

## NEW MAPS AND LANDSCAPE DRAWINGS BY CRISTOFORO SORTE

by Juergen Schulz

The major cartographic work of Cristoforo Sorte, the Veronese painter, architect, irrigation engineer, and cartographer (1506/10 - after 1594), was a set of maps of the Venetian mainland territories, made for the Ducal Palace of Venice at the end of the Sixteenth Century. The history of the project began in 1578, when Sorte was commissioned to produce one large map of the Venetian *terra ferma* some 31 feet long for the inside wall of the Sala del Senato. In 1585-1586 the contract was renegotiated. The one map became six maps, and for reasons of security they were now intended for private rooms behind the Senate chamber. They were to show the Venetian state as a whole and, on a larger scale, the provinces of Bergamo, the Friuli, Brescia, Verona and Vicenza (combined in one map) and Padua and Treviso (combined).

Twelve years ago, when I surveyed Sorte's career in this journal, I could account for only four of the six maps of the set.<sup>1</sup> The general map of the entire state is mentioned in a guide book written in 1603, and thus is known to have been finished, although today it has disappeared. The map of the Veronese and Vicentino, dated 1591, is owned by the Museo Civico Correr at Venice. The maps of the Friuli and Padovano-Trevigiano, dated respectively 1590 and 1594, belong to the military archives of Austria at Vienna.<sup>2</sup> The maps of the Bergamasco and Bresciano that were to complete the cycle were not known to survive. Indeed, in the absence of any mention of the detail maps in early descriptions of the Ducal Palace, it remained uncertain whether Sorte had ever finished them.

<sup>1</sup> *J. Schulz*, Cristoforo Sorte and the Ducal Palace of Venice, in: *Flor. Mitt.*, 10, 1962, pp. 193-208. Full references will be found there for both the history of the Ducal Palace maps and the circumstances of Sorte's life mentioned but not further explained below.

A brief biography of Sorte, published by *R. Brenzoni*, *Dizionario di artisti veneti*, Florence, 1972, p. 272, only restates outdated information. It might be noted that the controversy over irrigation of the Veronese, in which Sorte engaged at the end of his life, continued into 1598. This may be seen from the pamphlet published that year by one of the protagonists of the dispute, *Benedetto Venier*, *Termini over Conclusioni nel proposito della regolazione dell'Adige etc.*, Verona (A. Tamò), 1598. It is one of two pamphlets that escaped my notice when I compiled the list of writings on this issue printed under note 11 of my earlier article. The other is by *T. da Monte*, *Livellazioni fatte per M. G. Pontara, et per M. B. Montino, ... in proposito della regolazione dell'Adige, con suoi adherenti benefitij, etc.*, Verona (G. Discepolo), 1595. The latter is of interest because it goes out of its way to vituperate Sorte, as if he were still alive: *esso Sorte, quale lasciando il suo mestiero di liuellare la terra, si arroga di saper con l'istesso suo fallace liuello liuellare li cuori altrui, non hauendo fin'hora saputo liuellare il suo, ne conoscer le alte, et le basse sue, nè il pieno, nè il voto, se ben ne ha hauuto tanto tempo, onde è da perdonargli* (pp. 52-53). These previously overlooked pamphlets, as well as nos 1, 2, 3, 4, and 7 of my previously published list, are catalogued under their authors' names by *P. Riccardi*, *Biblioteca matematica italiana*, Modena, 1870-80, I, 1, col. 612; I, 2, cols. 177, 467, and 587. The *livellazioni* of Pontara and Montino commissioned by *da Monte* and illustrated in his pamphlet were drawn up in 1597 in a finished map that survives in two copies, one at Verona, the other at Venice (*G. Marinelli*, *Saggio di cartografia della regione veneta*, Venice, 1881 [Deputazione veneta di storia patria, Monumenti Storici, Ser. 4<sup>a</sup>, Miscellanea, I], nos 106-107).

<sup>2</sup> Illustrated, resp., *Schulz*, fig. 5, and *R. Almagià*, *Monumenta Italiae Cartographica*, Florence, 1929, pls. XLIII, XLIV. The Correr map was recently restored and exhibited at Verona, *Saloni della Gran Guardia*, "Cinquant'anni di pittura veronese 1580-1630", Verona, 1974, n° XI. It is unfortunately the least well preserved of the series, having been wetted at one time so that the drawing is blurred and the colors are muddy and faded.

A chance discovery has now turned up the missing maps in the collection of Count Lorenzo Donà delle Rose at Venice (Figs. 1 and 2).<sup>3</sup> Long inscriptions, similar to those on the pendant maps, name Sorte as their author and attest that they were part of the Ducal Palace cycle. Their dates of completion are given as July, 1586, for the map of the Bergamasco and 1591 for that of the Bresciano. The former thus becomes the earliest of the set, having been completed barely six months after the final contract for the cycle was signed, in January, 1586.

Cartographically and artistically the new maps are very similar to the three previously published. The geography is shown in plan, the topography in bird's eye view. Landscape features are drawn and painted with a handsome fluency (Fig. 3) that raises them far above the quality of such details in other painted or printed maps of the Sixteenth Century. The cartouche framing the main inscription on the map of the Bergamasco offers one novelty. It is flanked by cherubs, the only examples of Sorte's figurative art that have so far come to light (Fig. 7).

The two newly-found maps differ from the others in both scale and size, just as the latter differed among themselves. The figures are best set forth in tabular form.<sup>4</sup>

- |      |  |
|------|--|
| 1586 | The Bergamasco, coll. Donà delle Rose, Venice. 1 : 42 240 (340 × 168 cm., or approx. $9\frac{3}{4} \times 4\frac{7}{8}$ Venetian feet) (Figs. 1, 7). |
| 1590 | The Friuli, Kriegsarchiv, Vienna. 1 : 45 780 (216 × 166 cm., or approx. $6\frac{1}{4} \times 4\frac{3}{4}$ Ven. ft.).                                |
| 1591 | The Bresciano, coll. Donà delle Rose, Venice. 1 : 55 200 (340 × 169 cm., or approx. $9\frac{3}{4} \times 4\frac{7}{8}$ Ven. ft.) (Figs. 2, 3).       |
| 1591 | The Veronese and Vicentino, Museo Correr, Venice. 1 : 70 500 (294 × 165 cm., or approx. $8\frac{1}{2} \times 4\frac{3}{4}$ Ven. ft.).                |
| 1594 | The Padovano and Trevigiano, Kriegsarchiv, Vienna. 1 : 45 780 (295 × 160 cm., or approx. $8\frac{1}{2} \times 4\frac{5}{8}$ Ven. ft.).               |

Why the maps differ in this respect is difficult to say. In a petition of 22nd December, 1585, Sorte explained how the original project for a single, vast mural map in the Sala del Senato had been revised by Giacomo Contarini (elected *Provveditore sopra la fabbrica del Palazzo* on 27th November, 1582<sup>5</sup>). He had ordered the map to be fitted into a specially-built cupboard, measuring 5 by  $5\frac{1}{2}$  Venetian feet, in the Chiesetta, or Senate chapel, where it would be less visible to prying eyes. In his petition, Sorte suggested that in addition to this much reduced version of his great map, there be separate maps of the individual provinces, an offer that was accepted. The definitive contract of 6th January, 1586 st. c., as mentioned above, called for one general and five detail maps. Each map was now to measure 10 by 5 Venetian feet ( $348 \times 174$  cm.).<sup>6</sup> Clearly, only the maps owned by Count Donà delle Rose approximate the specified dimensions. Perhaps the missing map of the state as a whole was also this large; the guidebook that mentions it calls it *un gran quadrone*.<sup>7</sup> The others are all smaller.

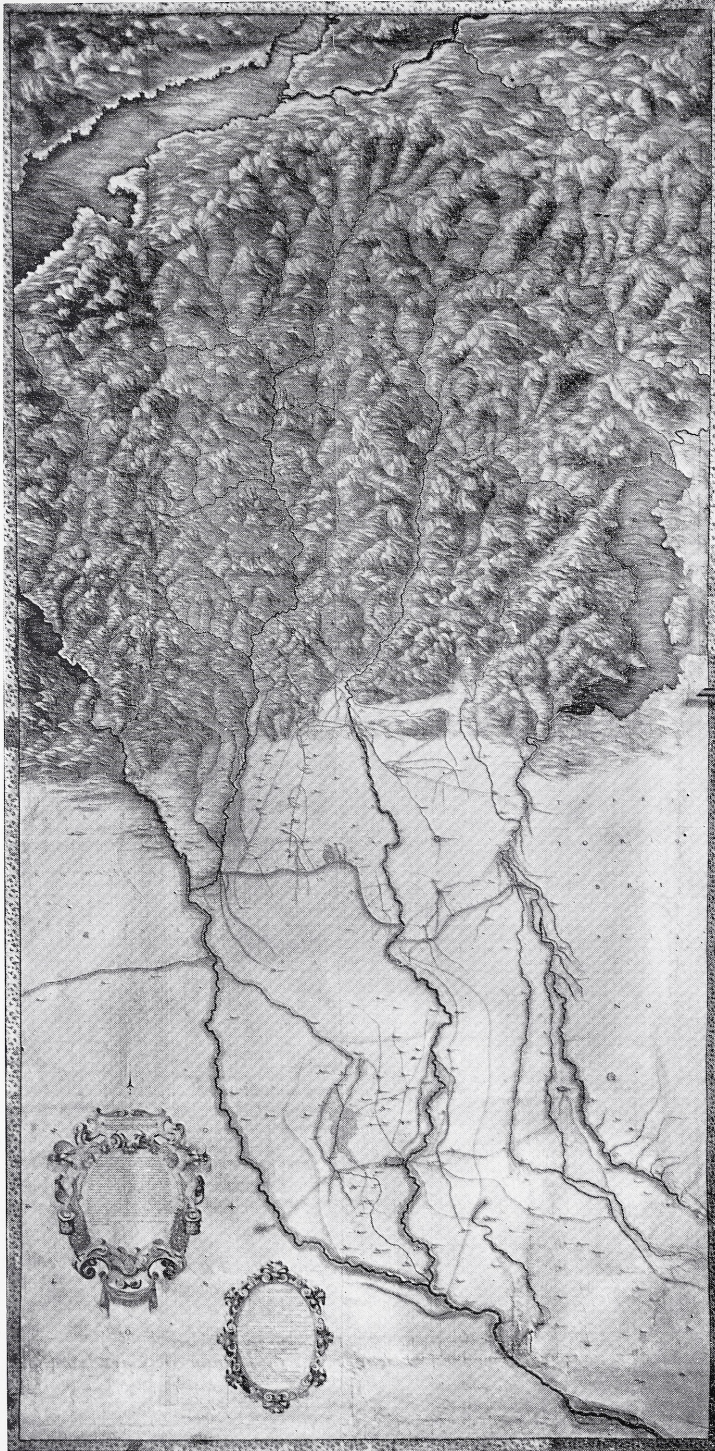
<sup>3</sup> I am extremely grateful to the Count for his permission to publish these maps, and for the courteous patience with which he allowed me to study them repeatedly. For a full description of both, see the Appendix, pp. 124-126.

<sup>4</sup> All five maps have been measured anew and the dimensions given here correct those previously reported by me and other authors. I am greatly indebted to the Viennese Kriegsarchiv for supplying new measurements of their two maps. They have been cut up into eight and ten sections (resp., the Friuli, and the Padovano-Trevigiano) and the edges of each section are irregular, so that the overall dimensions may err by one or two cm. in each direction.

<sup>5</sup> *G. B. Lorenzi*, *Monumenti per servire alla storia del Palazzo Ducale di Venezia etc.*, Venice, 1868, n° 1012-A. A list of *Provveditori* with dates of their election, *ibid.*, p. 600.

<sup>6</sup> *Ibid.*, n° 1012-B.

<sup>7</sup> *F. Sansovino*, *Venetia città nobilissima, ampliata del M. R. D. G. Stringa*, Venice, 1604 (the dedication is dated 1603), p. 232.



1 Cristoforo Sorte, Map of the Bergamasco. Venice, Coll. Count Lorenzo Donà delle Rose.

The change in plan, from a single map of  $5 \times 5\frac{1}{2}$  ft., to a sextartite series covering  $10 \times 30$  ft. in all ( $9\frac{3}{4} \times$  ca.  $28\frac{7}{8}$  ft. as actually realized), may have been related to a change of location of the Chiesetta. Some three weeks after signing the final contract with Sorte, the same Provveditori who had negotiated it responded to a long-standing demand of the Collegio for the creation of a more secure and convenient archive. They recommended that it be installed in the Chiesetta. The latter, they suggested, should be moved to the *sala delle teste*, the room that housed the collection of antiques left to the Republic by Cardinal Domenico Grimani. In these new quarters, the Chiesetta offered a good deal more space for wall maps than it had before.<sup>8</sup> We cannot be certain, however, that the maps were ever put up there. One, the map of the state as a whole, was hanging in 1603 in the anteroom between the new Chiesetta, the ex-Chiesetta, and the Senate chamber.<sup>9</sup> The others are never mentioned in any description of the Ducal Palace. Either they were kept in locked cases and were invisible, or they were not hung at all, but kept rolled up, perhaps in the new Senate archive. There are no traces of cupboards or frames in the three rooms today, which would allow us to understand the final arrangement. The ex-Chiesetta has been converted into an office and all its walls are bare. The new Chiesetta and the anteroom were entirely redecorated in the mid Eighteenth Century by Jacopo Guarana and Girolamo Mingozzi Colonna.<sup>10</sup>

Sorte's petition of December, 1585, mentions field trips taken for the purpose of making these maps. He acknowledged receipt of payments on account, *per haver cavalcato et tolto esso stato [veneto] in misura con le sue vere distantie da luoco a luoco con li suoi venti*. Nothing of this preparatory work has been found, other than ten sheets of drawings of the Friuli, mostly diagrams of bearings.<sup>11</sup> But a great number of Sorte's other papers still do survive. The State Archive of Venice possesses two miscellanies, one of drawings, the other of correspondence, and at least 73 finished maps.<sup>12</sup> The Biblioteca Marciana owns two maps, one etched, the other

<sup>8</sup> Approval of the recommendation by the Provveditori F. Foscari, P. Paruta, and G. Moro was voted by the Collegio on 31st January, 1586 st.c. An appropriation to cover the costs was made in June. A year later it was decided to add further space for the archive by erecting an annex to the Ducal Palace directly behind and adjoining the ex-Chiesetta, over the sacristy of St. Mark's. See *Lorenzi*, op. cit., n<sup>os</sup> 956, 961, 975. In the event, a very large structure was put up, straddling not the sacristy but the chapel of S. Teodoro. The new archive was already functioning by December, 1597; *Lorenzi*, n<sup>o</sup> 1082. Meanwhile, the new Chiesetta had been taken in hand. The antiques in the room were moved out in 1593. An altar was begun still before the death in 1595 of Doge Pasquale Cicogna, whose arms it bears. Cf. *F. Zanotto*, *Il Palazzo Ducale di Venezia illustrato*, Venice, 1842-61, II, ch. xiv, p. 4 ff., and *F. Barbieri*, *Vincenzo Scamozzi*, Vicenza, n.d. (1952), p. 149 ff.

While the old Chiesetta measured only some  $17\frac{2}{3}$  by  $19\frac{1}{8}$  Venetian feet ( $6,14 \times 6,66$  m.), the new chapel was fully  $40\frac{7}{8}$  by  $21\frac{1}{2}$  feet ( $14,22 \times 7,51$  m).

It should be noted that *Zanotto's* description of these rooms, loc. cit., is confused because of a misunderstanding of the guide cited note 7 above. Stringa enters these rooms from a passage "a man manco del tribunale del Senato". *Zanotto* takes this to mean the left when facing the tribunal, but *Stringa* was looking left from the tribunal. As a result, *Zanotto's* indications are partially reversed.

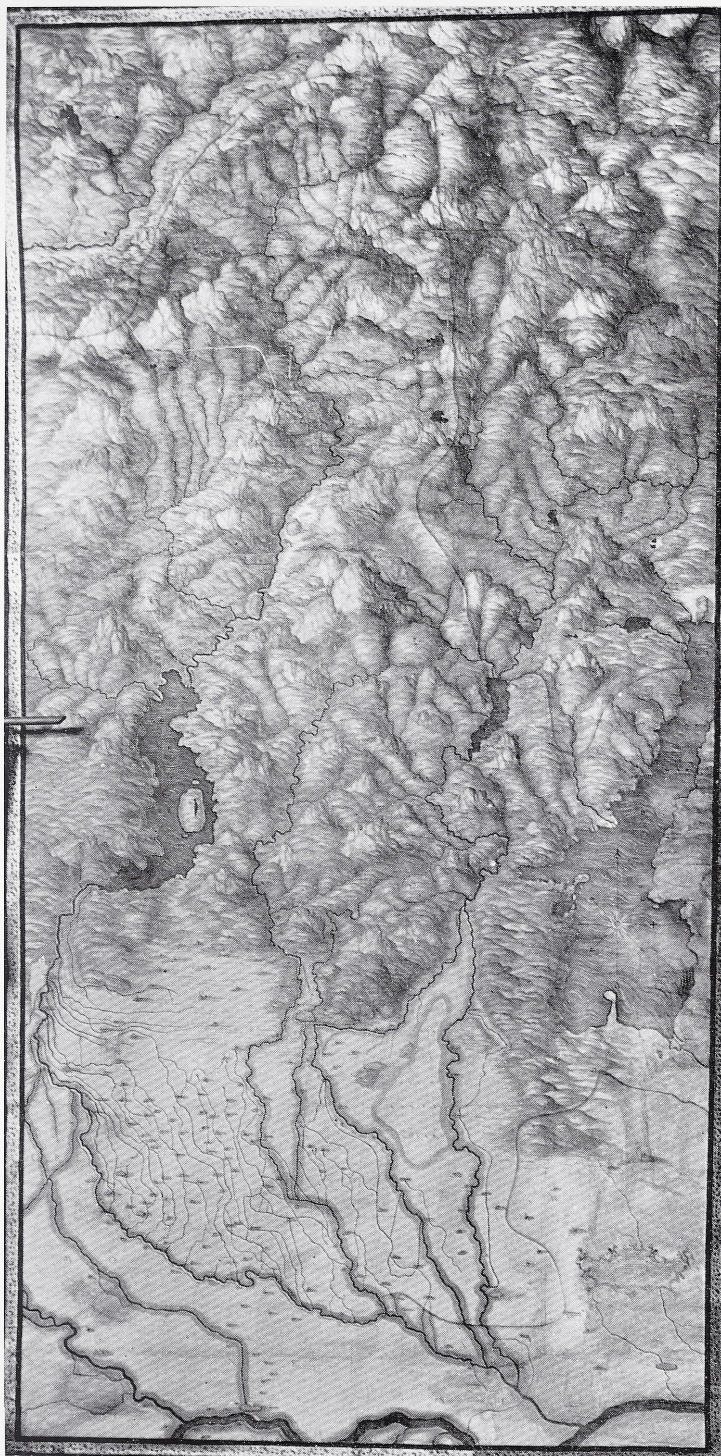
<sup>9</sup> *Sansovino-Stringa* (see note 7).

<sup>10</sup> *Zanotto*, loc. cit., and all authors since place this redecoration in 1766, the year the same artists worked in the nearby Sala dei Banchetti. However, there is no basis for dating the present work other than the fact that it is mentioned by *A. M. Zanetti*, *Della pittura veneziana*, Venice, 1771, pp. 480, 486.

<sup>11</sup> Pp. 4-13 in the first gathering of the miscellany of drawings described note 12 below.

<sup>12</sup> The two miscellanies exist in the archives of the Provveditori alla Camera dei Confini, although the material they contain concerns almost exclusively work done by Sorte for the Magistrato ai Beni Inculti and private parties. Perhaps they were seized at his death as having a state interest, and were assigned to the Camera dei Confini as the appropriate body for maps of a supposed intelligence value. The papers are bound pell-mell into vellum wrappers. They must have been loose sheets when acquired by the state, and were sewn together without any attempt to order them.

The volume of correspondence (Generali, n<sup>o</sup> 260) is titled on the spine: *P(ezzo) N(umer)o I and 1420 Venecia Bressa Bergamo patria dl Friuli Beni Inculti 1586 | Auertimenti dil Perito Sorte Circa le lagune p(er) ouiar l'alteration dell' Contesa Tra Borno Bressan | In Val Cam.<sup>ca</sup> et Scalui Bergam.<sup>co</sup> Attione dl sorti et Altri periti in materia di Beni Inculti. | Proposte Venete et Risposte Cesaree nel Conuento di Verona 1518 p(er) losseruanza dell' Tregue | ... [omissis]/1564 Cadauero trouato nela Ausa InFormationi delli SS.<sup>ii</sup> Bolani et K.<sup>e</sup> Gratiano*. The album measures  $335 \times 235$  mm. and is 95 mm. thick. It contains



2 Cristoforo Sorte, Map of the Bresciano. Venice, Coll. Count Lorenzo Donà delle Rose.

drawn, and Sorte's chapbook in which he recorded instructions from employers, petitions, commissions, and a short treatise on the origin of rivers written for Sforza Pallavicini.<sup>13</sup> Among all these remains one can still find the fairly complete documentation for at least one of his other map-making ventures, on the basis of which one may form some idea of his methods and results.

In the Fall of 1569 Sorte was engaged by the Podestà of Brescia and Bergamo to map an area in the high mountains rising to the East of the Val di Scalve, a part of the Alpi Orobie above Lake Iseo. The two communes of Borno and Scalve, subject territories, respectively, of Brescia and Bergamo, were locked in dispute over the exact course of their boundary in the crags between the Pizzo del Camino and the Corna Mozza. Sorte's map, which was to be made at the expense of the contending parties, was to record their claims. As happened to Sorte on so many other occasions, he became embroiled in quarrels and litigation as a result of his work. The artist and his son, Giulio<sup>14</sup>, had spent 35 days in the field, in October and November,

150 gatherings of from one to 36 sheets. As the title explains, only the initial gatherings concern Sorte, namely the first through 113th. These contain copies of state documents he required for reference, letters of instruction to him from the Magistrato ai Beni Inculti, draughts of his reports to them and of petitions to various bodies, and business letters received by him. Of particular interest is the 49th gathering, which is a chronological list in Sorte's own hand of all commissions given him and all decisions concerning him by the Magistrato ai Beni Inculti, from 1557 to 1585, plus a list of all his writings and depositions on irrigation matters, from 1556 to 1569.

The volume of drawings (Generali, n° 262) is titled on the spine: *P(ezzo) N(umer)o 2 and 1558 1590 / Disegni Molti et Varij di christoforo Sorte Alcuni dei quali Sono / Del Tirolo Fatti Arichiasta dll' Imperadore et Alcuni di parte / Dilo Stato della Mirandola / 1590*. The album measures 342 × 240 mm. and is 120 mm. thick. It consists of 120 gatherings, containing from one to thirteen sheets, or two to 26 pages as bound. Each gathering may concern more than one subject, and some papers were used more than once. Two gatherings even stem from Sorte's son, Giulio (the 40th and 89th; see note 14 below). The collection seems to have been an accumulation of field notes which, when there was need, Sorte raided for scraps of paper, and to which he returned loose sheets, and which he kept in no order at all.

The paper Sorte used averages 315 × 420 mm. in size. Almost without exception the sheets retain traces of folds that show how they were used. They were folded in eight and each eighth was drawn on separately. The folds were not cut through; instead the sheets were opened, refolded, and rotated as Sorte moved from one face of the paper to another. As a result, the drawings constantly change their orientation on the page.

Of particular interest for historians of art, other than the sheets examined below, are those of the 112th and 119th gathering. The former concerns a survey of 1561 of the Progno di Fumane and contains a fine bird's eye view of the Villa della Torre. The latter concerns a survey of 1562 of Istria and includes a plan of Pola and its antiquities.

Separate maps are concentrated in the archives of the Magistrato ai Beni Inculti, where they are listed in the indexes of drawings for the provinces of Verona, Vicenza, and Padua. The remainder are in the Raccolta Terkutz (n° 61, signed), and the Camera dei Confini (buste 141, 196, and 331, the second signed; for its history, see *E. De Toni*, *Confini della Repubblica Veneta fra Auronzo e Doblaco*, in: *Archivio per l'Alto Adige*, 3, 1908, p. 161, n° 4). A map of the Bresciano, dated 1554, and one of the Friuli, dated 1586, are recorded in the Eighteenth Century inventory of the drawings of the Magistrato alle Fortezze, but can no longer be found. They may have been taken by the French commissioner who raided the Magistrato's archive in 1797. The first is probably reproduced in Sorte's etched map of the Bresciano of 1560 (see note 13 below). The second must have been an elaborately annotated copy of Confini, busta 141, mentioned above. Cf. *Camera dei Confini*, n° 11 ("Catalogo dei disegni..., 1759"), s.v. Disegno 179, Disegno 240, and p. 29 v.

<sup>13</sup> The etching, dated 1560, is a map of the Bresciano; *Bibl. Marciana*, 138. c. 4, pl. 41 (illus., as a woodcut, by *R. Almagià* [see note 2], pl. XL, 1). It probably reproduces a lost map of the same province made by Sorte in 1554; see note 12 above. The drawing is a plan of Peschiera of 1571; *Bibl. Marciana*, Cod. Ital., Cl. VI. 188 (= 10 039), p. 43 (illus. by *L. Puppi*, *Michele Sanmicheli*, Padua, 1971, p. 106). The book is catalogued in: *Catalogo dei codici marciani italiani*, II, Classe IV e V, a cura di *C. Frati e A. Segarizzi*, Modena, 1911, n° IV-169. Very likely many more works and notes by Sorte could be identified in Venetian libraries and archives with an intensive search. There is no Sixteenth Century cartographer, to my knowledge, who has left such extensive remains. One hopes that before too long they will attract the attention of an historian of cartography.

<sup>14</sup> Giulio assisted his father on at least two other occasions. Sorte's miscellany of drawings, cited note 12 above, contains a single sheet for the 40th gathering that is titled in Sorte's own hand: *Dessegni fatta dil clar.<sup>mo</sup> ms. Aluise Grimani con li disegni dilli confini de cadore fati da iulio mio figliotto*. The drawings



3 Detail of Fig. 2.

referred to are either out of place or lost, for there are no sketches bound with this sheet. The survey for which they were made was commissioned from Sorte in 1582 by Alvise Grimani, and is recorded in his drawing kept in busta 196 of the archive of the Camera dei Confini; see note 12 above. In 1574 Giulio surveyed lands south of Verona, in connection with a property dispute between that city and Teodoro da Monte. (Da Monte's later grudge against Sorte, expressed in the pamphlets cited note 1 above, may be owed to this episode). His field notes are bound into the 89th gathering of Sorte's miscellany of drawings, and his finished map survives in the archives of Verona (*Marinelli* [see note 1], n° 76). He seems to have been working as a deputy of his father's, for the correspondence concerning this commission that survives in the miscellany cited note 12 above, is all addressed to the elder Sorte, and the model for the finished map according to the inscription on it was supplied by the latter as well. A map of the Bergamasco by Giulio, of 1575, belongs to the Biblioteca Marciana (Cod. Ital., Cl. VI. 189 [= 10 031], pl. 12). It is vastly inferior in quality to the elder Sorte's maps. The rhythmically distributed, handsome crags of the latter's print and paintings are transformed into clusters of pointed pinnacles, like barnacles, and the meticulously drawn foothills of the latter become an unarticulated blanket of waves.

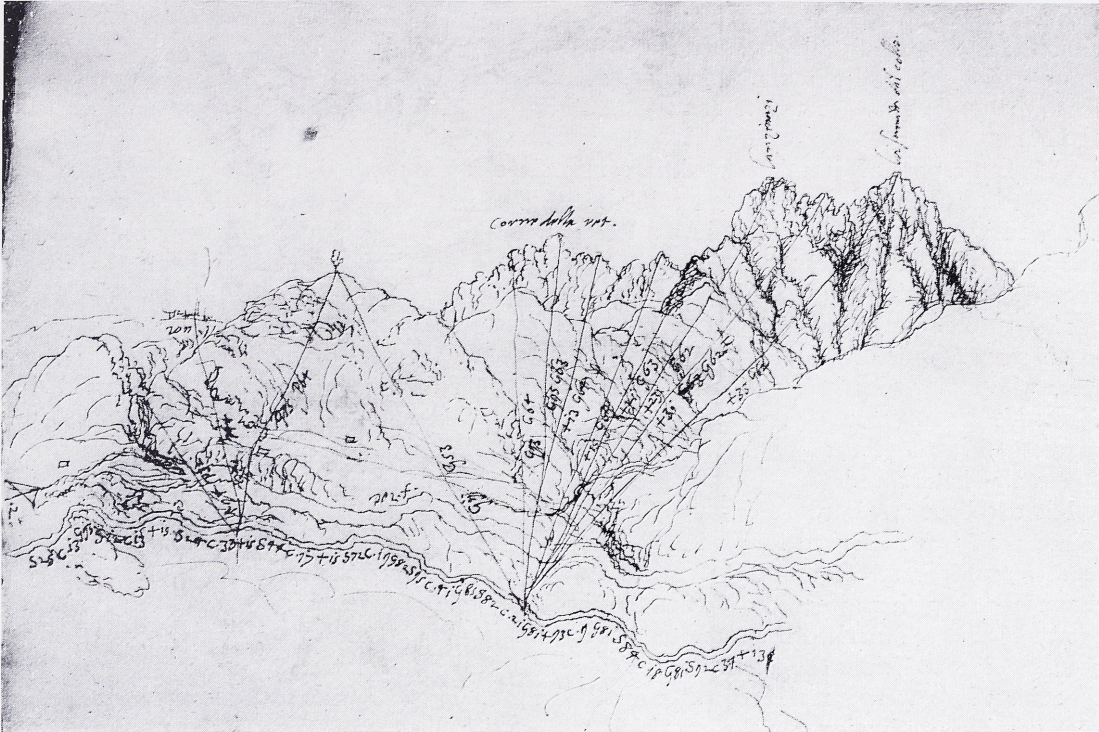


4 Cristoforo Sorte, The Pizzo della Presolana, seen from near Azzone, pen drawing, Venice, Archivio di Stato.

1569, in order to collect data. By April of the following year the map was finished. But only Borno paid; Scalve was dissatisfied with the map and refused to pay its share of the work. Sorte refused to let go of the map, considering it a surety for payment. Scalve engaged an independent surveyor, to check Sorte's map.<sup>15</sup> He found numerous shortcomings, all of which Sorte stoutly denied. In September, 1571, the Venetian government, which was anxious to settle the border dispute that lay behind all the squabbling, decided to send its own expert, to review everybody's findings once again. He too pointed to errors in Sorte's map but, worse still, he had been ordered by the Signoria to bring Sorte's finished map back to Venice. Still without full payment, Sorte was now without his precious map as well. He filed suit in Venice to sequester the map, but the suit was quashed on a point of jurisdiction. Since his original contract had been signed in Brescia, the Auditori Novi of Venice remanded the case there, and ordered the map sent to Brescia for the hearing. When it arrived in Brescia, however, the local Podestà refused to open it. The map was sealed with a ducal seal which he declared himself powerless to unseal. The map was sent back to Venice. At this point, late in 1571, the embattled Sorte addressed a petition for redress to the Signoria. We do not know how this Kafkaesque battle with officialdom ended, for no further documents survive. Nor does the finished map survive (amongst other things, during its transport to Venice it had gotten damaged by rain!). But fourteen

<sup>15</sup> He was Silvio Belli of Vicenza, known otherwise as a collaborator of Palladio and an engineer, cartographer, and author of treatises in his own right; cf. *F. Barbieri*, in: *Diz. Biogr.*, VII, pp. 680-682.





5 Cristoforo Sorte, The Massif of the Pizzo del Camino, seen from near Gromo, pen drawing. Venice, Archivio di Stato.

sheets of Sorte's field drawings still exist, together with his *modello* for the final map (Figs. 4-6).<sup>16</sup>

The drawings are all extensively annotated with horizontal distances and bearings. Distances are measured along pathways and roads — not across open country — and, as in all of Sorte's survey notes, the unit of measure is the Veronese *pertica*.<sup>17</sup> Interspersed among the measurements of distance are bearings, taken to mark changes of direction in the road being followed. The method is this: a given road is broken up into sections, the initial direction of each segment is measured in degrees of the compass, and its length is then established; at the end of such a segment, a new bearing is taken and the count of *pertiche* begun anew.<sup>18</sup> Major landmarks,

<sup>16</sup> The troublesome history of this project can be followed from Sorte's side in the second gathering of the miscellany of correspondence described under note 12 above. The decision of the Collegio to dispatch its own expert is recorded in its Notatorio, Registro n° 39 (1571-72), pp. 66, 70. The person sent was Giovanni Antonio Rusconi. Copies of his report of 14th November, 1571, and Belli's report of 8th September, 1571, together with Sorte's rebuttal thereto, are contained in Sorte's correspondence. The originals are kept with the papers concerning the Collegio's final disposition of the border dispute, in its Notatorio, Filza n° 43 (June-August, 1572), under date 15th July, 1572. Sorte's drawings and *modello*, in resp. the 22nd and 66th gathering of the miscellany of drawings described under note 12 above, are identifiable from the place names on them. See further notes 21 and 28 below.

<sup>17</sup> The Veronese *pertica*, or *cavezza*, of six feet is equivalent to 2.057 m. (*A. Martini*, *Manuale di metrologia*, Torino, 1883, p. 822). Perhaps the distances were actually paced, and the paces then converted to *pertiche* at a fixed rate. Two steps of an average adult are approximately one *pertica*.

<sup>18</sup> In some of the drawings the roads are annotated with bearings alone. I assume that in their case Sorte used a standard increment of distance — five or ten *pertiche* — and simply noted the changes of bearing as each increment was paced off.

whether towns, houses, crossroads, or mountain peaks, are also sighted with the compass to establish their exact position with respect to a given vantage point, and the same landmarks recur again and again in the drawings, seen and sighted from constantly different points. Presumably, the purpose was to create a network of fixes within which to anchor any particular feature.

This last aspect of Sorte's procedure comes close to the method of triangulation. However, it is not identical with it. Vantage points must have been chosen with some care, but they do not fall into a pattern that resembles a triangulation plot. Indeed, the absence of any straight line measurement between two points in Sorte's field drawings would seem to preclude trigonometric calculation as part of his method. The network of fixes he collected for a given landmark was random in character, with the result that features could end up seriously displaced in his maps. (This criticism was levelled against the Borno-Scalve map by both of the examiners who reviewed it in 1571). In other words, Sorte's method was basically still that of early Sixteenth Century surveyors, who collected their data along established itineraries, down roads, paths, and the edges of fields, but never projected an abstract grid of measurements across the landscape.<sup>19</sup>

His excellent results were due to the sheer quantity of data he collected. Every major and minor path was measured for its length and changes of direction. Every feature was sighted from a multiplicity of viewpoints. In this way Sorte obtained an extraordinary abundance of data to work with and could check and recheck any one set of measurements against a wealth of others that approached the same feature from other points and directions. The method was cumbersome and time consuming, but despite the cavils of interested parties, produced maps that as a whole were remarkably exact for their time. They stand out among the contemporary cartographic production for the precision with which they reproduce the contours of lakes, courses of rivers, paths of roads and mountain valleys, and position of even the most minor settlements.<sup>20</sup>

In contrast to this exactitude in the reproduction of horizontal relationships, Sorte's rendering of relief is pragmatic and approximate. Although the measurement of the comparative levels of neighboring lakes and waterways was a constant part of his duties as a surveyor for the Magistrato ai Beni Inculti, he seems never to have measured or calculated heights when

<sup>19</sup> The method is essentially that of Leonardo, in his survey of Cesena of 1502. See the meticulous study by *N. De Toni*, *Leonardo da Vinci e i rilievi topografici di Cesena*, in: *Studi Romagnoli*, 8, 1957, pp. 413-424 (reprinted in: *Leonardo da Vinci letto e commentato da Marinoni, Heidenreich, Brizio*, etc., ed. *P. Galluzzi*, Florence, 1974, pp. 131-148). Historians of technology and mathematics have written a good deal on the invention of the theodolite and triangulation, but an understanding of earlier survey methods has to be pieced together from various incomplete accounts. See: *P. Riccardi*, *Cenni sulla storia della geodesia in Italia...*, part. I, in: *Memoria dell'Accademia delle Scienze dell'Istituto di Bologna*, Ser. 3<sup>o</sup>, 10, 1879, p. 431 ff.; *E. G. R. Taylor*, *Tudor Geography, 1485-1583*, London, 1939, ch. viii; *E. R. Kiely*, *Surveying Instruments, their History and Classroom Use*, New York, 1947 (National Council of Teachers of Mathematics, Yearbook, XIX); *D. J. Price*, *Mediaeval Land Surveying and Topographical Maps*, in: *Geographical Journal*, 121, 1955, p. 1 ff.; and *E. Imhof*, *Beiträge zur Geschichte der topographischen Kartographie*, in: *International Yearbook of Cartography*, 4, 1964, p. 129 ff.

<sup>20</sup> See the judgment of *R. Almagià* (see note 2), p. 37 ff., esp. 39-a, and *Idem*, C. Sorte il primo grande cartografo ... della Repubblica di Venezia, in: *H. Lautensack and H. R. Fischer*, eds., *Kartographische Studien — Haack-Festschrift*, Gotha, 1957, p. 7 ff. (reprinted in: *R. Almagià*, *Scritti geografici [1905-1957]*, Rome, 1961, p. 613 ff.). Sorte's fund of information was naturally greatest for areas that he had visited and mapped repeatedly, i.e. the cultivated foothills and plains of the Bresciano, Veronese, and Padovano. Not surprisingly, these are mapped most accurately in the Ducal Palace maps. When it came to the wild valleys of the high Alps, which he had little time to survey in the 1580's, and no reason to visit previously, the Ducal Palace maps contain many errors of contour and position. Examples are the distorted shape and misorientation of the upper end of Lake Como, in the map of the Bergamasco, and the distorted courses and relative positions of the upper Olio and Adda Rivers, in the map of the Bresciano. Even so, Sorte's representation of these features is more accurate than that of earlier cartographers; cf., for instance the rendering of Lake Como in Giacomo Gastaldi's map of Lombardy, engraved in 1570 (*Almagià*, *Monumenta*, pl. XXXI).

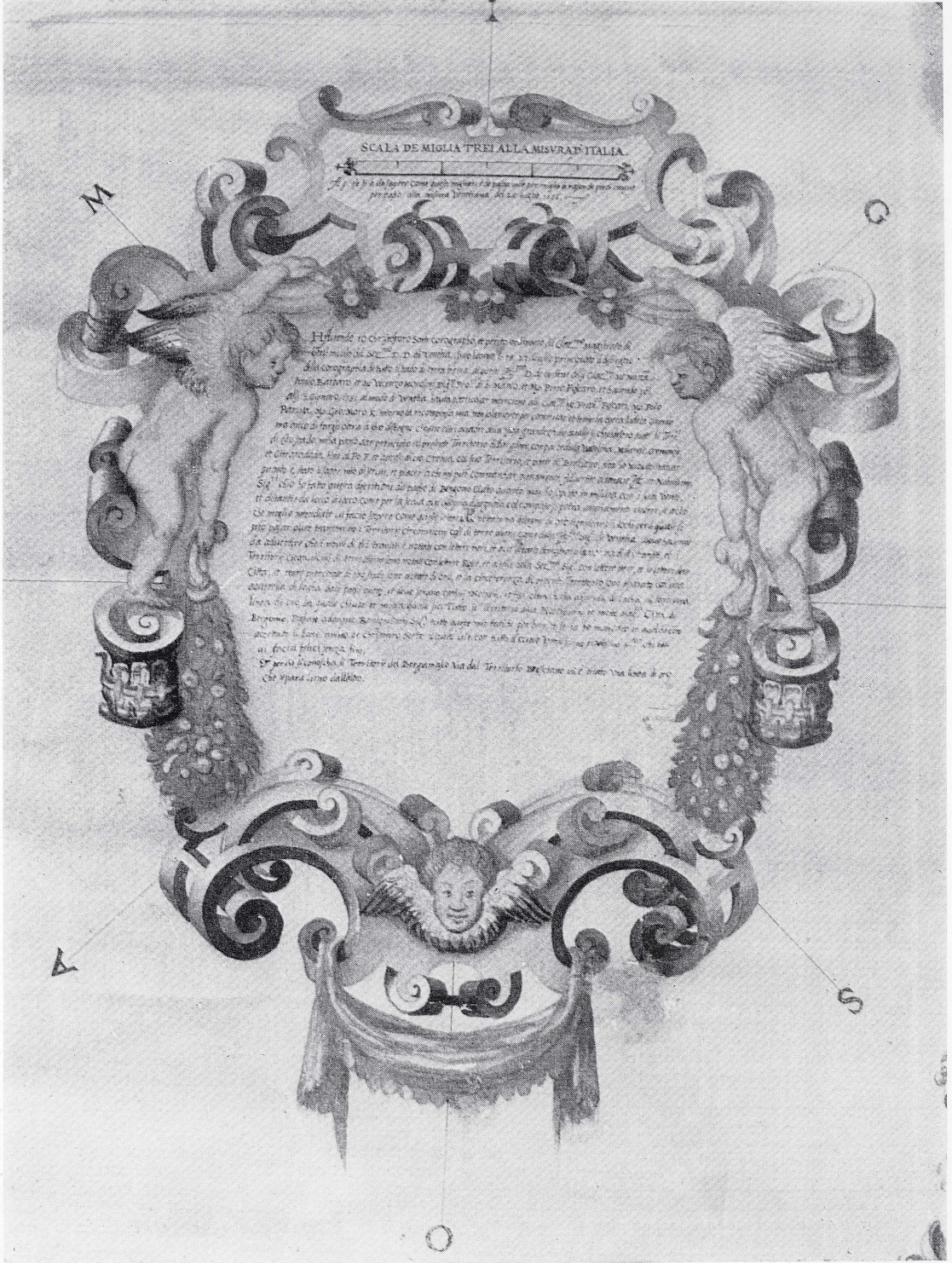


6 Cristoforo Sorte, Modello for a Map of the Boundaries of Borno and Scalve. Venice, Archivio di Stato.

engaged on a land, as distinct from an hydrographic, survey. He did draw perspective views of the hills and mountains over which he clambered, in order to mark upon them the stations of his horizontal measurements. In this way he obtained a record of the approximate location and appearance of mountainous features. But the hills and crags he represented in his finished maps are generic rather than specific in form. Where he knew there were highlands, he drew rounded hills. Where he knew there were high mountains, he put in great crags. However, neither the location nor the shape and number of these features is exact.

In the map of Scalve and Borno, as we know it from the *modello* (Fig. 6), crags and ridges are indicated at the sites of the Corna Mozza and the Pizzo del Camino, the two principal mountains of the area, but they have a conventionalized sawtooth silhouette. They do not resemble the exact profiles of these peaks, which Sorte had actually drawn with great exactitude in his field sketches. All around them lie rounded masses of hills which, while they follow the faithfully rendered courses of riverbeds, are otherwise quite unlike the real hills of the area.<sup>21</sup> It is as if at this point in Sorte's process of map making, art became as important a guide as science.

<sup>21</sup> From the miscellany of drawings (see note 12 above): 66th gathering. Two sheets, each 408 × 295 mm., pasted together to form a single sheet, 408 × 587 mm.; pen and brown ink over pencil underdrawing. The lack of correspondence between the real mountains and those pictured by Sorte was noticed at the time. One of Belli's criticisms of the Borno-Scalve map was: *si vede nel modello* (i.e., Sorte's map) *un sasso, il quale e notato sasso piu grande, et mostrasi in esso modello solo et molto grande, et in fatto quello non appar cosi grande, et ha d'intorno de gli altri sassi non molto differenti in grandezza* (Provveditori alla Camera dei Confini, Generali, n° 260, 2nd gathering, p. 26 v, and, Collegio, Notatorio, Filza n° 43, under 15th July, 1572).



7 Cristoforo Sorte, Detail of Fig. 1.

The point is confirmed by the surviving maps of the Ducal Palace. The mountainous features in them are consistently overscale, whether they are foothills or Dolomitic peaks. Furthermore, they grow in scale from the earlier of the maps to the later. In the map of the Bergamasco, of 1586 (Fig. 1), the individual mountains are rather small and tightly packed. They are, in fact, difficult to distinguish at the considerable distance from which these features must be viewed, the map being over three meters high. In the four maps of 1590, 1591 (Fig. 2), and 1594, the orography is less finicky and is punctuated by quite large crags that rear up from the general background of hills (Fig. 3). Neither their size nor their profiles and positions agree with actually existing peaks. In the case of the Bresciano, they do not even agree with the crags Sorte represented on his etched map of the area, of 1560, which was the model for the Ducal Palace map.<sup>22</sup> They serve as compositional accents, features large enough to tell at a distance, functioning as centers around which other landscape features may be organized.

There is considerable resemblance between this mode of composition, as well as Sorte's vocabulary of alpestrine forms, and those of an Austrian map maker, Paul Dax. Dax (1503-1561) was trained as a painter in the artistic milieu of the Emperor Maximilian I at Innsbruck. After military service with the imperial armies in Italy and at Vienna, from 1526 to 1529, he settled at Innsbruck to pursue a busy career as painter, glass painter, architect, and cartographer. In a series of surveys, from 1541 to his death, he mapped large parts of upper Austria, from the Bavarian border down to Trent, and from the Val Venosta on the West to the Kitzbüheler Alps on the East. When he died he was working on a map of the valley of the Adige that had been ordered by the Emperor Ferdinand I to complement a map of the northern Tyrol that Dax had made in 1555.<sup>23</sup> His only certain map to survive is a map of the confines of Bavaria and the Tyrol, in the area of the Tegernsee and Achensee (Fig. 8).<sup>24</sup> It shows a surprising resemblance to Sorte's maps in the composition and drawing of mountain features. The draughtsmanship is more calligraphic — the thin pen lines flow with a rhythm and speed that are German in character — and Dax's washes are more transparent than Sorte's watercolors. But there is a resemblance nonetheless in the naked crags and the manner in which they are set off against wooded hills. Since, by his own testimony, Sorte worked at Trent for some time before 1539, he may in fact have known Dax's works.<sup>25</sup>

<sup>22</sup> See note 13 above.

<sup>23</sup> For Dax's biography see *Thieme-Becker*, VIII, p. 488 f., and among the cited literature, esp., *Schönherr*. His cartography is treated in articles not cited there: *A. Feuerstein*, Die Entwicklung des Kartenbildes von Tirol..., in: *Mitteilungen der K. K. Geographischen Gesellschaft in Wien*, 55, 1912, p. 328 ff., esp. p. 359 ff.; *O. Stolz*, Anschauung und Kenntnis der Hochgebirge Tirols vor dem Erwachen des Alpinismus, in: *Zs. des Dt. und Österr. Alpenvereins*, 58, 1927, p. 8 ff., esp. p. 34 ff.

<sup>24</sup> Innsbruck, Tiroler Landesarchiv, Karte n° 2669; 962 × 945 mm.; pen and ink and colored washes on paper, recently mounted on linen, North at top; approx. scale, 1 : 62 000. Signed with the monogram, "P. D.". The map is exhibited on long-term loan at the Tiroler Landeskundliche Sammlung in the Zeughaus of Maximilian I, Innsbruck. I am greatly indebted to Landesarchivdirektor, Hofrat Dr. *Eduard Widmoser* for photographs and information regarding this map.

Dax mapped the area shown on two occasions, in 1544 and 1553, and the Innsbruck map may stem from either survey. Cf. *D. von Schönherr*, Beiträge zur Kunstgeschichte Tirols: vii, Paul Dax, in: *Archiv für Geschichte und Altertumskunde Tirols*, 2, 1865, p. 328, and, *idem*, Urkunden und Regesten aus dem K. K. Statthalterei-Archiv in Innsbruck, in: *Jb. Kaiserhaus*, 11, 1890, part ii, nos 6682, 7006, 7018. In 1547 Dax made a copy of one of the earlier maps, but it was mounted by him on linen and therefore is not the surviving one (*Schönherr*, *Urkunden*, n° 6714). It is worth remarking that he also made a map of the area of Kufstein in 1544 that was an astonishing anticipation of modern, plastic relief maps. It is described as, „zu mehrem Verständniss und zu noch mehrem Verstand in eine sonderliche Visirung, aus den Grund gezogen, erhebt von Lehm gestrichen und ausgeführt“ (*Schönherr*, *Beiträge*, loc. cit.).

<sup>25</sup> See Sorte's biography, in my article cited note 1 above. Sorte's lost map of the Tyrol, it should be noted, was apparently made in direct continuation of Dax's work for the Emperor Ferdinand I. In note 6 of my previous article, I associated Sorte's work with Ferdinand II but, as Dr. *Hans Martin von Erffa* has kindly pointed out to me, this is mistaken.

In a petition to the Venetian Collegio, acted upon 1st June, 1568, Sorte described his map as *il disegno del contado di Tirolo con tutti i passi, che vengono nelli Territorij del Bresciano, Veronese, Vicentino*,

That Sorte knew and drew inspiration from Northern European landscape representations seems almost certain. The rugged pinnacles painted in his maps are a Netherlandish convention, as I remarked already in my earlier article. His field drawings, which have not been studied heretofore, suggest a knowledge of Northern, and especially Flemish landscape drawings.

All of them were strictly functional in purpose. They were made to record property lines, bearings, and the like. But the perspective views that figure among them may be regarded also as landscape drawings, and as such they offer a basis for the study of Sorte's drawing style. They are extremely beautiful (Figs. 4, 5, 9). The forms are rendered almost exclusively in outline, drawn with a very fine pen, in long, single (i.e. not multiple) and very slightly tremulous strokes. Hatching is used sparingly and commonly serves not to model relief but to separate different areas, as color would in a painting. The preëminence of outline, the thinness of the pen stroke, and the tonal use of hatching are all characteristics of Giulio Romano's pen drawing style. Also some of Sorte's landscape notations resemble those of Giulio. Hills on the horizon are represented by a quick, cursive outline that leaves them transparent, as if bleached by aerial perspective. Trees are rendered by one, continuous contour line (as against the Venetian convention of drawing bundles of feathery fronds). Both abbreviations go back to Raphael.<sup>26</sup> Sorte must have learned them, as well as his penmanship, from Giulio, under whom he had worked as a young man.<sup>27</sup>

☞ *Bassanese per me fatto in nome della Maestà dell'Imperator Ferdinando, buona memoria; C. Sorte, Modo d'irrigare la campagna di Verona etc., Verona, 1593, pp. 1-4.* Only Ferdinand I can be meant (d. 25th July, 1564). The petition sought to revive a project for a copy of the Emperor's map, expanded by the addition of the territories of the Venetian mainland state, commissioned by the Collegio on 9th April, 1565, but never taken in hand for want of funds. (In my earlier article, loc. cit., I mistakenly attributed this date to Ferdinand's map). No documents relating to the project, nor the sketch of the proposed map submitted by Sorte with his petition of 1568, have been found by me in the *Notatorio* of the Collegio or in the archives of the Camera dei Confini and the Magistrato ai Beni Inculti, to whom the petition was referred. But nothing seems to have come of the matter in 1568 either, since the great wall map for the Sala del Senato conceived ten years later was identical in content with the map projected in 1565 and 1568. The Latin legends of the Emperor's map and of the sketch submitted in 1568 were transcribed by Sorte into his chapbook, preserved at the Biblioteca Marciana (see note 13 above), resp. pp. 36-37, 59 v - 60 v. (In my earlier article, I mistakenly identified the first of these as a copy of Ferdinand's commission).

From Sorte's quoted description, the Emperor's map seems to have taken in the same territory that Dax was mapping at the time of his death for Ferdinand I. It was commissioned, as we have seen, by the same patron. If it was therefore a continuation of Dax's work, we can date it precisely between the deaths of Dax, in 1561 and Ferdinand in 1564. Sorte's acquaintance with maps such as those by Dax, however, was older by some years. Already the etched map of the Bresciano of 1560 shows his characteristic landscape forms, and the latter is likely to have reflected an even earlier map of the same province of 1554 (see note 13 above).

<sup>26</sup> They appear also in a few of Parmigianino's drawings, made after the latter's visit to Rome, e.g. n° 117 in *A. E. Popham, Catalogue of the Drawings of Parmigianino, New Haven, 1971*. In the case of Giulio, see the landscape backgrounds in his drawings of the Erotes of Philostratus and the arms of Cardinal Ercole Gonzaga, n° 217 and 362 in *F. Hartt, Giulio Romano, New Haven, 1958*. Giulio's pen line and use of hatching are well represented in his drawings of the Rape of Mymone and the Calydonian Boar Hunt, *ibid.*, n° 162, 293. Raphael drawings that were a model for both artists are such as the studies for the Miraculous Draught of Fishes and Charge to St. Peter, n°s 241 and 245 in *O. Fischel, Raphaels Zeichnungen, Berlin, 1913-41, VIII*.

<sup>27</sup> Sorte mentions his stay at Mantua in his treatise, *Osservazioni nella pittura, Venice, 1580, p. 16 f.* (second edition, 1594, p. 20 f.; ed. *P. Barocchi, Trattati d'arte del Cinquecento, Bari, 1960-62, I, p. 297 f.*). He speaks of an illusionistic vault decoration that he executed in the Castello of Mantua for Federico Gonzaga, and the perspective construction of which was explained to him by Giulio. We must assume that the entire decoration was designed by the latter, and that Sorte was only the executant. Cf. *J. Schulz, A forgotten Chapter in the early History of Quadratura Painting: the fratelli Rosa*, in: *Burl. Mag.*, 103, 1961, pp. 90-102 (p. 92).

Sorte's account is supposed to be illustrated by a reproduction of a foreshortened twisted column, the motive which, in Sorte's words, became the *primo principio* ☞ *fondamento* of the Rosa brothers' *quadratura* schemes. All illustrations are missing in the first edition of the treatise, however, and I was able to reproduce (loc. cit.) only an early copy of the cut. An exemplar of the extraordinarily rare second edition has since become known to me (Bibl. Apostolica Vaticana, Cicognara IV, 213). It provides the missing woodcut on p. 21 r (Fig. 10).



8 Paul Dax, Map of the Boundaries of Bavaria and Tyrol. Innsbruck, Tiroler Landesarchiv (on loan to the Tiroler Landeskundliche Sammlung).

Neither Giulio nor any other Italian artist of the mid and early Sixteenth Century, however, drew landscapes of such informality and directness as Sorte's. The small sketches of the Pizzo della Presolana and the Pizzo del Camino, part of the field drawings for the Borno-Scalve survey, are totally unprejudiced in their observation and unerringly fluent in execution (Figs. 4-5).<sup>28</sup> Everywhere the artist's pen is seeking the exact outline of the crags; there is no *idea*

<sup>28</sup> From the miscellany of drawings (see note 12 above), 22nd gathering, pp. 3 r and 26 v, which are the two halves of a single sheet measuring 308 × 430 mm. overall: pen and brown ink.



9 Cristoforo Sorte, The Castello Muselli, near Incaffi, seen from the South, pen drawing. Venice, Archivio di Stato.

of a mountain that comes between him and the motive. A rapid, scribbly pen stroke marks the contours. Unsystematically applied volleys of hooks and dashes form the hatching (used here to give both color and relief). A great naturalism of forms and an atmospheric texture are the combined result. Among the hundreds of field drawings preserved in the Venetian archives, there are also some views of less savage scenes, more directly comparable with Italian landscape drawings of the time. An example is the view of the Castello Muselli at Incaffi, between Verona and Lake Garda, showing a valley with hills and trees and an abrupt cliff at the right (Fig. 9).<sup>29</sup> There is no artificial frame; the motives organize themselves around a natural feature, the eminence with its castle. Rapid, quavering strokes outline the imprecise contours of wooded hills and cliffs, copses and single trees. Even the buildings lack clean edges; their silhouettes are

<sup>29</sup> *Ibid.*, 104th gathering, p. 4 v, which is half of a single sheet measuring 318 × 430 mm., the remainder of which is blank (the drawing measures 318 × 215 mm.): pen and brown ink. The view and the sketch plans of the site that accompany it are all undated. Their watermark, a kneeling angel with a banner, is very common in mid Sixteenth Century papers of the Val Padana and Veneto (cf. *Ch.-M. Briquet*, *Les filigranes*, Paris, 1907, I, n° 625-638, dating from 1547 to 1574). The site is identified as Incaffi on pp. 1 r and 2 r of the gathering. It is little changed today. The *marna dl fracastor*, on the right, is gone, but the Castello still stands, albeit much restored. Sorte has stretched out distances on the horizontal axis and made the foreground fall away more sharply than it does in reality. In this way the respective positions of different landmarks such as the boulder, path, trees, and buildings, are made more evident and the purpose of the sketch as an *aide-memoire* is better served. (I am extremely grateful to dott.ssa M. S. Tisato for having guided me to and around Incaffi).



broken up by chimneys, rotting battlements, and changing roof levels. Again, no *idea* of fields and castles is interposed between the motive and the moving pen.

The unstudied quality of Sorte's compositions and the naturalism of their forms and textures set them entirely apart from Venetian landscape drawings. Whether the pastoral landscapes of Titian and Domenico Campagnola, or the ruin landscapes of Battista Pittoni, Venetian landscape drawings of the early and mid Sixteenth Century are highly idealized in content and conventionalized in their forms.<sup>30</sup> They are studio drawings rather than records of things seen in the country. Indeed, before the later Sixteenth Century few Italian artists drew directly from nature, and even fewer were able to shed the formality of their highly refined techniques and disciplined sense of form when doing so. Only Leonardo and Parmigianino have left a handful of studies that, in the casual placement and looseness of the forms, attain the freedom of Sorte's sketches. Early Sixteenth Century Flemish artists, on the other hand, drew often in this fashion. Beginning with Hieronymus Bosch and Joachim Patenier, informal landscape drawings become ever more common in the Flemish school.<sup>31</sup> It is not that one can point to any particular artist as Sorte's model. Rather, it is that Sorte's basic approach to landscape is similar to one firmly established in Flanders but still entirely exceptional in Italy at the time he was learning his art. One or more Flemings worked as landscape specialists in Giulio Romano's Mantuan studio.<sup>32</sup> It seems likely that Sorte's unconstraint when drawing landscape motives was learned there. The disparity between his drawn and painted landscapes, the one so naturalistic, the other quite conventionalized, is no obstacle to this suggestion. It is characteristic also of Netherlandish art.

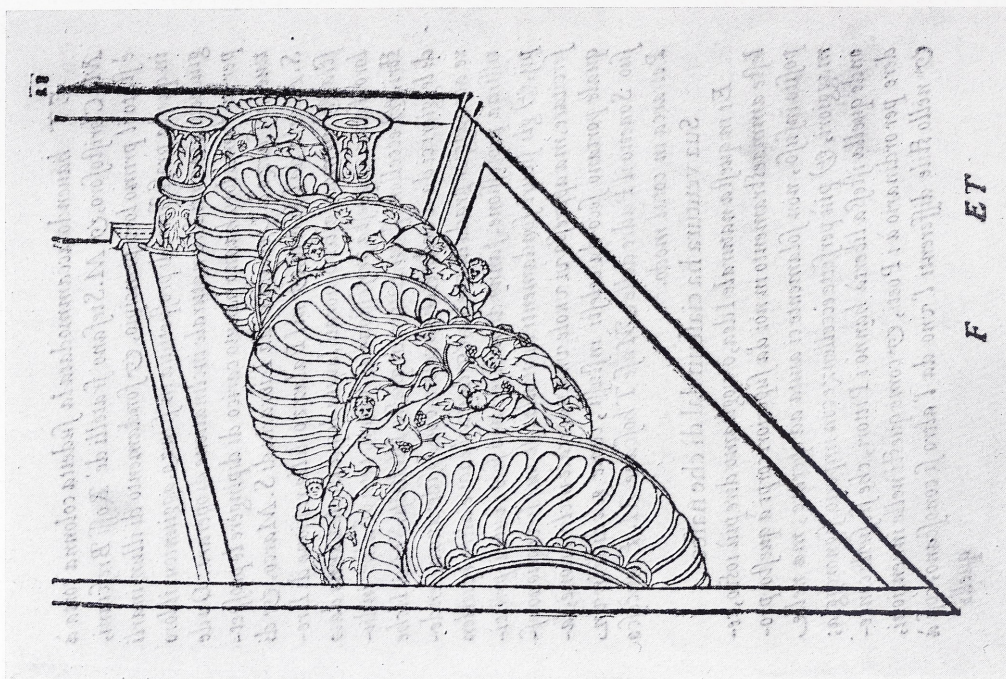
The mixture of sources that went to make up Sorte's personal style as a painter of maps and draughtsman is not unusual for mid Sixteenth Century Italy. Artistic culture, like humanist culture, had grown national and even international by this time, in the Veneto as in every other province. And yet, the particular choices and combinations he made are quite distinctive. His maps were compiled by traditional methods, and complemented by landscape forms that were equally conventional in their own context, i.e. in European Sixteenth Century landscape painting. But the combination is remarkable; the maps have an expressive content that makes them stand out among Italian maps of their time. His drawings effect a fusion of Italian technique and Northern vision that is familiar in Roman drawings of the turn of the Sixteenth to Seventeenth Century. But the precocity and sureness with which it is already realized by Sorte are astonishing. Even in 1975, it would seem, the roll of gifted artists in Renaissance Italy is not closed. We can add to it a superior landscape draughtsman who heretofore was altogether unknown.

<sup>30</sup> Titian and Campagnola drawings are often illustrated. For particularly good reproductions see the volumes of *D. von Hadeln*, *Venezianische Zeichnungen der Hochrenaissance*, Berlin, 1925, pls. 5-7, and, *Titian's Drawings*, London, 1927, pls. 4, 48, and the exhibition catalogue of the Metropolitan Museum of Art, „Drawings from New York Collections, I, 'The Italian Renaissance“, New York, 1965, n° 81, 58, 59.

Pittoni is best known for his landscape etchings of 1561 and after; cf. *K. Oberhuber*, Hieronymus Cock, Battista Pittoni und Paolo Veronese in Villa Maser, in: *Munuscula disciplinorum*, Kunsthistorische Studien Hans Kauffmann zum 70. Geburtstag 1966, ed. *T. Buddensieg und M. Winner*, Berlin, 1968, pp. 207-224. Recently, a group of drawings resembling the prints has been attributed to him by *M. Ballarin*; cf. Rome, Villa Medici, „Il paesaggio nel disegno del '500 europeo“, Rome, 1972, n° 111.

<sup>31</sup> *H. G. Franz*, *Niederländische Landschaftsmalerei im Zeitalter des Manierismus*, Graz, 1969 (Univ. Graz, Kunsthistorisches Institut, Forschungen und Berichte, II).

<sup>32</sup> A certain Luca Fiammingo (sometimes called Luca Tedesco) is frequently mentioned as a *paesista* in the accounts of Giulio's decorative projects during the years 1536-39 (*Hartt* [see note 26], pp. 79, 164, 167, 217, 260). What may have been still other northern painters employed by Giulio make fugitive appearances in the same documents (*ibid.*, pp. 166, 171 n. 2).



10 Giulio Romano's foreshortened, spiral Column. Woodcut from, C. Sorte, *Osservazioni nella pittura*, 1594.

## APPENDIX

### 1. Map of the Territory of Bergamo.

340 × 168 cm.; paper (pieced), laid down on fine canvas. A small hole, bottom left, and a large missing portion along the right (widening from approx. 8 cm. at the height of Lake Iseo to 87 cm. at the bottom edge) have been neatly repaired.

Rivers and buildings are outlined in pen and brown ink. Other features are painted with brush and water-color over traces of pencil. Rivers and lakes are colored light and dark blue, mountains are various shades of green, roads beige, towns light and dark red. Names of cities, provincial and national boundaries and passes are indicated in black, red, green, and gold, following a color code explained in the inscription. Flatland is uncolored. (This corresponds with Sorte's proposal of December, 1585: „le pianure... restino bianche acciochè i colori non impedischino così le lettere“; cf. note 5 above). The medium is gum arabic, i.e. the technique is true water color (see the careful description of his technique in Sorte's *Osservazioni nella pittura*, Venice, 1580, pp. 6 v - 8; second edition, Venice, 1594, pp. 9 v - 11).

Inscribed in the cartouche, lower left, as follows.

#### SCALA DE MIGLIA TREI ALLA MISVRA. D. ITALIA.

A preso si à da sapere come questi migliari è de passa mile per miglio à rason de piedi cinque per passo alla misura Venetiana, del 20. luglio, 1586.

Hauendo io christoforo Sorte corographo, et perito ordinario dil Clar.mo Magistrato di benj incultj del Ser.mo D. D. di Venetia, fino lanno 1578, 27, luglio principiato il disegno dilla corographia di tutto il stado di terra ferma, di questo Ill.mo D., de ordine dillj Clar.mj Ms. Marca(n)tonio Barbaro, et Ms. Vincenzo morosini, Dig.mj Pro.ri di S. Marco, et Ms. Piero Foscaro, et hauendo poi allj 8. Gienaro, 1585, al modo di Venetia, hauta particolar intencione allj Clar.mj Ms. Fran(ces)co Foscari, Ms. Polo Paruta, Ms. Gio(vanni) Moro, K(avalier), intorno la ricompensa mia non solamente per continuar, et tenir la opera sudeta Ginerale ma anco di fargli oltra à esso disegno cinque altri quadri dilla istesa grandezza ne

quallj si chiudessero tutti li Terr(ito)ri di esso stado, mi ha parso dar precipio al presente Territorio di Bergamo, con parte dilla Valtelina, Milanese, Cremonese, et Gieraradada, fino al Po, F(iume), et apreso dicio Crema col suo Territorio, et parte dil Bresciano, no ho hualuto mancar quanto è stato il saper mio di seruir, et piacer à chi mi può comandar pienamente, Aduertite adonque Ill. et Nobilissimj Sig.ri chio ho fatto questa descrizione dil paese di Bergamo Giusto quanto mai ho saputo in misura con i suoi Venti, et distantie da locco à locco come per la scala qui disopra dissegnata col compaso si potra ampiamente uedere, et acio che meglio intendiate ui facio sapere come queste lettere. P. nottate nel disegno di oro, significano i lochi per li quali si può pasar ouer transitar ne i Territorij circonuicinj cosi di terre aliene come dilla Ill.ma Sig.a di Venetia, doue hauerette da aduertire che i nomj di essi transiti è nottati con lettere nere, et qui a parte dimostrano la natura di essi transiti, et i Territorij Ciconuicinj di terre aliene sono notatj con lettere Rosse, et quelle della Ser.ma Sig.a con lettere nere, et le lettere delle Citta, et terre precipale di esso stado sono nottate di oro, et la circoferenza dil presente Territorio sono separato con una aquerella di lacha dallj paessi alienj, et doue serano confinj Notabilj, et fissi oltra à essa aquerella di lacha ui sono una linea di oro, la qualle chiude, et mostra qualle sia Tutto il Territorio dilla Nobilissima, et molto mag.ca Citta di Bergamo. Pigliate adonque Benignissimj Sig.ri, tutte queste mie fatiche per bene, et se io ho mancato in qualche co n to accettate il bono animo di christoforo Sorte il quale uie con tutto il cuore Vmilissimo fidelissimo s(ervi)tor chi idio ui faccia felice senza fine.

& perche si conoscha li Territorij Bergamasco Via dal Territorio Bresciano ui è tirato Vna linea di oro che separa luno dall'altro.

*Inscribed in the cartouche, bottom center: a description of 23 mountain passes, distinguished between those passable and impassable on horseback, entitled, "Instrutione de tutti li Transitj doue si può Transitar dil presente Territorio Bergamasco neli lochi circonuicinj in terre aliene".*

*North North East at top. From the northern extremity of Lake Garda at the top to the confluence of the Rivers Adda and Po at the bottom; from Lake Garlate on the left to Lake Iseo on the right. Scale of three Venetian miles (= 123 mm.; the approximate scale is 1:42 240).*

*Exhibited: Venice, Palazzo Grassi, "Tesori d'Arte Italiana. Mostra mercato dell'antiquariato (26 maggio-30 giugno 1962)", Venice, 1962, p. 49, N° 405 (wrongly described as dated 1578).*

## II. Map of the Territory of Brescia.

*340 × 169 cm.; paper (pieced), laid down on fine canvas. Small holes at the bottom left and an irregular missing portion along the right (widening from approx. 15 cm. at the height of Sirmione to 55 cm. at the bottom edge) have been neatly repaired. The cartouche with the inscription, lower right, has been saved and pasted down on the repair.*

*Technique as in the map of the Bergamasco, above.*

*Inscribed in the cartouche, lower right, as follows.*

Io christoforo sorte primo perito ordinario di beni inculjt ho fatto il presente disegno del 1591.

### SCALA DE MILLIA DVE ITALIANE

MENTRE che di commisione dilli Ill.mi Sig.ri Pro.ri sopra la fabrica del Palazzo dilla Ser.ma Sig.a di Venetia, mj diedj a porre in disegno la corographia dil presente Territorio Bresciano sua Citta il qualle sono vna dille cinque parte di tutto il stado di terra ferma, Posi ogni pensiero, che tutte le partj, et qualita di Lui con giuste misure, et distanze, perfetamente si conoscessero, Percio non espermiando alcuna fatica, i luochi che gli confinano uj aggjionsi come amplamente sopra a esso disegno si puol Vedere la che separacione dalli Paessi alienj da quelli dilla Ser.ma Sig.a de Venetia, quallj sono signatj con unna aquerella de lacha, et quellj Paessi dilla Ser.ma Sig.a de Venetia, quellj sono signatj, con unna linea de horo, et quanto puoi Volendo sapere tuttj lj passi, et transitj che uscise di esso Territorio Bresciano in terre aliene saranno notato con questa lettera .P. rossa con i nomj loro, et li passi ouer transitj, che uane territorio al'altro della Ser.ma Sig.a saranno nottati con questa lettera .P. di colore negro con li loro nomj. + questo sono breui cognitionj Sig.ri quanto contiene il territorio bresciano con li paesi circonuicinj al terro. ...; [*eleven words illegible from water damage*].

*North on top. From the Valtellina at the top to the River Po at the bottom; from the River Olivo on the left to the eastern bank of Lake Garda on the right. Scale of two Venetian miles (= 63 mm.; the approximate scale is 1:55 200).*

*The area covered by the map agrees broadly with that reproduced in Sorte's etched map of the Bresciano*

of 1560 (see note 13 above). Slight amounts of territory on the extreme left and right have been eliminated, and the bottom has been extended to include the River Po. The suggestion of Almagià, that an engraved map of the Bresciano of 1597 by Leone Pallavicino may have been based on the present map from the Ducal Palace is thus mistaken. Pallavicino's print reproduces the exact area of Sorte's etching and was based on the latter (cf. R. Almagià, *Monumenta Italiae cartographica*, Florence, 1929, p. 39-b and pl. XLII-2).

*Exhibited: as above.*

#### RIASSUNTO

Si pubblicano le carte del Territorio Bergamasco e del Territorio Bresciano, dipinte nel 1586 e nel 1591 da Cristoforo Sorte come parti di una serie di carte topografiche destinate al Palazzo Ducale di Venezia, tentando di spiegare l'eventuale collocazione di esse in ambienti retrostanti alla Sala del Senato. Altri parti di questa serie sono già state pubblicate dall'Autore nel volume X, 1962, delle „Mitteilungen“. Per mezzo di un esame dei rilievi del Sorte, si studiano i metodi da lui adoperati per raccogliere i dati cartografici, e per il loro stendimento in vere carte topografiche. Il raffronto dei suoi disegni con altri dell'epoca rivela le fonti artistiche del Sorte come disegnatore di paesaggi.

#### Photo Credits:

*Ferruzzi, Venice: Figs. 1, 2. - Author: Figs. 3, 7. - Archivio di Stato, Venice (by permission of the Ministero dell'Interno, Parere ministeriale no. 844, 24th January, 1975): Figs. 4, 5, 6, 9. - Tiroler Landesmuseum, Innsbruck: Fig. 8. - Bibl. Vaticana: Fig. 10.*