. La administración territorial, las reivindicaciones locales y la mirada imperial se superponen y comunican para producir, cada uno a su manera, una "imagen interesada". Pero los mapas y la forma en que están escritos también reflejan estas tres escalas, revelando en última instancia una dinámica imperial, un proyecto negociado y compartido de justicia conmutativa.

Palabras clave: Monarquía de los Habsburgo, Catastro, Milán, Censimento Siglo XVIII, Territorio, Conocimiento del Estado.

“The land register of the Duchy of Milan, which was started under Charles VI, is considered to be one of the most accurate and meticulous operations of its kind ever carried out”, Adam Smith, *The Wealth of Nations*, Volume IV, Book V, Chapter II, Paris, 1802.

The digitisation of ancient cadastral maps now seems to have become a matter of course, and the Milanese *Censimento*, has not escaped this fate.¹ In fact, this cadastre is not only reputed to be accurate, but is also based on geometric and parcel maps that cover the countryside and towns, making it possible to locate and describe the property subject to taxation, as well as listing the owner’s name. Historians started by looking at the social issues involved: capturing the registers (*sommarioni*) and transforming them into a database provided a strong basis for research into social groups in Lombardy and their land ownership, even if the validity of this method has been challenged (Zaninelli, 1986).² With the development of computer cartography, the study of farming systems or, more broadly, the evolution of landscapes, has drawn on tax estimates to produce thematic maps, or even to ‘rediscover the image’ of a community (Della Valle, 2015).³ Combined with lists of patricians and contextualised by the use of family archives, the cadastre of the city of Milan has become the basis of a GIS (Cogné, 2006 and 2017). Historians have thus moved from a quantitative analysis to a geomatic approach using the ‘writing’ of the land register, although they have not yet succeeded in digitising the maps.⁴

As in Tuscany and, more broadly, in the former Italian states such as Savoy, the Theresian land register is part of a long tradition that from an early date associated the register with a map, and the owner or usufructuary with a plot of land (Antoine & Landais). This land register was also part of a debate and process that concerned not only other countries inside the Habsburg Monarchy, but also other European states, and aimed to radically transform the definition of the tax base

and the administration of territories (Camarero Bullón, 2002; Touzery, 2007, Lebeau, 2014). In fact, a land register is first and foremost an administrative tool created to collect taxes on land and buildings. What can historians and geographers ‘find’ in the end?

Geographers specialising in GIS have drawn our attention to the diversity of spatial representations, between those who have direct experience of the terrain and those who take or seek to take their information from figurative substitutes, maps, plans but also lists, tables, etc. (Caron & Roches, 2001: p. 2). Rather than trying to describe the space - but what space? shouldn’t we first look at how it is perceived by different players and the types of documents they produce?⁵ Over and above plans and maps, the Milanese *Censimento* is made up of a variety of documentation that shapes or transforms the territory, showing, over the course of its production, interactions between local, Milanese and imperial players and, depending on the perspective and the time, a local territory populated by objects, a scene of human or social phenomena, a territory seen from the air, or even a combination of these elements, with tax assessment and its criteria, which themselves varied from time to time, being just one of the formalised territories were.

We therefore propose to start not from the map but from the cadastral writings produced at the different scales of the monarchy. Each scale of observation is also a scale of action producing a different image. The imperial level played a part therein, even if it would be inappropriate to reduce it solely to the development of state control. Territorial administration, local demands and the imperial eye overlapped and communicated to produce, each in their own way, an “interested image” (Liva, Savoja & Signori, 1984).

THE ADMINISTRATIVE HISTORY OF A COLLECTION OF FORMS

The tax system introduced by the Spanish government between 1543 and 1599 had become both unfair and obsolete when Emperor Charles VI assumed administration powers in the Duchy of Milan, an imperial fiefdom left vacant by the death of Charles II of Spain in 1700 (Vigo, 1990; Agnoletto, 2000). Prince Eugene, President of the War Council in Vienna and Governor General of Milan from 1706, initially pro-

1 <https://francearchives.fr/fr/article/26287472>.

2 For a critical perspective, see Berengo (1970) and Mirri (1964).

3 See, for example, Della Valle (2015) or the exhibition organised in 2027 at the Archivio di Stato di Milano, *Aspetto del paesaggio lombardo nella cartografia dell'Archivio di Stato di Milano*. <https://movio.cultura.gov.it/asmi/ilpaesaggiolombardo/en/6/aspetti-del-paesaggio-lombardo-nella-cartografia-dell-archivio-di-stato-di-milano-a-cura-di-giovanni-liva>

4 “Atlante dei catasti storici e delle carte topografiche della Lombardia” project. The www.atlantestorico.lombardia.it website is not currently active.

5 On the ‘triplicity’ of space according to Henri Lefebvre - lived space/perceived space/conceived space, physical space/social space/mental space, represented space/space of representation/representation of space, Berque (2016: p. 169).

moted a new tax, the *diaria*, intended to finance military operations. This tax knitted a number of taxes created under the Spanish government, while significantly increasing the levy (Pugliese, 1924). From the very moment it was introduced in 1707, the *diaria* aroused deep discontent, but also debates, as in the case of the *Progetto di un nuovo sistema da taglia praticarsi nello stato di Milano*, written by Count Pras Martiniana and sent to the Emperor in 1709. The proposal for a universal land tax of 12 soldi per *pertica*, combined with triple taxation on people, real estate and commercial profits, triggered a campaign of libels accusing Pras of being a project-maker, French books reader and particularly Vauban's *Dîme Royale*.⁶ As the Duchy of Milan definitively became an Austrian possession through the Treaties of Rastatt (6 March 1714) and Baden (7 September 1714), another solution had to be found to make the tax both more efficient and more tolerated.

Following the analysis developed by Pompeo Neri, chairman of the second Giunta, historians generally distinguish two phases: the first running from the Austrian takeover of the Stato di Milano to the beginning of the War of Polish Succession (1718-1733) and the second from the Peace of Aix-la-Chapelle to the promulgation of the new land register (1749-1760). Both the situation of the Duchy of Milan close to a Kingdom of Sardinia that sought France's alliance and stood alongside France in the War of the Polish Succession and the dates on which the two boards were appointed, seem to justify this chronology. These two moments, the first devoted to mapping and land valuation, the second more dedicated to the introduction of a new administrative structure, the valuation of movable property and the calculation of taxes, attest not only to an exceptional administrative continuity for the eighteenth century, but also to the seminal nature of an undertaking that led to a number of structural reforms in the Austrian Lombardy.

Based upon the Milanese archives, Sergio Zaninelli produced the most comprehensive study of the work of the *R. Giunta* set up at the end of 1718 to stifle the complaints raised by the dissemination of the Pras project and then reach a new distribution of taxes (Zaninelli, 1963; Zangheri, 1980; Locatelli & Tedeschi, 2012). The *Real Giunta del Censo* followed on from the *Giunta dei Cinque Delegati*, which had already been set up to implement the tax reform ordered by

Charles V in 1543 (Neri, 1750: p. 347).⁷ These boards reported only to the Governor of Milan, who was himself in communication with the Spanish Supreme Council in Vienna, but they also communicated with all the institutions of the Stato di Milano, resulting in considerable and dispersed funds. Headed by Vincenzo Mirò and then, after his withdrawal in 1731, by his deputy Giuseppe Cavalieri, the *R. Giunta* continued its work until 1733, when it submitted a report on its findings, before being suspended due to hostilities in the Po plain.⁸ Despite constant opposition from the Congregation of the State, the city of Milan and, more generally, the patricians of the Duchy of Milan, the *R. Giunta* nonetheless managed to do an "excellent job" (Neri, 1750: p. 347).⁹

The first registration of land parcels with their perimeter and surface area was preceded by an important publicity and notification phase, since all landowners, regardless of their state or residence, had to declare their property where they were, not where they lived. They were also required to categorize each land parcel and plot of building they owned according to one of 19 qualities of land or 15 categories of buildings, they also had to specify the amounts paid to the tax authorities in 1717 and 1718. The entire territory was affected. After a trial phase, in 1721 the *R. Giunta* launched the general survey of the Stato di Milano. Meanwhile the *R. Giunta* continued to deliberate on the objects to be taken into account. Ovens, warehouses, mills and ditches, which were initially excluded, were eventually recorded. A note for the use of experts (*periti*) dated 25 August 1724 set out the basis for the new assessment, requiring each parcel to be specified for access to water and at which cost, the different uses, cultivation, wild hedges (*ronco*), land with mulberry trees (*terreni moronati* with the number of trees), rice fields, etc.¹⁰ The community maps drawn up on the basis of the surveyors' statements, 669 dated 25th August 1724, were gradually filled in

7 In 1599, the Giunta dei Prefetti dell'Estimo became the Giunta dei Cinque Delegati (Pugliese, 1924: p. 125).

8 S. Zaninelli published the 235-point table of contents of the concluding report entitled "Sommario della Consulta sulla esecuzione del censimento" (1733), Materie, c. 528, Archivio Storico Civico, Milan. (Zaninelli, 1963: pp. 155-170).

9 On the position of the Congregation of the State, made up of the 65 parish syndics (*pieve*) appointed in 1572 to manage the new land register, *Le istituzioni storiche del territorio lombardo XIV-XIX secolo*, Milano: Regione Lombardia, 2000, 18.

10 "Disposizioni della R. Giunta per la classificazione dei terreni e la giustificazione dei privilegi" (25 August 1724), Gridario relativo al censo, AO. II 2, Biblioteca Nazionale Braiddense, Milan. (Zaninelli, 1963: pp. 135-138).

6 Common unit = 1 *pertica* or 654.5179 m². (Zaninelli, 1960: pp. 562-569).

with taxable items, while the use of colours made it possible to distinguish the use of the land. The survey was completed at the beginning of 1726. The Milanese board then estimated the value of each *pertica* according to quality, adjusted to the value tariff, parcel by parcel, and compiled them in a table for each community in order to begin the delicate verification phase. These assessments had to be printed out for each community and sent, along with two printed copies of the edict, to the local authorities, who were then required to make one copy of it so that the assessment could be made public and one copy kept in their offices.¹¹ Taxpayers then had two months to submit their claims. Following this publication, a panel of twelve experts (*periti*) was appointed to verify the titles of ownership and, above all, immunities. According to an initial report, a quarter of the assets could be considered exempt (Neri, 1750: p. 350). At this step of the process, it was necessary to check with pre-existing documentation, particularly older maps and cadastres. As the operations progressed, the number of complaints increased and reached Vienna directly. While complying with the Italian Council's wish to respect immunities, the *R. Giunta* then drew up an inventory of the remaining problems, which consisted so many blanks on the map, such as ecclesiastical emphyteusis, where it was unclear whether they had to pay tax.¹²

A new perception of the territory then seemed to prevail, shifting the focus from the plots to the owners and the legal status of each piece of their property. In addition to surveying communities, deducting uncultivated areas, and assessing plots, this work now involved categorizing properties into three items: those that were obviously taxable, those that were exempt and those whose tax status was uncertain.

Operations, which had been interrupted since 1733, did not resume in July 1749, after the signing of the Treaty of Aix-la-Chapelle, as P. Neri claims, but rather in 1737 when archives that had been kept safe in Mantua during the war returned to Milan. Reports show that the *R. Giunta* set about reorganising the

territory of the communities by grouping the smaller ones together. The reproduction of this report in P. Neri's *Relazione*, one of the few of its kind, attests to the importance of this undertaking, which was certainly intertwined with the reform of the land registry, but which affected the reorganisation of powers in the Duchy of Milan.¹³ At the same time, the city of Cremona, which was interested in the redistribution of taxes inside the Stato di Milano, petitioned the emperor to resume operations.¹⁴ Francesco Aguirre, custodian of the fund, proposed introducing the new cadastre by asking owners whose title to immunity was uncertain to establish proof themselves (Capra, 1987: p. 111). However, these initiatives remained limited until the appointment of the Genoese Gianluca Pallavicini, first as a military governor of Lombardy and then as a minister plenipotentiary in 1745, gave fresh impetus to this policy of reform against local opposition. The introduction of a land register featured prominently in the plan sent to Vienna in 1749, which proposed establishing "fair and useful rules for the Police, Commerce and Finance".¹⁵ Pallavicini also called on the Tuscan jurist Pompeo Neri to chair the newly created board (*Giunta del censimento*).

A brief report sent to Pallavicini at the end of December 1749 listed the points to be dealt with and set out a programme for the *Giunta*. With regard to the surveying of the territory, only marginal corrections remained to be made, particularly in areas of relief or on the borders. Similarly, the valuation of agricultural land, particularly of plots deemed exempt, was now considered complete, unlike the topographical description of the buildings (*beni di seconda stazione*) and the registration of their owners, which needed to be completely redone.¹⁶ Pompeo Neri's *Relazione*, published in 1750, continued to stress the need to avoid omissions on the sole grounds that the property belonged to powerful or important owners, errors in valuation because they were based on the average sale price over two years, unequal distribution

11 "Terminatasi la Stima de' Terreni...", "Disposizioni della R. Giunta per la presentazione dei ricorsi contro la stima" (30 September 1726), Gridario relativo al censo, AO. II 2 (Zaninelli, 1963: p. 141).

12 "Consulta della Giunta del Censimento fatta a SM con una esatta e distinta informazione di quanto sin allora fatto e di quanto in appunto di doveva fare condurre a fine l'opera del censimento" (23 December 1726), Lombardei 37 Einführung eines neuen Censimento generale (1714-31), Haus-Hof- und Staatsarchiv (HHSTA), Vienna.

13 "Confini, aggregazioni e segregazioni. Consulta della Giunta del Censimento de 28 marzo 1733 sopra le aggregazioni i Reunioni dei Comuni", FHKA SUS Ital.A. 083, Confini, aggregazioni e segregazioni, trasporti delli partite di Estimo da possessore in possessore (Fasz. K.V), 1750-1781, Österreichisches Staatsarchiv (ÖSTA), Vienna, f. 245-289 (Neri, 1750: pp. 109-126).

14 "Petizione a S.S.C.R.M. della città di Cremona", Lombardei Korrespondenz 42 Correspondence between Aguirre Villator and Daun, HHSTA, f. 271. (Capra, 1987: pp. 110-111).

15 Archivio Pallavicini, III, 30.

16 Archivio Pallavicini, III, 31, Archivio di Stato, Bologna.

of the tax due to the intervention of the provincial authorities or payment in the owner's community of residence, where taxation favoured owners, particularly in the cities.¹⁷ From now on, tax apportionment should be based exclusively on the communities' geometric maps and valuation of all their plots of land.

The collection of edicts, orders and instructions relating to the introduction of the land register, published in 1760, provides the best overview of how the reform was carried out by the second *Giunta*.¹⁸ At the end of 1750, each community received from a *cancelliere delegato*, a position created ad hoc, a reduced map and the corresponding *sommario* (register), as well as a 45-point questionnaire to update the legal status of property, estimate the amount of personal tax and how it was set, find out the proceeds of the *entrati patrimoniali* (rights of use), and find out how much the debts and, finally, the tax of each community amounted to. At the same time, between 1750 and 1753, the *Giunta* worked to establish an urban land register by solving the problem of estimating property values based on actual or estimated rents according to each very street, regardless of whether the owner lived there or not and regardless of its condition. As with properties in the countryside, each house was visited, parish by parish, street by street, then given a number and its plot measured, while the dissociation between ownership and use (dissociation of usufruct and ownership or *livelli*, long leases) was taken into account (Cogné, 2006; Mazzucchelli, 1987). Finally, religious properties were listed but no estimated value was provided.¹⁹

At the end of the valuation process, even though the entire territory of the Stato di Milano had been surveyed, three problems remained, particularly in the city: that of property transfers (*trasporti d'estimo*) and updating the land register (Cogné, 2006: pp. 465, 470). that of taking into account economic activities, which remained ad hoc, limited to landing docks, warehouses and mills, excluding, for instance, dyeing factories (Cogné, 2006, p. 469) and that of distribution between *pieve*, which would require the aggrega-

tion of certain communities or even between cities, as between Milan and Cremona or Como. Despite these imperfections and uncertainties, the *Sentenza d'estimo* was published in February 1758 and the land register came into force on 1st January 1760.²⁰

From the Milanese boards to the communities, many players, often unwillingly involved in the reform process, changed both the way the territory of the Stato di Milano was understood and the territory itself, as with the rectification of the border brought about by the Treaty of Aix-la-Chapelle (1748). Pompeo Neri evokes the immense documentation that superimposes community and individual reports, office reports and the voluminous memoirs of the *R. Giunta*. A landscape was captured as a taxable territory, distinguishing surfaces and goods to be taxed from hedges, coppices and uncertain riverbanks. Buildings and other sources of income, starting with chestnut trees and other productive trees, were entered in the community land register. The work did not end with this very capture of the landscape, but continued with the many reforms that profoundly assorted the administrative methods through the Stato di Milano and between its provinces (Neri, 1750: p. 351).

WHY NEW MAPS?

In his comparative history of European tax systems, the intendant of finance Moreau de Beaumont highlights the map and its plans: "The basis of this operation was a figurative and topographical plan drawn for the entire territory of Milan; this plan includes every inheritance, every hedge, every canal, represented in their natural state" (Moreau de Beaumont, 1787: p. 281). However, this technical choice was strongly criticised by the envoy of the Spanish Supreme Council, Councillor Francesco Perlongo, who considered the production of new maps by the State to be superfluous and costly.²¹ In fact, the decision to carry out a general survey at new cost broke with the previous cartographic material, terriers and estimates, on which *a contrario* the Duke of Savoy had begun to base the new cadastre of his States.²² Should this be attributed

17 Neri, 1750: pp. 19-25, 31, 97-102 for the 17 maxims of the reform.

18 (1760). Raccolta degli editti, ordini, istruzioni, riforme, e lettere circolari istruttive della R. Giunta del Censimento generale dello Stato di Milano, riunita con cesareo r. l. 6e dispaccio de 19 lug^o 1749 e sciolta li 2 marzo 1758. Milan: Giuseppe Ricchino Malatesta Stampatore, 23-26. Presentation of the work of the second Giunta based on the Relazione and the Raccolta in Capra, 1987 and in Capra & Galli, 2001: pp. 55-81.

19 A concordat was signed with the Church, which retained its tax immunity: Taccolini, 1998.

20 Raccolta..., 321-324.

21 "Ricopiate da tanti ufficiali con tante spese", "Annotacion sobre las cinco cartas del regente conte perlongo en fecha de 5, 8, 12, 14, 15 del Marzo corriente de 1727 y de otras dos de 19 y 22 del mismo Marzo y otra del 29 del mismo", Lombardei Collectanea 37, HHSTA.

22 The edict of 25 February 1701 ordered cadastres to be drawn up for all parishes that did not have any or that had any that were too old.

exclusively to the absolutism, when the perfectly contemporary revision of the land register in the Archduchy of Austria did not include any specific cartographic material (Hackl, 1997: p. 25). The production of geometric maps therefore needs to be viewed in the light of the development of cartography during the first half of the 18th century, between legal tradition and new uses in cabinet warfare.²³

In fact, two traditions that had neither the same relationship with mathematics nor the same notion of accuracy - calculative geometry and topographical expertise - began to interact.²⁴ On the initiative of Prince Eugène, an illustrious warlord, Giovanni Jacopo Marinoni, deputy director of the new school of military engineers that he himself had created, stayed in Milan in 1719-1720.²⁵ Not only did he advocate the use of the (praetorian) plane-table, in preference to the chain,²⁶ but he also insisted on the need to survey each parcel uniformly, i.e. with the same unit, but also with its contours, as well as the paths, ditches, streams, banks and type of cultivation, and advocated drawing up a plan on the ground, "au naturel" to use Moreau de Beaumont's words, i.e. as nature had made it.²⁷ The whole procedure was intended to make double-checked measures unnecessary, much to the displeasure of the city of Milan and the State Congregation. Several tests were carried out with a team of engineers and surveyors on various types of terrain. Although successful, these trials aroused the hostility

of the communities and the jealousy of the local surveyors. As late as 1727, commissioner Perlongo cast doubt on the quality of the surveyors: out of 155, only 10 belonged to the *Collegio degli agrimensori* in Milan and 9 to the body of engineers and architects, the others not knowing how to use the tablet (Zaninelli, 1963: p. 81). Membership of the college was not required to carry out the measurements ordered by the *Giunta*, which provided its agents with ad hoc instructions. In 1750, P. Neri criticised the practice of double-checked measures as a useless sign of procrastination, confirming not so much the rejection of the goniometric method as the persistence of resistance to the tax reform imposed from above (Neri, 1750: p. 106).

A total of 2,387 geometric and parcel maps were produced from plans drawn up *in situ*, then copied and reduced to a scale of 1:2000. Each parcel is identified by a number in black ink and its area, calculated in Milanese *pertice*, is shown on the community map in red ink. The play of colours makes it possible to distinguish the use of the land (*squadra*), while the production sites are represented in pink and the contours of the community's territory are outlined in yellow.²⁸ There are few ornaments to add to an already rich representation: an ornate cartouche with the name of the community, a compass rose and a representation of the Milanese *trabucco* scale. The reports of the two boards never mention the choice of colours or the different methods of representation. This topographical language therefore seems to be shared (Dainville, 1964).

In fact, map reading is destined to play an essential role. Based on the reference map, the only copy kept at the Censorial Office and intended to remain available for consultation at all times, a "reduced" 1:8000 scale map was drawn up using the same representation criteria but on a smaller scale, then copied in two copies, one of which was bound into volumes of 30 maps and the other sent to the community concerned.²⁹ Whether on a large or small scale, all the maps were entered in a

23 Rich insights into the uses of maps in Italian states in the modern era: (1986). *Cartografia e istituzioni in età moderna*, Atti del convegno. Genova, Nella sede della Società Ligure di Storia Patria, 1987. For a broader chronology, see Jacob, 1992.

24 For the importance of Philippe de La Hire's manual, *L'école des arpenteurs ou l'on enseigne toutes les pratiques de géométrie qui sont nécessaires à un arpenteur. On y a ajouté un abrégé du Nivellement avec les propriétés des eaux, & les manières de jauger ou mesurer*, Paris, Thomas Moette, 1692, 2nd edition. See Verdier, 2015, chapter "Cartier les terriers", and Binois & Pansini, 2022.

25 Born in Udine in 1676 and died in Vienna in 1755, Giovanni Jacopo Marinoni was appointed court mathematician by Emperor Leopold I in 1703 (Gatti, 1901: pp. 60-90).

26 The Praetorian plane-table consists of a wooden table supported on a rider by means of a removable attachment. The operator deploys the minute on the table and traces his readings directly using a compass and a mobile alidade fitted with two sights for drawing lines and angles. Developed towards the end of the 16th century by the Bohemian mathematician and astronomer Johannes Richter, also known as Prætorius, it came into widespread use in Europe during the 17th century.

27 (1740). Article "naturel". *Dictionnaire... II*, 179.

28 "Premessa questa notizia il Modello segnato col n° 1 è l'idea di una Mappa Territoriale, ove apparisce distintamente la figura, situazione e separazione di un Pezzo di Terra dall'altro non solo secondo i diversi Possessi (Istruzioni 10 Ottobre 1720) ma anche secondo le diverse qualità e classi di bontà, chiamate squadre, come di dimostra coll linee disegnate nella figura della mappa nelle quale restano distinte con Numero progressivo le figure d'ogni Pezzo", "Formulario della Scrittura del Nuovo Estimo di tutto lo Stato di Milano", Cod. Ser. N. 12436, ÖNB.

29 Milanese trabucco: 6 feet (1 foot: 0.435185 metres). For a model of a reduced map, <https://movio.cultura.gov.it/asmilpaesaggiolombardo/en/30/cassano-d-adda>.

register (*sommario*) containing the name of the owner, the type of crop and the quality of the product for each plot. The French envoy gives a precise list of the maps and accompanying practical writings that he obtained for the communities in the Stato di Milano that had come under the domination of the Kingdom of Sardinia: "The count of Pralorme handed over the map of the perimeter of a community, drawn in Indian ink, a plan as it stands on the ground, the same plan washed,³⁰ a map in sheets bound together, containing the figurative drawing of all the rooms and land contained in the general plan, the control book kept by the surveyor's assistant, another book containing the survey and report of on its the parts, another containing the land register, another containing the transport book, all bound in gilt calf on the edge and bearing the arms of the King of Sardinia, another bound notebook containing all the calculations made as a result, making six volumes in folio".³¹ Several old and new uses for maps coexist here. Maps had long been used to settle disputes, but when ordered and brought in by private individuals, they were only valid for the duration of a lawsuit.³² The maps issued by the Censorial Office still make it possible to see at a glance and to provide proof from a distance. But there are several new features. The effect of the maps was redoubled by the assembly of registers and volumes of 30 maps, which made it possible to grasp a larger area. Maps and registers in concert are still the prerequisites for a long list of documents produced during the implementation of the reform, which the communities must keep.³³ Finally, accuracy and certainty must be ensured over the long term thanks to

the "transport book", which must record all changes in ownership or use. The administration imposed a method and ruled out countermeasures, obliging the communities by making them custodians of the evidence.

The *pieve* (parishes) that make up the Stato di Milano were thus completely mapped and duly informed of the results by the envoys of Neri *Giunta*.³⁴ But managing to measure all the parcels in the Stato di Milano did not necessarily mean that a "topographical map of the entire territory of Milan" had been produced, as Moreau de Beaumont claimed. The surveyors used the tablet to quickly obtain a chain of triangles, which then served as the basis for the maps. For small areas of about a few square kilometres, the inaccuracy of this method was no concern. But on the scale of a province, tracing the angles directly on the paper with a coarse pencil instead of measuring them introduced an initial approximation. By successively drawing other triangles from this initial line, the cartographer amplified his errors and distorted his map.³⁵ Instead, the maps were placed end-to-end to represent the Stato di Milano.³⁶ The geometric capture of the territory remained an undertaking carried out by the Neri *Giunta* and recorded in the Bureau of Censiment: the administrator's space here remained the territory of the taxed owner.³⁷

The decision to send each community a copy of its "reduced" map bears witness not only to the technical prowess involved, but also to the difficulty of accepting the undertaking, which profoundly altered relations between the communities and the administration through the map. Most of the first copies distributed from 1723 onwards were lost in the 1750s.³⁸

30 Created assuming the site is illuminated at 45° vertically and horizontally (rendering).

31 "Journal de la route et du travail de Mr. Harvoine", 15 October 1763, 156 MI 72, d. 2, Documents concernant la mission confiée en 1763 à M. Harvoine, receveur général des finances d'Alençon, pour aller étudier les cadastres établis en divers Etats d'Italie", 2, n. 28, Archives nationales (A.N.), Paris.

32 For the legal use of the map by private individuals, Barbot, 2012.

33 "La scrittura delle nuove Tavole deve esser fondata nei Documenti enunciati nel frontispizio di esse, che sono la Mappa, il sommario antico con sue duplicate revisioni, le stime pubblicate per Editto del 30. 7bre 1726, e sua successiva revisione a forma della Relazione del di 22. Genn 1732, le nuove Intestazioni dei Terreni modernamente fatte a tenore dell'Istruzioni del di 20. Aprile e 9. 8bre 1751e la nuova intestazione descrizione e stima delle case eseguita similmente l'anno passato a forma dell'istruzioni del di 13 Agosto 1751", FHKA SUS Ital.A. 82 Istruzione al collegio dei Periti sopra il modo di compilarla la relazione da presentarsi alla giunta nell'atto di accompagnare e proporre la tavola del nuovo estimo di chiascheduna Comunità, ÖSTA, f. 352-356. (Theis, 2020).

34 Figures given by Neri, 1750.

35 La Hire gives a clear account of the difficulties encountered in triangulation to produce large-scale maps. (De La Hire, 1692: pp. 154-156 and 177).

36 "Essendosi formata una Mappa per ogni Territorio, dalla quale poi si son fatta la Mappa d'ogni provincia e son queste la Carta topografica dello Stato, il quale: esclusa la porzione smembrata nella ultime Cessioni, e risultato di Pertiche quadrate 11, 385,121 che sequivalgono a Miglia Italiane quadrate 2338 $\frac{3}{4}$, non compe sa pero la superficie de' Laghi, Fiumi e Torrenti", Formulario..., ÖNB.

37 In 1721, for example, the Magistrato camerale, which manages the duchy's finances, commissioned a different type of map to combat smuggling: <https://movio.cultura.gov.it/asmi/ilpaesaggiolombardo/en/29/lo-stato-di-milano-e-i-suoi-confini>. For the relationship between cadastres and landowners. See Barbero, 2003.

38 Neri, 1750: p. 353. 1750 24 Aprile "Consulta della Giunta del Censimento sopra un ordine circolare da spedirsi per la Rassegna e Revista di tutte le Mappe consegnate alle Comunità", FHKA SUS Ital.A. 81, ÖSTA, f. 38-41.

War, but also carelessness and the desire to erase all traces of esteem can be rightly invoked. The search for simpler, more streamlined principles and the hope of having an immutable land register were not as commonly shared goals as the Milanese *Giunta* would have wished. For this reason, it entitled itself to choose its interlocutors by requiring each community to appoint a delegated registrar, whom it then engaged to organise an “information ceremony” to take the community as witness and make it aware of the evidence put on the map.³⁹

Augustin Berque analysed the effects of the arrival in the human sciences of a geometrised space and, at the same time, its limits. The map of plots as an artefact is more an expression of a conception of the world than a literal transposition of a landscape (Chassagnette, 2018). Resisting to the introduction of *censimento*, whether actively or passively, was carefully recorded by the administration, whether in the form of petitions, disputes over use (of riverbanks, for example) or certificates stating that documents were missing, all in their own way form a ‘non-Aristotelian’ landscape that could also be mapped (Quesnot, 2021: p. 6).

THE EYE OF THE EMPEROR

Historians of absolutism interpret the introduction of the land register as the victory of centrality and uniformity over local particularities, while specialists in imperial history emphasise the need for maps in order to appropriate the territory (Mozzarelli, 1982, Schiera, 1983, Romani, 1959, Capra, 1979). From both perspectives, the Viennese court should play a leading role. But we still need to understand how and what that role should be. In the case of hereditary states, the central state did not intervene in the seigneuries (Hackl, 1997).

In fact, scale and duration of the implementation of this reform challenged the administration not only to manage its own repository, but also to maintain the course of its action. Communication with Vienna not only highlights the dual location and the need to sort the documentation, but also provides an insight into the *modus operandi* of the various levels upstream of

the production of the edicts.⁴⁰ Commissioner Perlongo points to the supposed lack of diligence on the part of the *R. Giunta*.⁴¹ On the contrary, the Viennese archives document the regularity with which supporting documents were sent as annexes to correspondence with the minister plenipotentiary, a practice that was significantly reinforced from 1750 onwards.

The action of the Court of Vienna, and more specifically the Council of War, was decisive in the choice of men to drive forward this reform. The desire to break with the past was made public with the publication of the Pras project, followed by Neri’s *Relazione*, which coincided with the installation of the two boards. Prince Eugene was the addressee of the Pras project, which led to the creation of the *R. Giunta*, which replaced the *Giunta dei cinque giudici delegati* created in 1599 to deal with the distribution of taxes (Capra, 1987: p. 66). Governor Gianluca Pallavicini took the decision, against the author’s advice, to print fifty copies of what was only Pompeo Neri’s first report, demonstrating above all the restoration of order to the archives and the ability to retake the initiative.⁴² In Vienna, Prince Eugène and Gianluca Pallavicini clashed with the Spanish Supreme Council, made up of Catalans who had followed Charles VI from Barcelona: Perlongo’s dispatch was undoubtedly the last show of force against Milan’s land registry project, even though the Council was only sparingly informed of the ongoing reform.⁴³

We need to look again at the composition of these boards, which, in accordance with the custom of the Habsburg sovereigns in Italy, were made up of expatriate Italians who did not come from the ranks of the local aristocrats or patricians. Indeed, Vincenzo Mirò, before taking over as director of the *R. Giunta*, was regent of the collateral council of Naples. Like Cavalieri, who succeeded him in 1731, he was a prominent representative of the supporters of the State and the Viceroy against the Church and the *baronaggio*. He was succeeded by Francesco d’Aguirre, a Sicilian who had en-

39 "Tale Pubblicazioni dovra farsi in un convocato generale di tutti i Possessori attuali del Terreno descritti o non descritti", "Riflessioni del Presidente del Censimento sopra il metodo di approvare e pubblicare le Tavole degli Estimi Comunali, che contiene il Piano dei Lavori dell'anno futuro", 29 agosto 1752 and "Istruzione ai Cancellieri Delegati della Giunta del Censimento per la pubblicazione delle Tavole del nuovo estimio in ciascheduna Comunità", FHKA SUS Ital.A. 82, ÖSTA, f. 245-248. (Fogel, 1989).

40 The materials relating to the Milanese land register are kept in Vienna in the archives of the Council of Spain, then the Department of Italy, the body responsible for managing Italian possessions. A dummy collection was also created in the archives of the Austrian Chamber of Finance and partly duplicated for the emperor's cabinet.

41 "Rismeno delle Giunte tenute dalli quanto febb. 1719 a tutti li 21 feb. 1727", *Lombardei Collectanea* 37, HHSTA.

42 "6 luglio 1750 al Sign Conte Cristiani Gran cancelliere in ordine ad una stampa nella materia del censimento", *Archivio Pallavicini III* 31, Bologna.

43 Only two relations for 1724-1725 and 1726 precede Perlongo's consignment, *Lombardei Collectanea* 37, HHSTA.

tered the service of King Victor Amédée of Savoy during the short-lived Sardinian domination of Sicily. Aguirre, who in the 1720s reformed higher education in Turin by reducing the role of the Jesuits, moved to the service of Charles VI when the King of Sardinia signed a concordat with the Pope (1729). In 1730, the same Aguirre was commissioned to reply to the *Dissertatio historico-legalis de capitatione rusticane plebis* written by Gabrielle Verri at the request of the Milanese patriciate (Capra, 1987: pp. 76-18). Pompeo Neri, who headed the second *Giunta*, was an eminent jurisconsult who had distinguished himself in the service of the Grand Duke of Tuscany by preparing a penal and civil code for Tuscany (Fratojanni & Verga, 1988). To get a clearer picture, it would be necessary to take a closer look at the college of experts, at least three of whom remained engineers under both boards, and even maintained family relations with the engineers of the Viennese School.⁴⁴

The initial dissemination of political economy through Vauban's *Royal Tithe* and legal enlightenment, embodied by Pietro Giannone and Lodovico Muratori, encouraged the development of common principles of government in the Habsburg administration between Milan and Vienna. But between distributive justice, which gives to each according to his rank, and uniformity, which imposes taxes on each according to his abilities, it is rather the principle of commutative justice that runs through relations and unites the two boards (Levi, 2003; Barbot, 2019). When Gianluca Pallavicini asserted that "the censimento that should remove the inequality that exists in the payment of contributions", he was first and foremost looking at the duchy as a whole.⁴⁵ The memorandum of 7 October 1730, which insists on the need for equality between the different parts of the kingdom before starting to apportion burdens individually, is also reproduced in Pompeo Neri's *Relazione*.⁴⁶ There was also an equalisation office alongside the censiment(o) or census office.

These principles were accepted in Vienna rather than being imposed from above. Pallavicini recalls in the same plan that "the censimento is a work already prepared: it is enough to know how to take advantage of the work that has been done and that has cost the State several million, that it has asked for it with eagerness because it

has known that it is a resource that can alleviate its misery: If enlightened and honest people are chosen, this work will prosper", while Beltrame Cristiani, the penultimate governor of Milan in charge of the land registry, stated that "non è materia di inquisizione, non interessa il Principe, ma li soli pubblici per l'eguaglianza fra loro".⁴⁷

However, the work carried out over the course of the project has enabled us to gather an impressive amount of data on the distribution and nature of settlements, cultivation choices, sources of agricultural or property income, productive tools, income from goods in use, as well as to better identify communities and their owners, to distinguish between town and country, and to assess the finances of the communities.⁴⁸ These data were quickly converted into a "summary" of the State, like an art reduction of the Stato di Milano. The bird's-eye view and the pedestrian's point of view are combined here to equalise the territory, but, passed on from minister plenipotentiary to minister plenipotentiary, these summaries show the "self-interested image" of the Milanese government.⁴⁹

In fact, we need to look more closely at the documentation preserved in Vienna in order to approach the Viennese "interested map" beyond its purely political objectives, to increase the resources of the Stato di Milano and control its elites, who occupy the instructions and correspondence. From 1750 onwards, the imperial gaze focused primarily on the territory, its boundaries and special features (relief, rivers, common areas exempt from taxation, such as roads and canals), all points and places that primarily concerned sovereignty.⁵⁰ Although

44 Giovanni Filippini and Pietro A. Filippini, vice-director of the Viennese School.

45 "Plan for Italy as presented in Vienna on 20 Oct 1748", Archivio Pallavicini, Bologna.

46 Articoli estratti dall' ultima Consulta fatta dalla Giunta del Censimento a S.M.C.C. sopra la Tassa, o la Coletta personale sotto 7 ottobre 1730. (Neri, 1750: pp. 215-228).

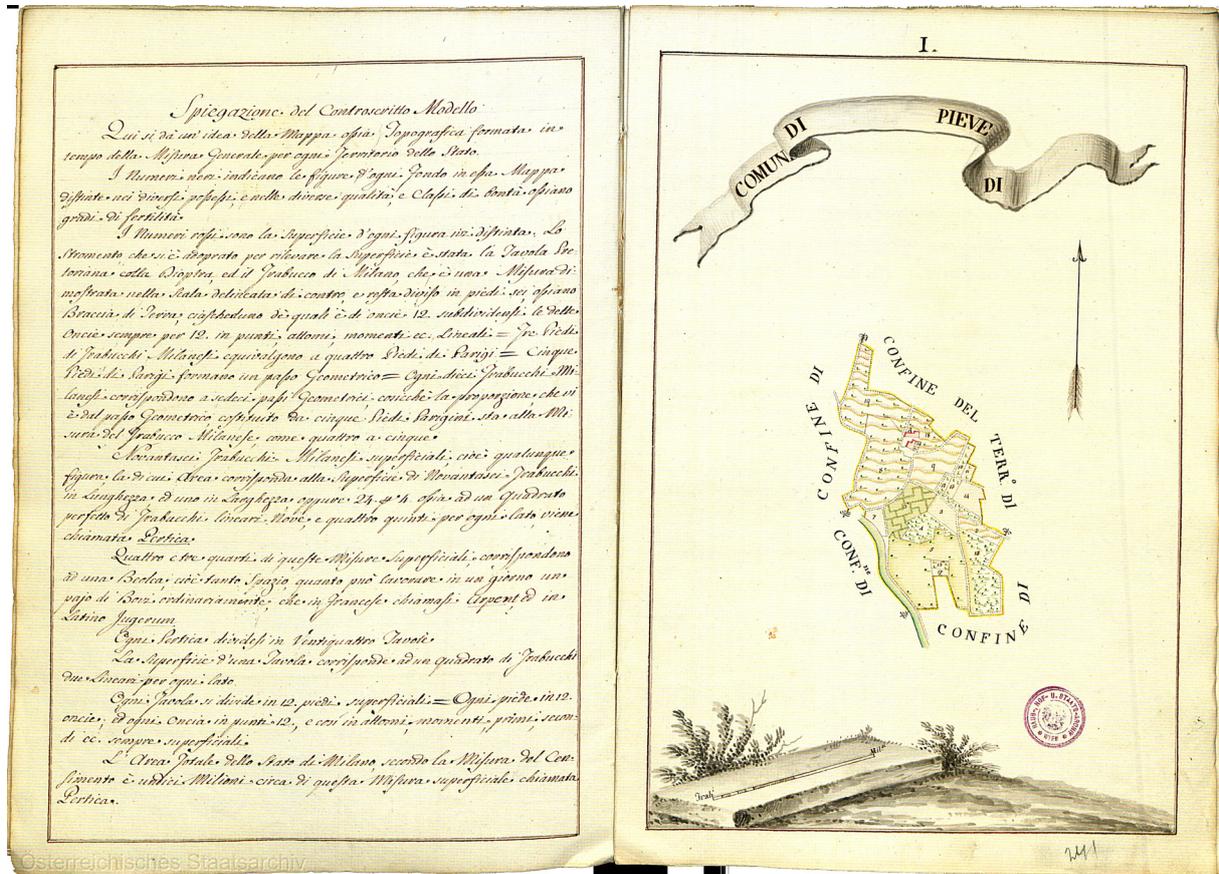
47 "Così in appuntamenti della Congegazione del 5 febbraio 1752", Dicasteri f. 315, Archivio Civico, Milan, quoted by Mozzarelli, 1982: p. 58. Beltame Cristiani (1702-1758) of obscure origin began his career as a quaestor in the duchy of Parma and Piacenza, became provisional administrator of Modena in 1742 and entered the service of the Emperor.

48 "1750 24 Aprile Consulta della Giunta del Censimento sopra i mezzi di riunite diverse notizie locali di fatto necessarie all'esecuzione del censimento", FHKA SUS Ital.A. 81, ÖSTA, f. 14-19.

49 "Bilanztabellen der Real Giunta del Censimento (1750-1758)", Morzone Giacomo (author), Fideikommissbibliothek, Österreichische Nationalbibliothek (ÖNB), Vienna. This document, part of the Milanese papers of the plenipotentiary ministers, did not return to Vienna until the death of Johann Joseph Wilczek in 1819.

50 Important file on the course of the Adda and Ticino rivers, which form the boundary with Parma and Piacenza, HS 81. On the reliefs, "Relazione Diaria della visita nei Luoghi Montuosi di questo stato di Milano fatta del giorno 30. Giugno al 5. Agosto 1752 d'Ordine della Real Giunta dall' Ingeg Direct Giuseppe Antonio Castelli", FHKA SUS Ital.A. 87, ÖSTA, f. 11-49.

FIGURE 1
 MODELLI O SIANO ESEMPLARI DI COME NEI DIVERSI CASI ENUNCIATI NELLE INSTRUZIONI GENERALI DEVONO FORMARSI LE INTESTAZIONI



Fuente: Italien Spanischer Rat, Lombardei Collectanea 1731-83, 38, f. 241, Haus-Hof und Staatsarchiv, Vienna.

the cartographic reductions, drawn up in Milan to be transported to the communities, were not transmitted to Vienna, the Viennese archives bear witness to a particularly strong desire to have the tools of reform available in the form of models, as if it were not a question of taking in the territory at a glance but of inventing the means to achieve this.⁵¹ Thus, when the French envoy was instructed to "take information and documents, as well as models and copies of documents that can be used to carry out the proposed object"⁵² or when Joseph

II received the "form" for the land register during his visit to Milan (figure 1).⁵³ These were not *ad hoc* gifts, but a well-established practice in communication between Milan and Vienna, which took on a new usefulness when it came to introducing a land register in France or in the new kingdom of Galicia resulting from the partition of Poland.⁵⁴

The Teresian cadastre, initially studied from a legal and administrative point of view as a successful reform in its Milanese context, also fed studies on social hierarchies in the countryside and the city. While the land register

51 "Esemplari delle Mappe e Summarioni pubblicati a Agosto 1724 e consegnati a Rappresentanti della Città e contado di Como", Lombardei Collectanea, 37, HHSTA.

52 "Objets sur l'établissement du Censimento en France que l'on prend la liberté de proposer à son excellence M. le président Nery et sur lesquels il est très humblement supplié de dire son sentiment et de donner ses decisions", Cod 14 129, ÖNB, f. 2-105, f. 20.

53 "Formulario della Scrittura del Nuovo Estimo di tutto lo Stato di Milano", Cod. Ser. N. 12436, ÖNB. Also "Modelli o siano esemplari di come nei diversi casi enunciati nelle Istruzioni generali devono formarsi le intestazioni", Lombardei Collectanea 38, HHSTA.

54 "Modello di mappa per facilitare l'intelligenza della soprascritta formola di Relazione", FHKA SUS Ital.A. 87, ÖSTA, f. 412.

seemed set to establish a landscape ‘au naturel’ on a map, the discussions held in committee on the esteem in which it was held, the circulation of relations between offices and the resulting sifting of information brought to light different territorial logics, several ‘interested images’. Like the plan, sometimes surveyed and sometimes washed, which became a map, the representations were the product of three ways of seeing: that of the engineers and foot messengers (*pedoni*) who surveyed the communities and brought them instructions, that of the governors who saw the territory from a bird’s eye view and, finally, that of the imperial administrators who looked for useful “little tools” in other countries of the Monarchy. But the maps and the way they are written also bring these three scales together, and ultimately reveal an imperial dynamic, a negotiated and shared project of commutative justice.

BIBLIOGRAPHY

- Agnoletto, S. (2000). *Lo stato di Milano al principio del Settecento. Finanza pubblica, sistema fiscale e interessi sociali*, Milan: Franco Angeli.
- Antoine, A. & Landais, B. (Eds.). *Cartographier le parcellaire rural dans l’Europe d’Ancien Régime*. Rennes: Presses Universitaires de Rennes, in press.
- Barbero, D. (2003). *Représentation cartographique d’une image vécue: la cadastre sarde, essai de géographie historique*. Lyon: Thèse de doctorat Université Jean Moulin Lyon III.
- Barbot, M. (2012). “Uncertainty or plurality? Les conflits sur les droits fonciers et immobiliers dans la Lombardie d’Ancien Régime». Dubouloz J. & Ingold A. (eds). (2012). *Faire la preuve des droits sur le sol. Une approche sur la longue durée*, Rome: École Française de Rome, 275-301.
- Barbot, M. (2019). «De l’*Aequitas* à la *Fairness*. Taxation, droit et justice au prisme de deux mesures de fiscalité directe (Italie, XVIe-XVIIe et XXIe siècles)». Albe V., Commaille J., Le Bot F. (Eds). *L’échelle des régulations politiques XVIIIe-XXIe siècles. L’histoire et les sciences sociales aux prises avec les normes, les acteurs et les institutions*. Lille: Presses du Septentrion, 47-58.
- Berengo, M. (1970). “A proposito di proprietà fondata”. *Rivista storica italiana*, LXXXII (1), 121-147.
- Berque, A. (2016). «Perception de l’espace ou milieu perceptif?». *L’espace géographique*. 2, 45, 168-181.
- Binois G. & Pansini, P. (2022). «Les pratiques mathématiques dans l’évolution de la topographie militaire française, 1744-1791». *Cahiers François Viète III-13 Les mathématiques professionnelles (XVI e -XIX e siècle)*, 83-110.
- Camarero Bullón, C. (Ed.). (2002). *El Catastro de Ensenada. Magna averiguación fiscal para alivio de los Vasallos y mejor conocimiento de los Reinos 1749-1756*. Madrid: Ministerio de Hacienda.
- Capra C. (1979). “Riforme finanziarie e mutamenti istituzionali nello Stato di Milano: gli anni Sessanta del secolo XVIII”, *Rivista storica italiana*, n° 2-3, pp. 313-368.
- Capra, C. (1987). *La Lombardia austriaca nell’età delle Riforme (1706-1796)*. Turin: UTET Libreria, 110-111.
- Capra, C. & Galli, G. (2001). “The 18th Century Land Register in the State of Milan”. *Jahrbuch für europäische Verwaltungsgeschichte*, 13, 55-81.
- Caron, C. & Roche, S. (2001). „Towards a typology of spatial representations“. *L’Espace géographique*, 1, 30, 1-12.
- Cartografia e istituzioni in età moderna*, Atti del convegno. Genova: Nella sede della Società Ligure di Storia Patria, 1987.
- Chassagnette, A. (2018). «Cartographie en Europe: la science du territoire». C. Charle & D. Roche (Eds.). *L’Europe. Encyclopédie historique*. Arles: Actes Sud, 1408-1411.
- Cogné, A. (2006). «Le cadastre de Lombardie (1758): une source pour l’histoire urbaine. La réalisation d’un système d’information géographique pour la ville de Milan». *Città e Storia*, 2, 457-478.
- Cogné, A. (2017). *Les propriétés urbaines du patriciat (Milan, XVII -XVIIIe siècle)*. Rome: École française de Rome.
- Dainville, F. de (1964). *Le langage des géographes*. Paris: Picard.
- De La Hire, Ph. de (1692). *L’école des arpenteurs ou l’on enseigne toutes les pratiques de géométrie qui sont nécessaires à un arpenteur. On y a ajouté un abrégé du Nivellement avec les propriétés des eaux, & les manières de jauger ou mesurer*. Paris: Thomas Moette (2nde édition).
- Della Valle, G. (Ed.). (2015). *L’immagine ritrovata: il catasto teresiano e Crenna (1718-1760)*. Gallarate: Prodiggi.
- Dictionnaire de l’Académie française (1740)*. Paris: Jean-Baptiste Coignard, 3rd edition.

- Fogel, M. (1989). *Les cérémonies de l'information dans la France du XVIe au XVIIIe siècle*. Paris: Fayard.
- Fratoianni A. & Verga, M. (Eds.) (1988). *Pompeo Neri. Atti del colloquio di studi di Castelfiorentino (6-7 maggio 1988)*. Castelfiorentino: Società Storica della Valdelsa.
- Gatti, F. (1901). *Geschichte der K.K. Ingenieur und K.K. Genie Akademie 1717-1869*. Vienna: W. Braumüller, 60-90.
- Hackl, B. (1997). *Die Theresianische Dominikal- und Rustikalfassung in Nierderösterreich 1748-1756*, Frankfurt am Main: Peter Lang.
- Jacob, Chr. (1992). *L'empire des cartes: Approche théorique de la cartographie à travers l'histoire*. Paris: Albin Michel.
- Le istituzioni storiche del territorio lombardo XIV-XIX secolo* (200). Milano: Regione Lombardia, 2000
- Lebeau, C. (2014). «Vers la construction d'une science administrative au XVIIIe siècle. L'exemple du cadastre de Milan». P. L. Porta & R. Scazzieri (Eds.). (2014). *L'illuminismo delle riforme civili: il contributo degli economisti lombardi*. Milan: Istituto Lombardo di scienze e lettere, pp. 107-136.
- Levi, G. (2003). "Aequitas vs fairness. Reciprocità ed equità fra età moderna ed età contemporanea". *Rivista di storia economica*. 3, pp. 195-204.
- Liva, G., Savoja, M. & Signori, M. (Eds.). (1984). *L'immagine interessata: territorio e cartografia in Lombardia tra 500 e 80*. Milan: Archivio di Stato.
- Locatelli, A. M. & Tedeschi, P. (2012). «Entre réforme fiscale et développement économique: les cadastres en Lombardie aux XVIIIe et XIXe siècles». B. Bourillon, N. Vivier (Eds.). *La mesure cadastrale. Estimer la valeur du foncier*. Rennes: Presses universitaires de Rennes. 19-41.
- Mazzucchelli, V. (1987). *Catasto e volto urbano: Milano alla meta del Settecento*. Rome: Alpha Print.
- Mirri, M. (1964), review of Zangheri, R., *La proprietà fondiaria...*, *Critica storica*, III, 650-660.
- Moreau de Beaumont, J.-L. (1787). *Mémoires concernant les impositions et droits*. Paris: Desaint.
- Mozzarelli, C. (1982). *Sovrano, Società e Amministrazione locale nella Lombardia Teresiana (1749-1758)*. Bologna: il Mulino.
- Neri, P. (1750). *Relazione dello stato in cui si trova l'opera del censimento universale del Ducato di Milano nel mese di maggio dell'Anno 1750*. Milano: Giuseppe Richino Malatesta Stampatore Regio Camerale.
- Pugliese, S. (1924). *Condizioni economiche e finanziarie della Lombardia nella prima metà del secolo XVIII*, Miscellanea di storia italiana 21, Turin: Fratelli Bocca, p. 270-294.
- Quesnot, T. (2021). "Impact of Social Interactions on the Acquisition of Spatial Knowledge". Cahier "Cognition and Action in a Plurality of Spaces". *Cognitive Processing. International Quarterly of Cognitive Science*. 22, 3-67.
- Romani, M. (1959). *Gian Luca Pallavicini e le riforme economiche nello Stato di Milano*, Milan, 1959.
- Schiera, P. (1983). *La dinamica statale austriaca nel XVIII e XIX secolo*, Bologna: il Mulino.
- Taccolini, M. (1998). *L'esonazione oltre il catasto. Beni ecclesiastici e politica fiscale nello stato di Milano nell'età delle riforme*. Milan: Vita e pensiero.
- Theis, V. (2020). «Pratiques de l'écrit, pratiques de la carte. Rendre justice aux cartes médiévales et modernes» (critical note). *Annales Histoire Sciences sociales*, 75-2, 233-245.
- Touzery, M. (Ed.). (2007). *De l'estime au cadastre en Europe. L'époque moderne*. Paris: Comité pour l'histoire économique et financière de la France.
- Verdier, N. (2015). *La carte avant les géographes. L'avènement du régime cartographique en France au XVIIIe siècle*. Paris: Éditions de la Sorbonne, chapter «Carter les terriers».
- Vigo, G. (1990). "L'intollerabili et continui carichi (sistema tributario nella Lombardia spagnola)", *Rivista milanese di economia*, 3, 102-113.
- Zangheri, R. (1980). *Catasti e storia della proprietà terriera*. Turin: Einaudi.
- Zaninelli, S. (1960). "Un progetto d'un nuovo sistema di taglia da praticarsi nello Stato di Milano del 1709". *Archivio storico lombardo*, p. 537-583.
- Zaninelli, S. (1963). *Il nuovo censo dello Stato di Milano dall'edito del 1718 al 1733*. Milan: Vita e Pensiero.
- Zaninelli, S. (1986). *La proprietà fondiaria in Lombardia dal catasto teresiano all'età napoleonica*. Milan: Vita e pensiero.