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The Traditions of Geometrical Representation and the Rise of Local Mapmaking in the Pontifical City of Avignon (14th-15th Centuries)

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The history of cartography in the Rhône valley comprises a major corpus: the atlas of Vesconte and the map collection brought to Pope John XXII in Avignon by the Venetian patrician Marino Sanudo in 1321. The arrival of the Pope in Avignon at the beginning of the fourteenth century turned this Provence town into one of the main intellectual centers of Christianity.

Therefore, this place represents a very special field of study to observe the deep transformations that affected art and cartography during the fourteenth century which was not only a century of awakening of new cartographic models, but also of the awakening of landscapes in painting.¹

¹ The publication of this thesis is forthcoming from Brepols in the “Terrarum Orbis” series as *Le peintre et la carte. Origines et essor de la vue figurée entre la vallée du Rhône et les Alpes (XIV^e-XV^e siècles)* (Painters and Maps. Origins and rise of the views between the Rhône Valley and the Alps, 14th-15th centuries). A version of this paper was presented at the 2017 International Medieval Congress in Leeds and I would like to thank Paul Harvey, Sabrina Corbellini, Dan Terkla, Felicitas Schmieder and Margriet Hoogvliet for their feedback and Nathalie Saliou and Benoit Longagnani for proofreading it. I studied this question in the PhD thesis I defended in 2016 at the École pratique des hautes études (Paris) under the direction of Patrick Gautier Dalché: *Le peintre et la carte. Les représentations d’espaces locaux entre la vallée du Rhône et les Alpes à la fin du Moyen Âge* (Painters and Maps. The representations of local spaces between the Rhône Valley and the Alps at the end of the Middle Ages).

The territories of the popes near Avignon and the surrounding principalities (Dauphiné, Provence) along the Rhône valley form an area from which local cartography arose in a very noticeable manner during the fourteenth and fifteenth centuries.² The pontifical corpus in the Rhône valley, broadly diffused and shown in and around the city, had an important influence on the rise of the region's local cartography during this time.

The Local and Regional Map Corpus of Marino Sanudo and Paolino Veneto in Pontifical Avignon (1321-1322)

Marino Sanudo arrived in Avignon with his collection of maps in September 1321 and stayed there, not for six months as is frequently asserted, but for more than a year, from September 1321 to October 1322. Indeed, in a letter to Bishop Bertrand du Pouget, Sanudo wrote:

I stayed in the (pontifical) *curia* about XIII months upon request and petition of him (John XXII) ; and in this place I received favors and honors in a close proximity with him and with many cardinals of the *curia* and moreover with the Serene King of Sicily and Jerusalem (Robert of Anjou) who gave me many graces.³

The arrival of Marino Sanudo is described in the prologue of his treaty on the recovery of the Holy Land, the *Liber secretorum fidelium crucis*, written for the pope and for all Christian kings and lords planning a new crusade.⁴

² In this work, I studied sixteen representations or groups of representations of particular places or spaces drawn during those centuries in this geographical area.

³ Translated from Latin, this full letter is published in Friedrich Kunstmann, "Studien über Marino Sanudo den Älteren mit einem Anhang seiner ungedruckten Briefe," *Sitzungsberichte der philosophisch-historischen Abteilung der Bayerischen Akademie der Wissenschaften zu München*, 7 (1855): 697-752. About the kind of these "graces" and "favors," see Maurice Faucon, "Marino Sanudo à Avignon," *Mélanges d'archéologie et d'histoire* 2 (1882): 222-223. About the stay of Robert in Avignon, see Samantha Kelly, *The new Solomon: Robert of Naples (1309-1343) and fourteenth century kingship*, Leiden: Brill, 2003: 77-82.

It is clear that Sanudo's presentation of the maps to the *curia*, which took place during the first few days of his stay, was meant to convince the prelates to follow his project.⁵ The treaty and the cartographical corpus were immediately entrusted by the pope to a group of clerics for further examination. This group included friars from the Levant and the Franciscan scholar, Paolino Veneto. Paolino was a compatriot of Sanudo's, and he used the maps brought to Avignon in his own works, some of which were compilations of all the useful data he could gather for Christian rulers like the pope and the King of Sicily: tables, genealogies, historical and geographical writings, and maps.⁶ It is important to note that Paolino used plans that Sanudo did not and that Sanudo added new representations to his corpus after his meeting with the Franciscan: the city plans of Jerusalem, Acre, and Antioch.⁷ In Avignon, they shared their collections of local maps

⁴ Marino Sanudo, *Liber secretorum fidelium crucis* (ed.) Jacques Bongars, *Gesta Dei per Francos*, II, Hanovre, 1611: 1-2.

⁵ About the different projects, see Antony Leopold, *How to Recover the Holy Land: The Crusade Proposals of the Late Thirteenth and Early Fourteenth Centuries*, Aldershot: Ashgate, 2000 and Aziz Suryal Atiya, *The Crusade in the Later Middle Ages*, New York: Kraus, 1938: 47-154, Jacques Paviot, *Projets de croisade (v. 1290 – v. 1330)*, Paris: Académie des inscriptions et belles lettres, 2008. About the importance of the maps in the different treaties for the Holy Land recovery, Nathalie Bouloux, *Culture et savoirs géographiques en Italie au XIV^e siècle*, Turnhout : Brepols, 2002; Patrick Gautier Dalché, "Cartes, réflexion stratégique et projets de croisade à la fin du XIII^e siècle et au début du XIV^e siècle : une initiative franciscaine?" *Francia – Forschungen zur westeuropäischen Geschichte*, 37 (2010): 90-95; Evelyn Edson, "Reviving the crusade: Sanudo's schemes and Vesconte's maps" in Rosamund Allen (ed.), *Eastward bound. Travel and travellers 1050-1550*, Manchester: Manchester University Press, 2004: 131-156 and Paul Harvey, *Medieval maps of the Holy Land*, London: The British Library, 2012.

⁶ See my *Le peintre et la carte. Origines et essor de la vue figurée entre la vallée du Rhône et les Alpes (XIV^e-XV^e siècles)* (forthcoming); and Isabelle Heullant-Donat, "Ab origine mundi: fra Elemosina et Paolino da Venezia: deux franciscains italiens et l'histoire universelle au XIV^e siècle," thèse de l'université Paris Ouest Nanterre La Défense, Paris, 1994.

⁷ For more details on this subject, in addition to the previous references, see Bernhard Degenhart and Annegrit Schmitt, "Marino Sanudo und Paolino Veneto. Zwei Literaten des 14. Jahrhunderts in ihrer Wirkung auf Buchillustrierung und Kartographie in Venedig, Avignon und Neapel," *Römisches Jahrbuch für Kunstgeschichte*, 1973: 1-139, Arturo Magnocavallo, "I codici del Liber secretorum fidelium crucis di Marin Sanudo il Vecchio," *Rendiconti del Reale istituto lombardo di scienze e lettere*, 2nd series, 31 (1898): 1114-1127 and

and plans to improve their works. The second version of the treaty of the recovery of the Holy Land Sanudo took to the *curia* was probably written during his stay there. The Venetian patrician argued that he followed the recommendations of the group of clerics led by Paolino.

Their relationship was very close. The two men diffused and showed these maps to the prelates, bishops, and ecclesiastical lords in the city, but also to the lords in Provence, especially those at the court of Robert of Anjou, Count of Provence and King of Sicily. They even made copies of their writings and maps there for this ruling elite, including a translation in Provençal of Paolino's work, the *Chronologia magna*, now kept in the British Library.⁸ Consequently, many of those likely to govern the territories of the Rhône Valley saw the maps. The question is: which kind of local maps did they see?

Geometrical Representation in the Local and Regional Map Corpus Brought to Avignon

Sanudo brought to Avignon three different kinds of local maps and plans of the Holy Land, as he wrote in the prologue of the *Liber secretorum fidelium crucis* : "*Eidem etiam praesentavi quatuor mappas mundi : unam, de mari Mediterraneo ; secundam, de mari et de terra ; tertiam, de Terra sancta ; quartam vero, de terra Aegypti*" ("Furthermore, I presented four maps : the first one about the Mediterranean Sea, the second one about the sea and the land, the third one about the Holy Land and the fourth one about the land of Egypt").

The first one is a set of four portolan charts made especially for the Venetian by the cartographer Pietro Vesconte. They show the different parts of the itinerary from the northern coast of the Kingdom of France to the Levant, the King of France having,

Franco Cardini, "Per un'edizione critica del *Liber secretorum fidelium crucis* di Marin Sanudo il Vecchio," *Studi e ricerche storiche*, 1 (1976): 191-250.

⁸ London, British Library, Egerton 1500. See also André Vernet, "Une version provençale de la *Chronologia magna* de Paulin de Venise," *Bibliothèque de l'École des chartes* 104 (1943): 115-136.

according to Sanudo, to take the leadership of the Crusade. Vesconte made several regional maps of the seas. He paid particular attention to the Atlantic Ocean and the English Channel. As a Genoese cartographer, he had *new* information from compatriots in the Capetian fleet based in Rouen. Additionally, since he worked for the Venetians, he had information from sailors in the convoy that sailed annually from the Serene Republic to Flanders.

The last map in the *Liber secretorum* is also a portolan chart. But Sanudo distinguishes it from the other four by calling it “*mappa de terra Aegypti*” and not “*mappa de mari*” which he used before. The reason is quite simple: the portolan chart that forms the basis of this particular map has been turned into a regional map of the Levant. It shows not only the coasts, but also the inland of Syria and Egypt.⁹ This document is an attempt to make a territorial map with the knowledge of maritime cartography. Therefore, this is a map, a two-dimensional representation of coastal and inland Egypt and Syria. We might even use the term “geometrical” because information from a scaled map (the portolan chart) has been used in its design. Regardless of whether or not he was successful, Sanudo tried to rely on the scaled indications of the portolan coastlines to create a reliable regional map.

The other regional map Sanudo brought to the pope’s curia is the “*mappa de terra sancta*.”¹⁰ The geometrical logic on this item is even clearer, thanks to the grid displayed in the background. Each square matches an area of two miles on each side. Each place is

⁹ Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1362a, f. 4v-5r. This atlas has been fully digitalized by the University of Heidelberg: “Vatikan, Biblioteca Apostolica Vaticana, Pal. lat. 1362 A Pietro Vesconte: Land- und Seekarten (Portolane) (Italien, 14. Jh. (1320))” <http://digi.ub.uni-heidelberg.de/diglit/bav_pal_lat_1362a (accessed November 1, 2017). Vatican City, Biblioteca Apostolica Vaticana, Vat. Lat. 2972, f. 108v-109r. The manuscript has been digitalized by the Biblioteca Vaticana : “Vat.lat.2972 | DigiVatLib,” <https://digi.vatlib.it/view/MSS_Vat.lat.2972 (accessed November 1, 2017).

¹⁰ Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1362a, f. 7v-8 : “Vatikan, Biblioteca Apostolica Vaticana, Pal. lat. 1362 A Pietro Vesconte: Land- und Seekarten (Portolane) (Italien, 14. Jh. (1320))” <http://digi.ub.uni-heidelberg.de/diglit/bav_pal_lat_1362a (accessed November 1, 2017).

located inside a particular square determined by its location in the Holy Land. Again, regardless of his success, Sanudo tried to make a scaled map by using a localization system based on a grid pattern. The approach is very interesting, and related to similar maps in the corpus from the Rhône valley: the plans of Pavia made by the priest Opicinus de Canistris when he was living in Avignon, the map of Switzerland made by the physician Konrad Türost around 1500, as well as all of the regional maps of the Ptolemaic corpus.¹¹ These men were all scholars who conceived local and regional maps in a geometrical fashion by using a grid to provide a consistent scale.

These two Sanudo maps are more regional than local. The areas covered are huge, and records of representations of Provençal regions survive, like the lost map of the Valentinois County (1423).¹² But in Avignon, Marino Sanudo and Paolino Veneto also gathered or exchanged geometrical city plans.¹³ Like the two previous items, they are presented in top-down view, and their geometrical characteristics indicate an attempt at scalar mapping, as opposed to the relative localization we see on most earlier maps. This becomes clear when we check the conformity of the drawings, which are very precise, to their models. On the plan of Jerusalem, Sanudo himself wrote that the “*civitas habuit in giro stadia triginta*” (“the city had a circumference of thirty stades”). And in Avignon, a copyist of the plan even added that a *stadium* is about an eighth of a mile.¹⁴

¹¹ Fermon, “Elements of cartographical culture in the Rhône Valley during the Pope’s Period” in *Le peintre et la carte*.

¹² Archives départementales de l’Isère, B 3505 (cardstock, piece 1). A detailed invoice for this work made by the painter John of Scotland on large piece of cloth is kept.

¹³ Vatican City, Biblioteca Apostolica Vaticana, Pal. lat. 1362a, f. 8v-9r: “Vatikan, Biblioteca Apostolica Vaticana, Pal. lat. 1362 A Pietro Vesconte: Land- und Seekarten (Portolane) (Italien, 14. Jh. (1320)” <http://digi.ub.uni-heidelberg.de/diglit/bav_pal_lat_1362a> (accessed November 1, 2017).

¹⁴ London, British Library, Egerton 1500, f. 49 r.

Thus, mapmakers and users were interested in measure and scale. Even in the Middle Ages, there was a tradition of geometrical spatial representation that was stronger than we might think. It involved drawing a plan of a space, the “*fundamenti descriptio*” as described by Alberti, by using measurements and the kind of absolute localization that we call “scale.” The plans of churches from Arculf, the plan of Saint-Gall, the maps of Sanudo, the plans of Opicinus, the whole of maritime cartography and the grid maps, some architectural plans, and even the drawings of Bartolus in the *Tractatus de fluminibus* are elements of this legacy of scaled representations, though the accuracy of their scales varies.¹⁵

Geometrical Representation and Views

In papal Avignon, we find not only the corpora of Sanudo and Paolino Veneto, but also several examples of fourteenth-century geometrical representation: plans, portolan charts, grid maps, dimensioned architectural drawings, and even an illustrated copy of the *Tractatus de fluminibus* of Bartolus. We also find numerous local maps and town-views, mostly from the fifteenth century, that are not scalar. These views form the core of the medieval corpus of medieval local maps and plans from the Rhône valley.

From this very large group, we can focus on four items that could have been produced, due to formal criteria or due to the cultural background of their authors, with a geometrical approach. The first map is very interesting because it comes from the island of Maguelone’s episcopal chapter (**Fig. 1**).¹⁶ It is a map of the fisheries owned by the

¹⁵ On the two first items quoted, see Paul Harvey, “Local and regional cartography in medieval Europe” in John Brian Harley and David Woodward (eds.), *The History of Cartography, volume One. Cartography in prehistoric, ancient, and medieval Europe and the Mediterranean*, Chicago: University of Chicago Press, 1987: 474-489.

¹⁶ Archives départementales de l’Hérault, G 2046, see Paul Fermon, “Les représentations des pêcheries de Maguelone, Saint-Gilles et Lérins ou les usages de la figura dans les milieux ecclésiastiques à la fin du

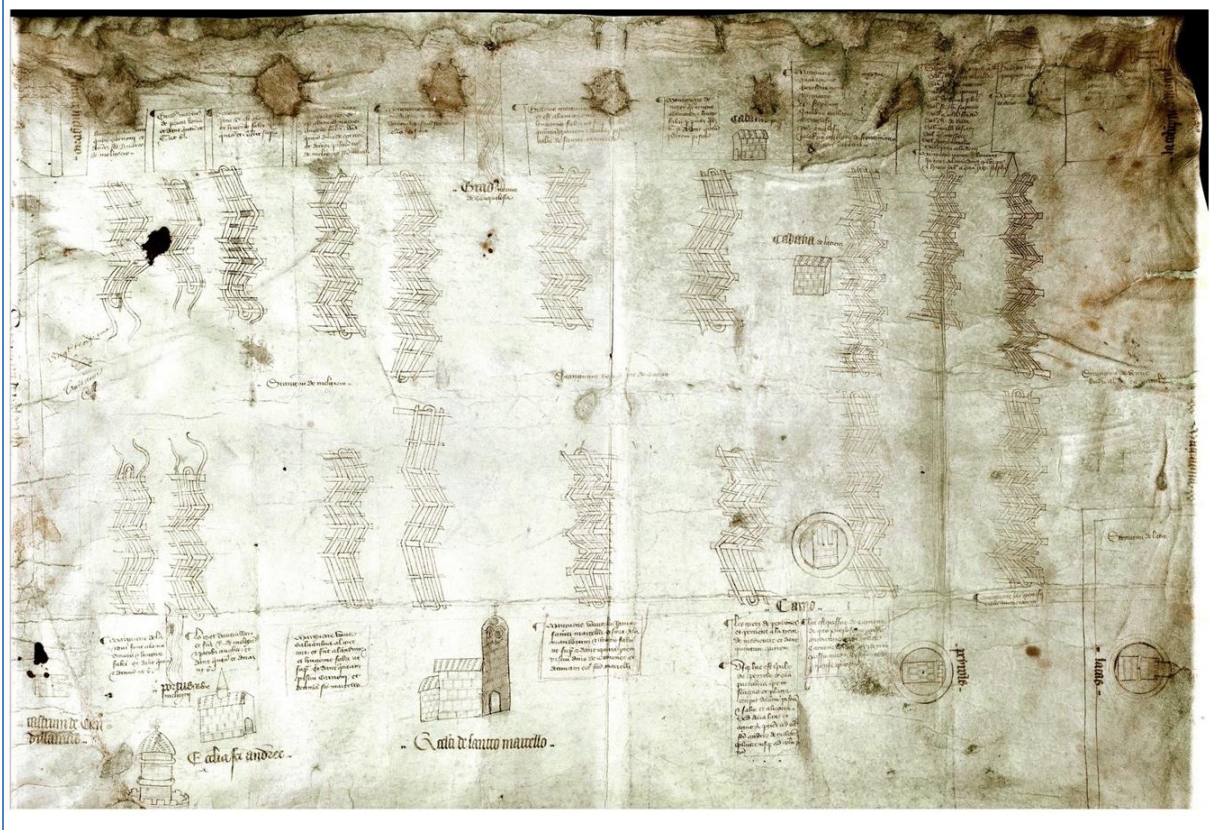


Figure 1 Maguelone's episcopal chapter, map of fisheries, 1350, Avignon, France. Archives départementales de l'Hérault, G 2046. Photo: Public Domain.

bishop and his canons and was produced around 1350. It represents the entire coastal pond of Mauguio with eighteen wooden fences used by the fishermen. This map was drawn to record an agreement between the fishermen about sharing their properties. Maguelone and the pontifical court of Avignon had a special relationship because the church of Maguelone, and its holdings constituted a fiefdom of the Holy See. Moreover, canons and bishops of Maguelone were noteworthy scholars. Bishop Gaucelin de Déaux, perhaps the patron of this map, established the famous inventory of the library of Pope Urban V in 1369.¹⁷ The people who ordered such local maps were likely to know and

Moyen Âge” in Michel Lauwers (ed.), *Monastères et espace social dans l’Occident médiéval : contexte, hiérarchie, circulations*, Turnhout: Brepols, 2014: 185-209.

understand Marino Sanudo's corpus. Besides, their concern was heavily technical: the layout of fishing tackles. They did not use geometrical representation; rather, the map is organized according to relative localization.

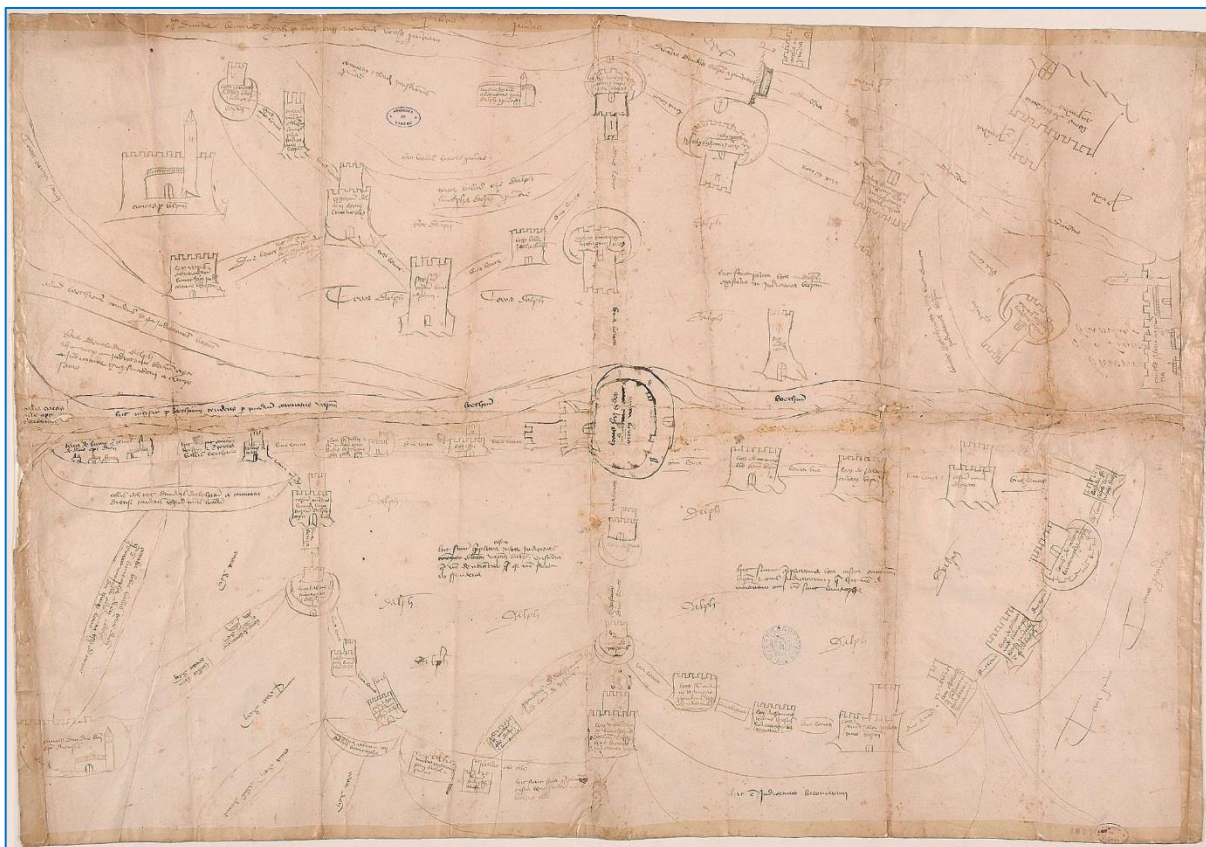


Figure 2 Road map of Serres near Gap, Dauphiné, by councilor Mathieu Thomassin, 1447, Archives départementales de l'Isère, B 3751. Photo : public domain.

These same circumstances were repeated in 1447 in the nearby principality of Dauphiné. The councilor Mathieu Thomassin personally drew a road map of the jurisdiction of Serres near Gap (**Fig. 2**).¹⁸ He was a famous lawyer from the King's University of Orléans, with strong geographical knowledge about the holdings of this

¹⁷ See Maurice Faucon, *La librairie des papes d'Avignon : sa formation, sa composition, ses catalogues (1316-1420)*, I, Paris: Thorin, 1886 and Marie-Hélène Jullien de Pommerol, *La bibliothèque pontificale à Avignon et à Peniscola pendant le Grand schisme d'Occident et sa dispersion*, Rome: École française de Rome, 1991.

¹⁸ Archives départementales de l'Isère, B 3751.

prince, as we see in a manuscript he dedicated to the Dauphin, the *Registre delphinal*.¹⁹ The map shows that Thomassin was interested in measurements; he wrote the distances between location in miles, but there is no sense of scale in his work.

The third item is a remarkable false map of Queen Sybille's paradise.²⁰ It shows an imaginary place as if it were real. The author of this map, the famous Provençal lord Antoine de la Salle, received his education at the court of the antipope Benedict XIII's palace in Avignon and lived afterwards at the court of Count of Provence. He was a man of letters who wrote several geographical texts.²¹ But even if he was attempting to use this map as proof of his success in his chivalrous quest of finding Queen Sybille's paradise, he did not use a geometrical representation of the fictional area. Instead, he asked a painter to produce a view: a landscape without any sense of scale.

Finally, there is the cartographical corpus from the Trial of the Rhône, which was the main concern of Avignon's pontifical court around 1500.²² This trial was about the property of the river. The pope's prosecutor, Doctor Pierre de Preta, came from Rome to prepare the trial at the palace in Avignon, with the legate and the town's most distinguished academic scholars. He ordered five sets of local maps from three different painters, all of whom were famous masters of workshops specializing in landscape painting. According to the surviving commissioning documents, only one map included indications of measure, and that was only for a very small part of the area limited to the Pont Saint-Bénézet. The orders are quite clear. The maps had to represent technical

¹⁹ See Léonard Dauphant, "Matthieu Thomassin et l'espace dauphinois (1436-v. 1456): naissance d'un humanisme géopolitique," *Journal des savants*, 1 (2008): 58-104.

²⁰ Chantilly, Bibliothèque du château, 0653 (0924), fol. 5 v., 6 r. See the reproduction and the study of this map in Fermon, *Le peintre et la carte*.

²¹ Fernand Desonay, *Antoine de la Salle, aventurier et pédagogue*, Paris: Droz, 1940.

²² Léon-Honoré Labande, *Avignon au XV^e siècle. Légation de Charles de Bourbon et du cardinal Julien de La Rovère*, Paris: Picard, 1920.

devices like the system of flood prevention comprising the bridge's pillars and the embankments and moats, but the prosecutor also wanted painted landscape views to take to Paris, in order to convince the king to retract the claims of his officers. The difference between the cartographical documents brought by Marino Sanudo to the Avignon curia and most of those produced in the Rhône valley afterwards is striking. In the first group, mapmakers needed technical knowledge. In the second group, even if the mapmakers had measurements and even if they were able to understand and reuse this technical knowledge, they were interested only in the visual feel of the place and not the abstraction of a geometrical representation and top-down view. The real rise of local mapmaking happened, not only when the pictures started to become more common, but also when mapmakers just had to go outside and draw what they saw. Then, not only did some mapmakers and users neglect the idea of scale, but they also came to prefer the sensory perception of the buildings they saw and lands they roamed to the analytic and abstract perception of geometrical representation. This is the reason for the success of the "view," which is appealing and simple to produce. 🐼