

PASTED TOPOGRAPHIES

INTRODUCTION

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The volume *Pasted Topographies* deals with processes of joining papers together by gluing and pasting. These are considered an important, sometimes even constitutive aspect of the production, the processing or the use of topographic images. So far, these gluing processes have mainly been considered in relation to restoration, and hardly at all with regard to their relevance for topographic representations of space. One obstacle to the study of gluing in cartographic production has been the “ideal of cartography”, as described and vociferously criticised by Matthew Edney: in the Western tradition, cartographic images are commonly regarded as intellectual products of mathematics and abstraction, evolving and improving through a steady historical progression of precision techniques.¹ This volume counters this idealising and historically inaccurate idea of cartography by presenting studies of the concrete conditions of the production and use of topographic image media, specifically with regard to gluing and pasting and their relevance for the representation of spaces. Its focus on processes of “mapping”,² which involve various actors as well as technical procedures, instruments and materials, dovetails with recent research trends in the history of science. Here, too, the material preconditions of knowledge production have been the subject of increasing interest in recent decades, bringing practices and objects into focus, such as laboratory equipment or cameras.³

- 1 Matthew H. Edney, *Cartography. The Ideal and Its History*, Chicago 2019.
- 2 Edney 2019 (note 1), chapter 6: “Not Cartography, But Mapping”.
- 3 The following titles are examples of such an approach: Steven Shapin and Simon Schaffer, *Leviathan and the*

Airpump. Hobbes, Boyle, and the Experimental Life, Princeton 1985; Anke te Heesen, “News, Paper, Scissors. Clippings in the Sciences and Arts around 1920”, in *Things that Talk. Object Lessons from Art and Science*, ed. Lorraine Daston, New York 2004, pp. 297–327;

Dealing with the very specific subject of gluing and pasting brings with it certain hurdles. If such processes are applied in preparatory stages of image making, they can rarely be traced on the cleaned-up end products. Evidence of such preliminary work, which was often rough and messy and could involve individual images being cut up, pasted together or combined, rarely survives.⁴ The historically and culturally specific techniques of pasting and gluing are also difficult to research because knowledge of exact techniques and recipes was often kept secret or only passed on orally, within the walls of craft workshops.⁵ It is only since the “material turn” that cultural studies today are prepared to appreciate the subject in its radical materiality. Earlier studies of historical pasting and gluing techniques concentrated on the necessities of restoration practice or the classification of these processes as precursors of modern procedures.⁶ Moreover, it is not always easy to distinguish precisely between material and other types of joining – like for example the drawing of images on a paper ground that has previously been glued together –, the combination of different materials, or digital processes of *copy and paste*. It is only by examining individual cases that the description of and the distinction between such practices become possible.

The case studies in this volume all deal with the physical pasting or gluing of paper to paper. This was not an active decision on the part of the editors. This focus emerged from the research of the scholars who have contributed to the volume. As self-evident as it may seem in view of the history of topographic image media in Western Europe, this particular technique is subject to specific conditions. One of these is the existence and use of

Bruno Latour, *Science in Action. How to Follow Scientists and Engineers through Society*, Milton Keynes 1987; Bruno Latour, *Reassembling the Social. An Introduction to Actor-Network-Theory*, Oxford et al. 2005.

⁴ This has been similarly noted in relation to intermediate steps in the production or compilation of texts, which can involve processes of paper-cutting, the use of snippets, as well as gluing. See John Considine, “Cutting and Pasting Slips. Early Modern Compilation and Information Management”, *Journal of*

Medieval and Early Modern Studies, 45, 3 (2015), pp. 487–504, here p. 492.

⁵ Katrin Cura, *Vom Hautleim zum Universalklebstoff. Zur Entwicklung der Klebstoffe*, Diepholz et al. 2010, p. 25 (following Karl Kamarsch, *Geschichte der Technologie seit der Mitte des 18. Jahrhunderts*, München 1872, pp. 859–860).

⁶ Cura 2010 (note 5) also mostly discusses historical techniques in their function as precursors of modern techniques after 1900, which constitute her main object of research.

paper as a ground for images.⁷ A second one is the availability of adhesives. Let us roughly outline the material conditions for the gluing and pasting of paper between about 1500 and the beginning of the 20th century. In Europe, following the invention of printing, it was mainly the bookbinders who were responsible for gluing paper and preparing suitable glues and pastes. Since the early modern period, ancient reports on gluing and pasting techniques have served as a line of tradition for the bookbinding trade, such as Pliny the Elder's description of the production of papyrus in ancient Egypt in his *Naturalis historia*. According to Pliny, papyrus strips were pressed together and the adhesive effect of the pollen and sap of the plant made them stick to each other.⁸ Based on this technique, as the Greek church leader and scholar Photius reported 400 years later, a certain Phillatius had developed a support for writing at the beginning of the 5th century A. D. The Athenians are said to have been so grateful to him for this that a statue was erected in his honour.⁹ In ancient Rome there existed the profession of the glutinator (Latin gluten; glutinum = glue), who glued together papyrus leaves to form scrolls or codices after they had been written onto.¹⁰

With the invention of printing, the book in the form that is still in use today came into being around 1500. From the very beginning, gluing processes played a decisive role in its production, since a book is held together by the gluing of a textile fabric to a spine. This requires a special sizing that is both stable and flexible so that the pages do not fall apart and the book remains easy to handle. As a result, bookbinders began to specialise in different adhesives and gluing processes. For example, the bookbinder Johann Gottfried Zeidler presented a basic definition of gluing in his *Einleitung in die Buchbinder Kunst* (Introduction to the Art of

7 For a cultural history of paper see Caroline O. Fowler, *The Art of Paper. From the Holy Land to the Americas*, New Haven/London 2019.

8 Plinius, *Naturalis historia*, XIII, 21–26, 81; XXIV, 51. See also Cicero, *Epistolae ad Atticum* 4/4(a), 1.

9 Art. "Phillatius", in *A Dictionary of Greek and Roman Biography and Mythology*, ed. William Smith, 3 vols., London 1873, vol. 3, p. 297: "Filla/tios, (another reading is Φιλτάτιος), a grammarian, contemporary with the

historian Olympiodorus, about A. D. 407. Photius (Cod. lxxx.) in his epitome of Olympiodorus, mentions him as having received the honour of a statue from the Athenians, for teaching them how to glue parchments together."

10 Reinhard Feldmann, "Glutinator", in *Lexikon des gesamten Buchwesens Online*, URL: http://dx.doi.org/10.1163/9789004337862_COM_070568 (accessed 15.02.2023); see also Jaroslav Černý, *Paper and Books in Ancient Egypt*, London 1947.

Bookbinding) of 1706. He described the principle of adhesion between two solid surfaces that are joined together by a soft, adhesive mass:

Gluing, pasting, or caking is manual work in which one spreads or presses a piece of liquid or softened material between two hard and dry things so that the small parts of it enter the pores and small holes or cracks in the hard things and harden in them, so that they adhere to each other.¹¹

Two types of adhesives – glue and paste – were and still are distinguished, according to their different raw materials and methods of preparation. While glue was made from boiling animal products – coarser glue was made from bones, finer from parchment or fish bladders – the raw materials for paste, flour or starch, were derived from plants. They differed significantly in their durability and usage: glue could be dried and remained usable for a long time, whereas paste needed to be used quickly after preparation and could not be stored.¹² The basic ingredients also accounted for their different properties when dried: layers of glue flaked off more easily than paste, which is why Zeidler, for example, preferred the latter.¹³

The production and use of adhesives also played a crucial role in other historical handcrafts, for example the paper producers who prepared their own glue, usually from boiled animal bones. It was needed to coat the surface of paper after it was made, so that colour from the printing press

11 Johann Gottfried Zeidler, *Buchbinder-Philosophie oder Einleitung in die Buchbinder Kunst*, Magdeburg 1708, pp. 10–11: “Leimen, Kleistern oder Kütten, ist eine Handarbeit, da man eine zehe flüssige, oder weich gemachte Materie zwischen zweene harte und trockene dinge streichet geußt oder drucket, daß sich die kleinen theilgen derselben in die poros und kleine Löchergen oder Ritzen der harten dinge begeben, und in denselben erharten, also daß beydes an einander hält.”

12 On the perishability of paste, see Zeidler 1708 (note 11), p. 12; on the durability of mouth glue, which does not develop an unpleasant odour even after a long time, see the article “Leim”, in Johann Heinrich Zedler, *Grosses vollständiges Universal-Lexicon aller Wissenschaften und Künste*,

64 vols., 4 vols. supplement, Halle/Leipzig 1731–1754, vol. 16, 1737, col. 1588.

13 Zeidler 1708 (note 11), pp. 12–14. Zeidler comments on p. 12: “Jedoch ist der Kleister vom Leim darinnen unterschieden, daß der Leim von der Hitze zusammen kreucht, daß seine Theile kürtzer werden, und zerreißen oder abspringen. Der Kleister aber, weil er kürzere theilgen hat, die nicht so dichte, sondern lockerer in einander gewirret, nachgiebt, daß er gleichwohl an einander hält. Weswegen er auch zum Papier und Pergament dienlicher als der Leim [...]”

or ink did not soak in.¹⁴ It was only after Moritz Friedrich Illig developed resin sizing that the scooping and the sizing of the paper could be combined in a single operation, a process that became common practice from around 1840.¹⁵

Other professionals or private individuals could buy glue for their everyday needs from bookbinders or ‘glue boilers’.¹⁶ Since it was easier to handle, glue seems to have been used more often than paste in the private sphere. The most common means of gluing papers together was so-called ‘mouth glue’, which was probably developed by bookbinders.¹⁷ Mouth glue was a glutinous adhesive that was traded in the form of hard, dry sticks or rods, or in sweet-shaped discs.¹⁸ High-grade glue was obtained from fish bladders (isinglass) or cleaned parchment remains, whilst lower grade glue was mostly made from rabbit or hare skin. Sugar was added to the glue, as this was easily soluble in water at body temperature and improved the taste.¹⁹ Reports on the use of mouth glue date as far back as the 14th century. For example, the artist Cennino Cennini (c. 1370–1398) in his *Libro dell'Arte* discussed the composition and use of various adhesives, including mouth glue made from fish bladders:

There is a glue called fish-glu (colla di pesce, isinglass). This is prepared from many kinds of fish. If you put a piece of this to your mouth as long as is necessary, and then rub a little on your sheepskin parchment, or other parchment, it will fasten them strongly together.²⁰

14 Cura 2010 (note 5), pp. 147–152.

15 Albert Haemmerle, Art. “Illig, Moritz Friedrich”, *Neue Deutsche Biographie* 10 (1974), p. 138; URL: <https://www.deutsche-biographie.de/pnd13768553X.html#ndbcontent>. (accessed: 28.09.2023).

16 Cura 2010 (note 5), pp. 48–49. In the “Ständebücher” by Hans Sachs and Jost Amman, as well as in the *Illuminierbuch* by the artist Valentin Boltz of 1549, the production of glue is also described as a sideline of the “parchmenter”, who cooked the particularly pure hide glue from parchment scraps.

17 This is the theory presented by Cura 2010 (note 5), p. 159. This is also suggested by the entry “Leim” in the *Universal-Lexikon* by Johann Heinrich Zedler, which speaks of “Buchbinder- oder

Mund-Leim”, i.e. bookbinder- or mouth-glue. See Zedler 1737 (note 12), col. 1588.

18 On the different forms, see Cura 2010 (note 5), p. 164.

19 Cura 2010 (note 5), p. 157.

20 *The Book of the Art of Cennino Cennini. A Contemporary Practical Treatise on Quattrocento Painting*. Translated from the Italian, with Notes on Medieval Art Methods by Christina J. Herringham, London 1899, p. 90. Another artist who reported making his own mouth glue was the painter Valentin Boltz in his *Illuminierbuch* of 1549, see Cura 2010 (note 5), p. 162.

Aside from its durability, the advantage of mouth glue over liquid paste applied with a brush seems to have been the way it could be applied precisely and sparingly, without causing the paper to curl. After the application of the mouth glue, a “smoothing stone” or a knife made of bone or wood was passed over the area, using pressure to spread the glue evenly.²¹

It was not until the end of the 19th century that mouth glue became unpopular, as it was considered unhygienic. Liquid universal glues that could also be used for gluing paper began to be produced on an industrial scale and were marketed widely. One of these was “Syndetikon”, which came onto the market in Germany around 1880.²² However, the problem that paste and wet glues generally caused paper to ripple easily was not solved until the 1960s with the introduction of glue sticks.²³

As much as gluing and pasting must be understood as technical, material processes, they also need to be considered for their practical and conceptual potential in relation to the production of images. Gluing contributes significantly to the production of topographic visualisations, structuring and enabling certain methods, subject matters and conceptualisations in the representation of spaces, as the case studies in this volume make evident. Its role can be defined more precisely with the help of three heuristic categories. The first, and probably the most important category for topographic images, is the representation of a spatial continuum, which is often based on the assembling of several preparatory sketches or of sheets of paper. The second concerns groups or series, i.e. the creation of an idea of space through pasted arrangements of individual images. The third category encompasses methods of making visible, experimenting with, and testing out alternative spatial designs through techniques of gluing, folding or placing drawings or prints over one another.

21 See Henri Louis Duhamel du Monceau, *Die Kunst verschiedene Arten von Leim zu machen*, vol. 11 of *Schauplätze der Künste und Handwerke, oder vollständige Beschreibung derselben, verfertiget oder gebilliget von den Herren der Akademie der Wissenschaften zu Paris. Mit vielen Kupfertafeln*. German translation, ed. Daniel Gottfried Schreber, Leipzig/Königsberg 1772, pp. 141–180, esp.

pp. 159–163, URL: http://digital.onb.ac.at/OnbViewer/viewer.faces?doc=ABO_%2BZ158339609 (accessed 15.02.2023); see also Cura 2010 (note 5), pp. 164–165.

22 Cura 2010 (note 5), p. 174.

23 Cura 2010 (note 5), p. 167.

Gluing together individual sheets: a prerequisite for the visualisation of a spatial continuum

Topographic visual media are often produced with the aim of making visible a larger whole, a spatial continuum. However, such overall views are often assembled from several individual views. Putting them together results in the imagination of a spatial totality, with the seams remaining imperceptible, almost in the sense of a psychoanalytical *suture*.²⁴ The practical relevance of this process is illustrated by a remark made by the 18th-century bookbinder Zeidler, who described the imperceptible gluing together of sheets of paper into longer formats as a characteristic of topographic pictorial media:

Occasionally, however, a bookbinder comes across something that has to be pieced together in this way, e.g. Long maps, such as those of the Rhine and Danube, [and] of cities, [...] which consist of more than one sheet, which [...] must be pasted together at first. It requires great care to ensure that the writing, even the subtle lines in engravings and woodcuts, meet exactly, so that one almost does not notice that it is put together, but looks as if it were all printed in one piece.²⁵

As Zeidler points out here, it was only by gluing together individual sheets to form a larger support that it was possible to depict certain topographic motifs. To his examples of maps of rivers and city views, others can be added, such as route maps, panoramas and coastal profiles. An engraved

24 Jacques Alain Miller, “Suture (Elements of the logic of the signifier)”, *Screen*, 18, 4 (1977/78), pp. 24–34; Jean-Pierre Oudart, “Cinema and Suture (1969)”, *Screen*, 18, 4 (1977/78), pp. 35–47. The psychoanalytic concept was transferred to film analysis to describe how the spectator connects the individual shots and settings, shot and counter-shot, into a coherent whole of narration and space by filling in the absences and closing (sewing together) gaps with their imagination. See also Pietro Bianchi, *Jacques Lacan and Cinema*, London 2017.

25 Johann Gottfried Zeidler 1708 (note 11), p. 9 (bold in the original): “So kommt

doch jezuweilen einem Buchbinder etwas vor, das auff solche art an einander gestücket werden muß, z.E. **Lange Land=Charten**, wie diejenigen sind, die übern den Rhein und Donau gestellet, [und] Städte, [...], so in mehr als einem Bogen bestehen, welche [...] hernach erst an einander gekleistert werden müssen, da es denn grosse vorsichtigkeit brauchet, daß die Schrift, auch die subtilen Linien in Kupffern und Holtzschnitten genau an einander treffen, daß man es fast nicht mercket, daß es zusammen gesetzt, sondern aussiehet, als wäre es alles an einem stück gedruckt.”

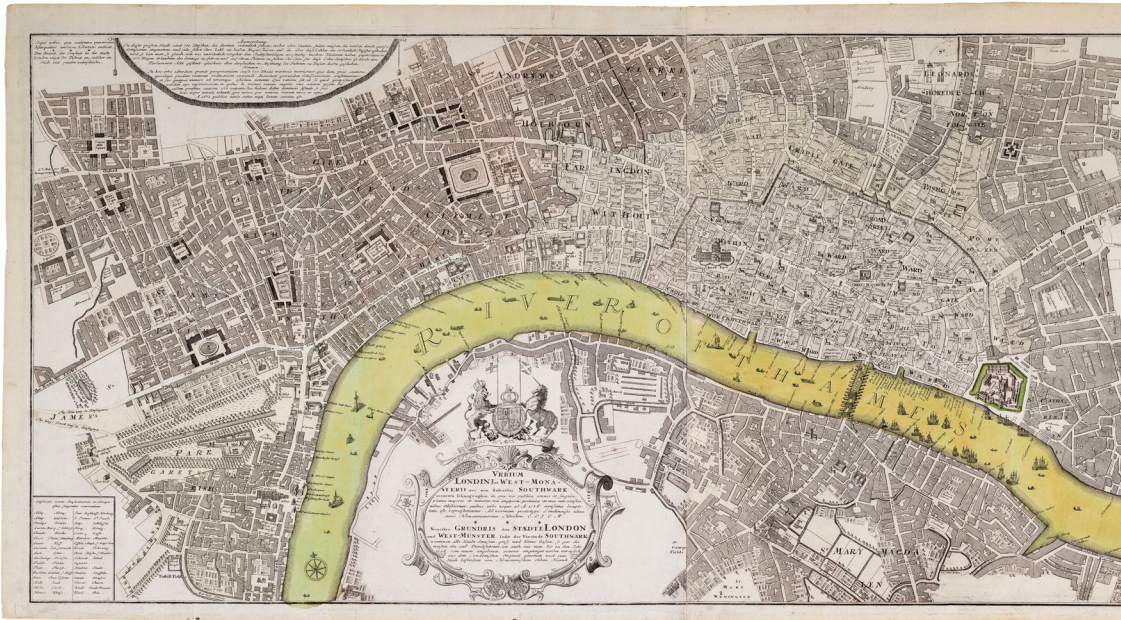
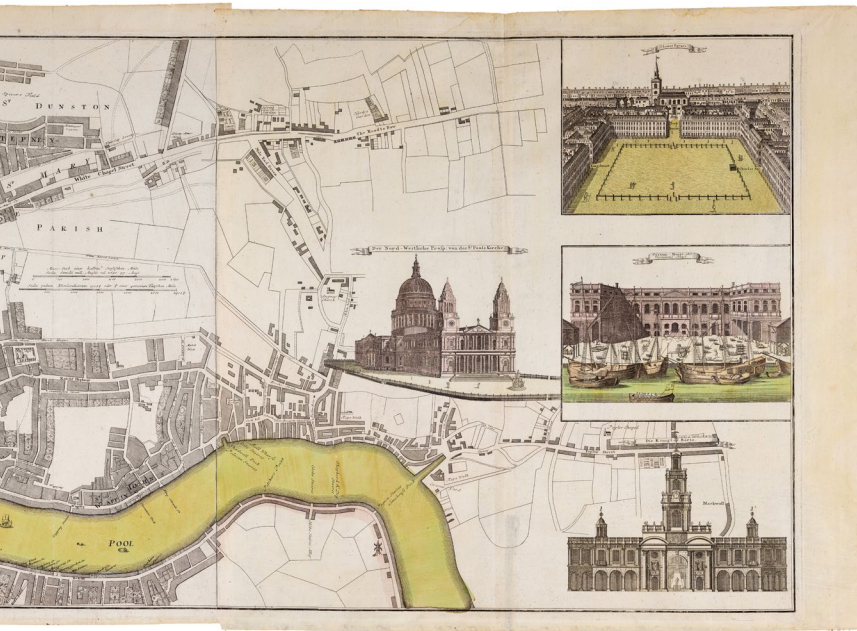


Fig. 1
 Homann Erben, *Urbium Londini et West-Monasterii
 nec non Suburbii Southwark (...)* / *Neuester Grundris
 der Staedte London und West-Münster, Samt der
 Vorstadt Southwark (...)*, ca. 1736, etching, watercolour,
 51 × 168.5 cm (image), 55 × 177 cm (sheet), Götzfried
 Antique Maps, Tettngang

map of London produced in Nuremberg around 1736 with the impressive dimensions of 55 × 177 cm is a case in point (**Fig. 1**). Here, three sheets were first printed individually and then glued together to form the large-format map of the elongated city built along the river.²⁶

This assembling of images of individual, small-scale spatial sections is the basis for that naturalised notion of a regular and continuous space which topographic image media can produce and which at the same time conditions them. Both aspects come into play in the analysis of gluing processes: we are not only concerned with better understanding the material

²⁶ See James L. Howgego, *Printed Maps of London, ca. 1553–1850*, London 1964, No. 81.

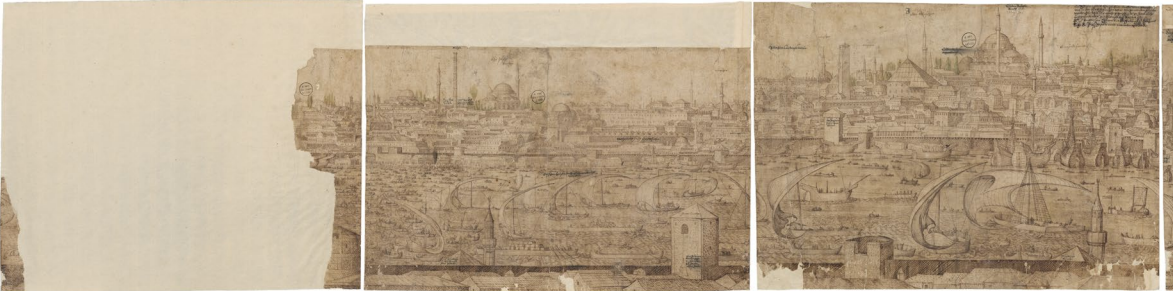


and practical bases of visual representations of extensive spaces, but also with the ideas and imaginaries that these composite visualisations of space convey.

Just as it was necessary for the printing and mounting of topographic representations to first subdivide the space into individual views and then join them together, the same was true for drawing. A prominent example for this is the very long drawing of a view of Constantinople by Melchior Lorck from 1559 (**Fig. 2**).²⁷ The wide panorama depicts the city from the Galata city walls. Research has shown that this view is based on a large

²⁷ Melchior Lorck stayed in the Ottoman capital following his position as part of the diplomatic legation of the Habsburgs. His panoramic drawing has been in Leiden University Library since the

17th century. It is available in a facsimile edition: *Melchior Lorck*, ed. Erik Fischer, 4 vols., Copenhagen 2009, vol. 4: *The Constantinople Prospect*.



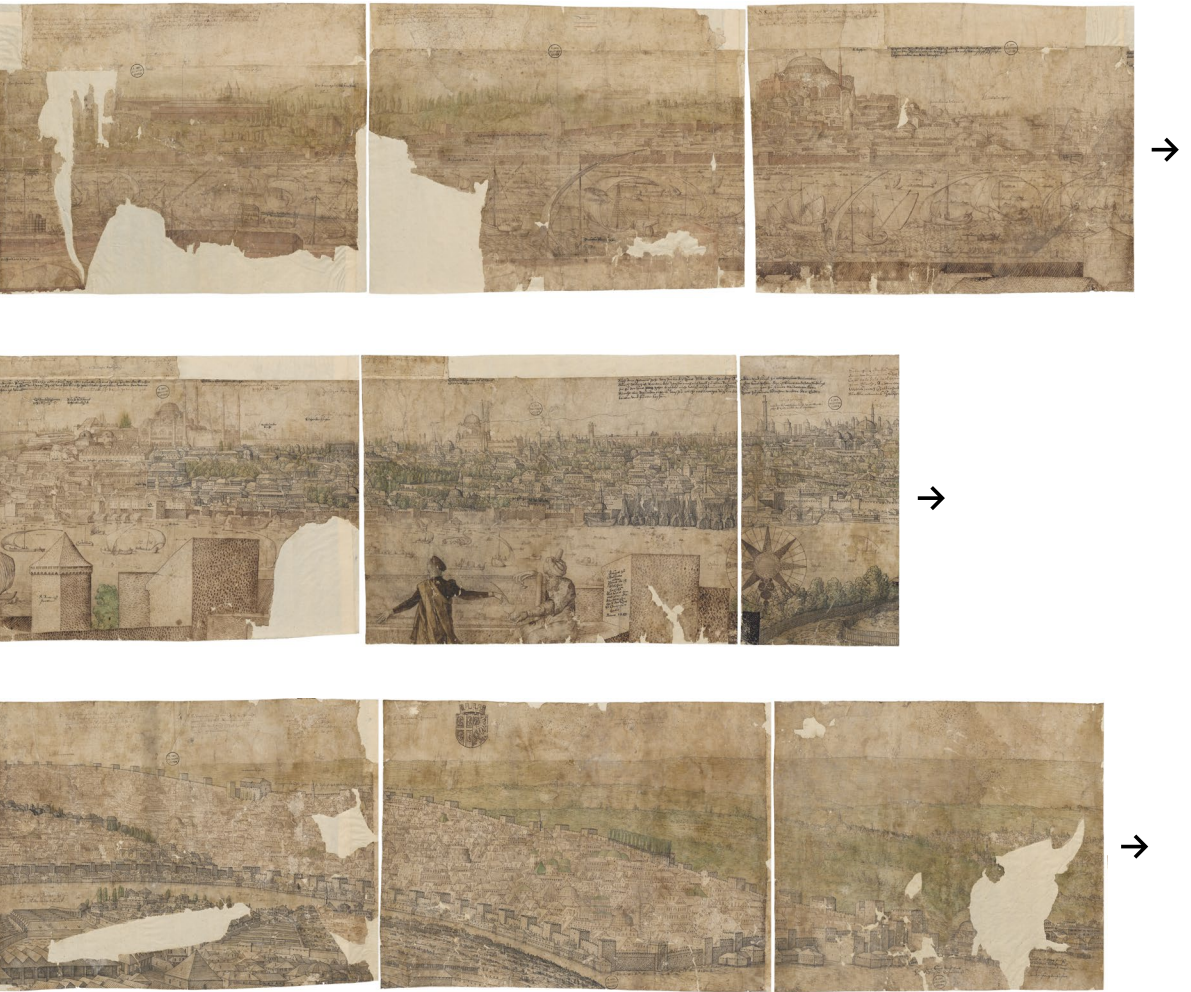


Fig. 2
 Melchior Lorich, *Prospect of Constantinople*
 (consisting of 21 drawings), 1559, pen and ink,
 42.5 × 1127.5 cm, Leiden University Libraries, BPL 1758

number of drawings of smaller sections of space, made from different viewpoints,²⁸ which Lorch later assembled.²⁹ Since evidence of the individual drawings or of any intermediate stages has not survived, it is no longer possible today to reconstruct how exactly the artist handled the material. However, it has been shown that and how he adjusted perspective inconsistencies at the seams, in order to create a coherent overall image.³⁰

The merging or superimposition of partial representations was not only common for panoramic views, as described in the case of Lorch, but also in the historical production of maps, if only for technical reasons. Surveys of parts of a mapped terrain were joined together, or older maps were integrated into a new map, supplemented, or improved.³¹ One convincing study of such piecing together is that of the 240 × 47 cm *Karte der Marsch-Quartiere des königlich sächsischen Infanterie-Regiments Prinz Friedrich, 27. März bis 18. Mai 1812* (Map of the Marching Quarters of the Royal Saxon Infantry Regiment Prince Frederick, 27 March to 18 May 1812). In this case, individual cartographic sketches that were not originally made for this purpose were subsequently joined to form an overall picture. The map is based on drawings from reconnaissance missions that were carried out daily in the field during the campaign. These maps, sketched for practical use in the field, vary widely in size and were drawn using different scales and levels of detail. In order to prepare the representative general

28 Nigel Westbrook, Kenneth Rainsbury Dark and Rene van Meeuwen, “Constructing Melchior Lorichs’s Panorama of Constantinople”, *Journal of the Society of Architectural Historians*, 69, 1 (2010), pp. 62–87. The observation that Lorch’s view was assembled from several individual views is attributed to Karl Wulzinger, “Melchior Lorichs Ansicht von Konstantinopel als topographische Quelle”, in *Festschrift Georg Jacob zum siebenzigsten Geburtstag*, ed. Theodor Menzel, Leipzig 1932, pp. 355–368 (digitised by ULB Sachsen-Anhalt: URL: <https://opendata.uni-halle.de/handle/1981185920/101445>, (accessed 15.02.2023).

29 This also shows that the processuality of the topographic recording is an important part of the result. Lorch’s drawing

“cannot be seen as a freeze-frame view of Ottoman reality, but as a painstaking collection of moments and partial views recorded in field drawings and notes that have been assembled into a whole: it is a pictorialization of successive recordings, perhaps made over many days.” Westbrook et al. 2010 (note 28), p. 78.

30 As a result, the spatial representation appears coherent and uniform, but there is no clear viewpoint. Westbrook et al. 2010 (note 28), p. 76.

31 See for example the articles in *Die Werkstatt des Kartographen. Materialien und Praktiken visueller Welterzeugung* (Laboratorium der Aufklärung 9), ed. Steffen Siegel and Petra Weigel, Munich 2011.

map for printing, it was necessary to adapt and touch up these images. Here, too, all seams and traces of the cartographic process were erased.³²

The potential of gluing was not only put to use in the production of topographic images. It also proved useful for the marketing of representations of continuous spaces. Complex topographic images were distributed in sections that needed to be assembled by the buyers. For example, Christian Gottlieb Reichard's *Atlas des ganzen Erdkreises* (Atlas of the Whole Circle of the Earth) of 1803 consists of a total of six panels that can be joined together to form a cube of the earth, in other words a square globe.³³ Similarly, the "Earth Globe Segment Map" by Martin Waldseemüller, printed in 1507, had to be assembled by users (Fig. 3).³⁴ As a woodcut on paper, it was possible to market a globe in flat-pack form. The elliptical, adjoining sections of the globe could be glued together on a round blank of about 10.4 cm in diameter.³⁵ This assembling of different sections of a map enables the transition from a two-dimensional to a three-dimensional representation, and allows for a more commercially viable form of distribution. Furthermore, this type of topographic representation is characterised by a certain playfulness.

32 Anders Engbert-Pedersen, "Die Verwaltung des Raumes. Kriegskartographische Praxis um 1800", in *Die Werkstatt des Kartographen* 2011 (note 31), pp. 29–48, here p. 46, illustration p. 44 and Tab. II. The sketches are in the map collection of the Staatsbibliothek Berlin (V31167), the map made by Ferdinand Heinrich August von Larisch between 1831 and 1863 in the Hauptstaatsarchiv Dresden (11373, Militärische Karten und Pläne, Sig F. 5, Nr. 49). Engbert-Pedersen points out that there is a fundamental difference between the "empirical vector space" (empirischer Vektorraum) of the underlying, situated map drawings from the campaign and the "panoptic overview map" (panoptische Übersichtskarte) that was derived from them afterwards.

33 See Andreas Christoph, "Vom Atlas zum Erdkubus. Eine kleine Geschichte zur Quadratur des Kreises", in *Die Werkstatt des Kartographen* 2011 (note 31),

pp. 49–66. See the article by Amrei Buchholz in this volume, Fig. 4.

34 Rüdiger Finsterwalder, "Peter Apian als Autor der sogenannten 'Ingolstädter Globusstreifen'?", *Der Globusfreund*, 45/46 (1997/98), pp. 177–186; Ute Obhof, "Der Erdglobus, der Amerika benannte. Die Überlieferung der Globensegmentkarte von Martin Waldseemüller aus dem Jahre 1507", *Neue Welt & Altes Wissen. Wie Amerika zu seinem Namen kam. Begleitbuch zur Ausstellung*, ed. Fachbereich Kultur der Stadt Offenburg, Offenburg 2006, pp. 45–54.

35 Charlotte Gray, "Peter Apian (attributed), Terrestrial Globe Gores, Ingolstadt, after 1520", Kat. 78 in *Prints and the Pursuit of Knowledge in Early Modern Europe* (exhib. cat. Cambridge, Harvard Art Museums), ed. Susan Dackerman, New Haven/London 2011. It has been suggested that such globes were intended as inexpensive illustrative material for school lessons.

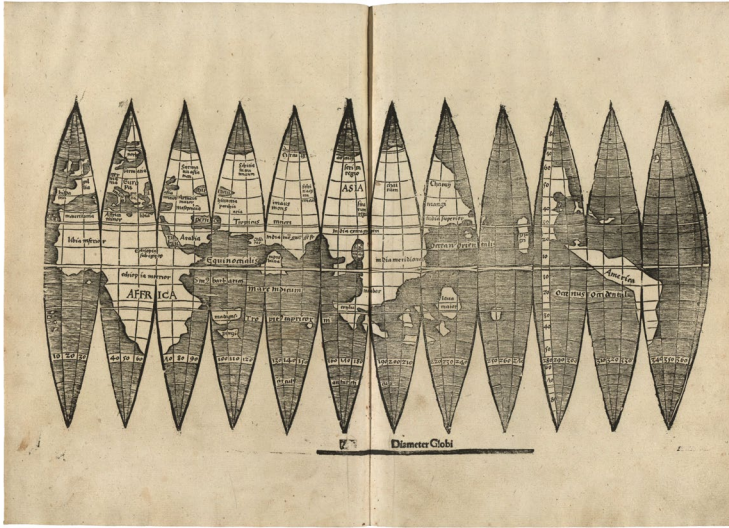


Fig. 3
Martin Waldseemüller [Matthias Ringmann],
Globe Segments, ca. 1507, woodcut, 18 × 35 cm,
Munich, Ludwig-Maximilians-Universität,
Cim. 107#2 (=2 Math. 499#2)

Spatial imaginaries in assemblages of individual images in albums

Gluing is further used to assemble and organize individual images on a common medium. Individual spatial arrangements are created by combining topographic images, especially in photo albums or albums of prints and drawings.³⁶ In the making of such albums, processes of production

³⁶ As early as the 15th and early 16th centuries, Jacopo Rubieri and Hartmann Schedel pasted prints from their collections, mostly featuring ecclesiastical iconographies, into books. By no later than the 16th century, so-called paper museums had been created both south and north of the Alps. These were single or multi-volume albums in which drawings and prints were collected – either inserted between the pages or mounted with glue – and

ordered by motif. On Rubieri see David S. Areford, *The Viewer and the Printed Image in Late Medieval Europe*, London 2016 (2010), pp. 104–163. On Schedel see *Die Graphiksammlung des Humanisten Hartmann Schedel*, ed. Béatrice Hernald (exhib. cat. Munich, Bayerische Staatsbibliothek), Munich 1990, p. 11. Such collections were encyclopaedically oriented and covered one or more subjects. These ranged from topography, through to antiquarian subjects, natural history or architecture, to portraits and costume studies.

and reception are intertwined; finished images from different contexts are selected, combined and thereby interpreted, while at the same time a new order of images is generated.

An early, no longer extant example of such a topographic album was the *Wolf Dietrich-Klebeband Städtebilder*, produced around 1600, which was probably created by Prince-Archbishop Wolf Dietrich von Raitenau (1559–1617) in Salzburg.³⁷ It originally included 148 prints and 14 drawings, mainly vedute and maps. The term “Städtebilder” (“cityscapes”) is somewhat inadequate here, as the volume contained architectural and town vedute as well as views of rural areas, fortresses, harbours and historical battles. This example can serve to illustrate the practice of ordering topographic images as well as the fragility of the result. Based on what could be reconstructed using the numbering of the surviving individual sheets, the volume’s original arrangement of the cityscapes corresponded to the route of a journey from Austria via Switzerland, Burgundy and Alsace, the Netherlands, France and Italy to the Mediterranean.³⁸ In the early 20th century, Ernst von Frisch, the librarian and director of the Salzburg Study Library, had all the prints removed from the volume as he did not consider their arrangement worth preserving. He disapproved strongly of the treatment of the individual sheets, which he regarded as works of art in their own right, as well as of the gluing itself:

The barbaric method of forcing sheets of art of various formats into a folio volume, where those sheets that protruded beyond the edges were folded by bare hands or even trimmed, was unfortunately very popular particularly during the culture-destroying seventeenth century. It is partly out of carelessness, partly out of false reverence, that these monstra [the albums], true monuments to ignorance, have survived to the present day. Our album is also distinguished by the ruthless treatment of its individual sheets; moreover, it was inhabited by a worm, whose favourite food, the paste, was to be found in abundance here in the album.³⁹

37 Christoph Brandhuber and Roswitha Juffinger, “Faszination Stadt. Rekonstruktionsversuch des Klebebands der Städtebilder in der Universitätsbibliothek Salzburg”, in *Zentrum der Macht. Die Salzburger Residenz 1668–1803* (exhib. cat. Residenzgalerie Salzburg), ed. Roswitha Juffinger, Salzburg 2011, wpp. 511–535.

38 Brandhuber/Juffinger 2011 (note 37), p. 513.

39 Ernst von Frisch, “Eine graphische Sammlung des Erzbischofs Wolf Dietrich von Raitenau”, *Salzburger Museumsblätter*, 7, 4 (1928), pp. 1–2, here p. 1: “Die barbarische Methode, Kunstblätter verschiedenen Formats in einen Folio-band hineinzuzwingen, wo jene Blätter,

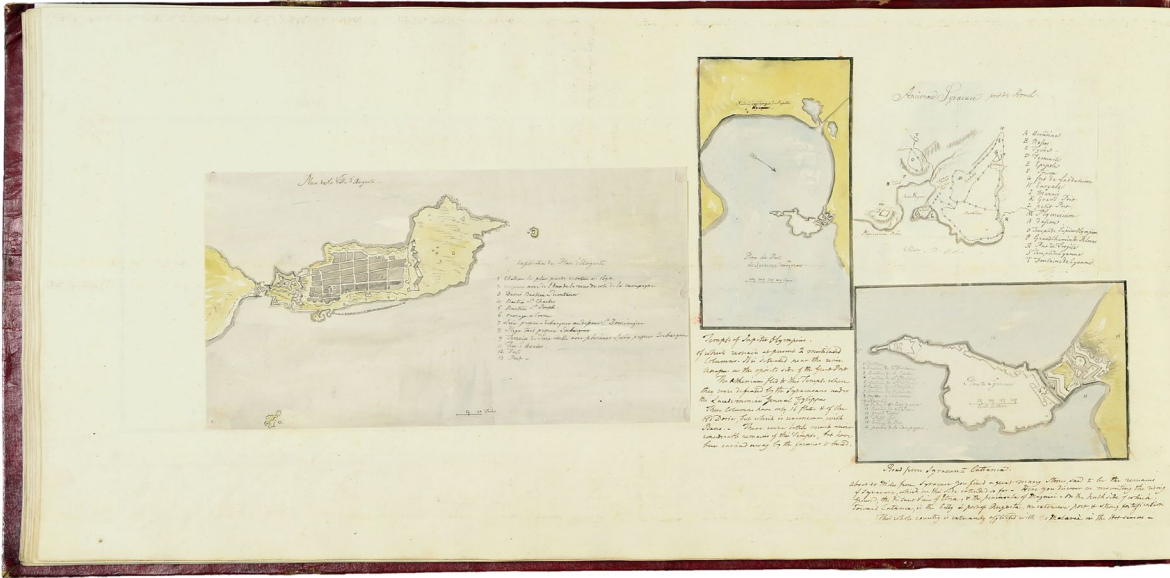


Fig. 4
 Charles Gore, Pages from the album *Voyage de Sicile*,
 1777 (drawings) / after 1790 (album), blacklead, pen and
 ink, watercolour, ca. 164,8 × 39 cm (double album page),
 Klassik Stiftung Weimar, Museen, Identification numbers:
 325010, 325012, 325013 and 325014, 325015,
 325016, 325017

This attitude towards albums is typical of the late 19th and early 20th centuries, when many of them were taken apart, with the extracted sheets filed in libraries, graphic collections or archives, according to classifications such as author or motif. In this process, the specific conceptualisation of space inherent in the medium of the book, as well as its particular sequence of images, were lost.

A further, particularly widespread ordering principle for topographic images is found in printed travel reports or guides, which became customary in Europe from the 15th century onwards. Through this medium, a standard of pictorially documenting travel regions with maps and landscape views was introduced. This practice was fully established in the 17th century, and gave rise to manuscript travel albums in the 18th and



19th centuries (Fig. 4).⁴⁰ Often, these would retrace the route of a journey in images, with early versions using pasted drawings and prints, and later versions containing photographs. Eventually ready-made books with blank pages or specially created albums made it possible to represent the topography of a journey and the places visited. Such albums often also featured a so-called stub binding, which enabled the users to glue in materials

die übers Maß hinausgingen, von roher Hand gefaltet oder gar beschnitten wurden, diese Methode war leider – und besonders in dem kulturvernichtenden siebzehnten Jahrhundert – sehr beliebt. Teils aus Achtlosigkeit, teils aus falscher Pietät, hat man diese Monstra, wahre Denkmäler des Unverständes, bis in die Gegenwart gerettet. Auch unser Klebeband zeichnet sich durch rücksichtslose Behandlung der einzelnen Blätter aus,

überdies hauste der Wurm darin, dessen Leibspeise, der Kleister, gerade hier im Klebeband reichlich zu finden war.” See also Brandhuber/Juffinger 2011 (note 37), p. 513.

⁴⁰ Jordana Dym, *Mapping Travel. The Origins and Conventions of Western Journey Maps*, Leiden/Boston 2021, pp. 51–66; Annette Kranen, *Historische Topographien. Bilder europäischer Reisender im Osmanischen Reich um 1700*, Paderborn 2020.

easily. In this context, the connection between the individual images results from both the geographical arrangement of the places shown and the personal memory of the journey. Through the sequence of images, the viewer can form a coherent mental image of the perambulated space.

Glued-on papers: trying out, experimenting, making alternatives visible

Gluing and pasting techniques not only allow the combination of partial views, but also the layering of alternative views. For example, flaps can be added, allowing to visualise a place at different moments in time, different urban planning scenarios, or different layers of space. A drawing by Hans Vredeman de Vries for the reconstruction of the fortifications of Antwerp of 1577 provides a good example of such an operation (**Fig. 5a–f**). Onto a basic plan of the existing citadel, he pasted five smaller drawings showing variations for the reconstruction, superimposing them on one another so that they could each be lifted up in turn.⁴¹ We can presume that Vredeman de Vries used this method to either try out the different options for himself, or to present them to the decision-makers involved in the reconstruction.

The application of flaps was not only used to plan future changes, but also to represent historical events, such as a landslide that almost completely buried the Alpine town of Piuro in 1618 (**Figs. 6a–b**). A paper flap in the form of the fallen masses of earth and rubble was applied to an etching of the town before the catastrophe. It shows how the small river flowing through the town was dammed up by the fallen layer of slope.⁴² By opening and closing the flap, the event can be replayed and, by comparing the before and after, the change in the landscape and thus the extent of the disaster become apparent.

Another form of experimentation with flaps can be found in Alexander von Humboldt's scientific work. His technique allows for different aspects of

41 See Charles van den Heuvel, "Cutting and Pasting Fortifications. Vredeman de Vries and the Plans for the Insertion of the Partially Dismantled Citadel of Antwerp", in *Hans Vredeman de Vries and the Artes Mechanicae Revisited*, ed. Piet Lombarde, Turnhout 2005, pp. 83–99, pp. 92–95.

42 On this print see Bruno Weber, "Das Elementarereignis im Denkbild", in *Naturkatastrophen. Beiträge zu ihrer Deutung, Wahrnehmung und Darstellung in Text und Bild von der Antike bis ins 20. Jahrhundert*, ed. Dieter Groh, Michael Kempe and Franz Mauelshagen, Tübingen 2003, pp. 237–259, pp. 241–248.

Fig. 5a – 5f
Hans Vredemann de Vries, Designs for the dismantling of the citadel of Antwerp, pen, ink and watercolour, 1577, 44 × 60 cm, Antwerpen, FelixArchief/Stadsarchief, 12#10825

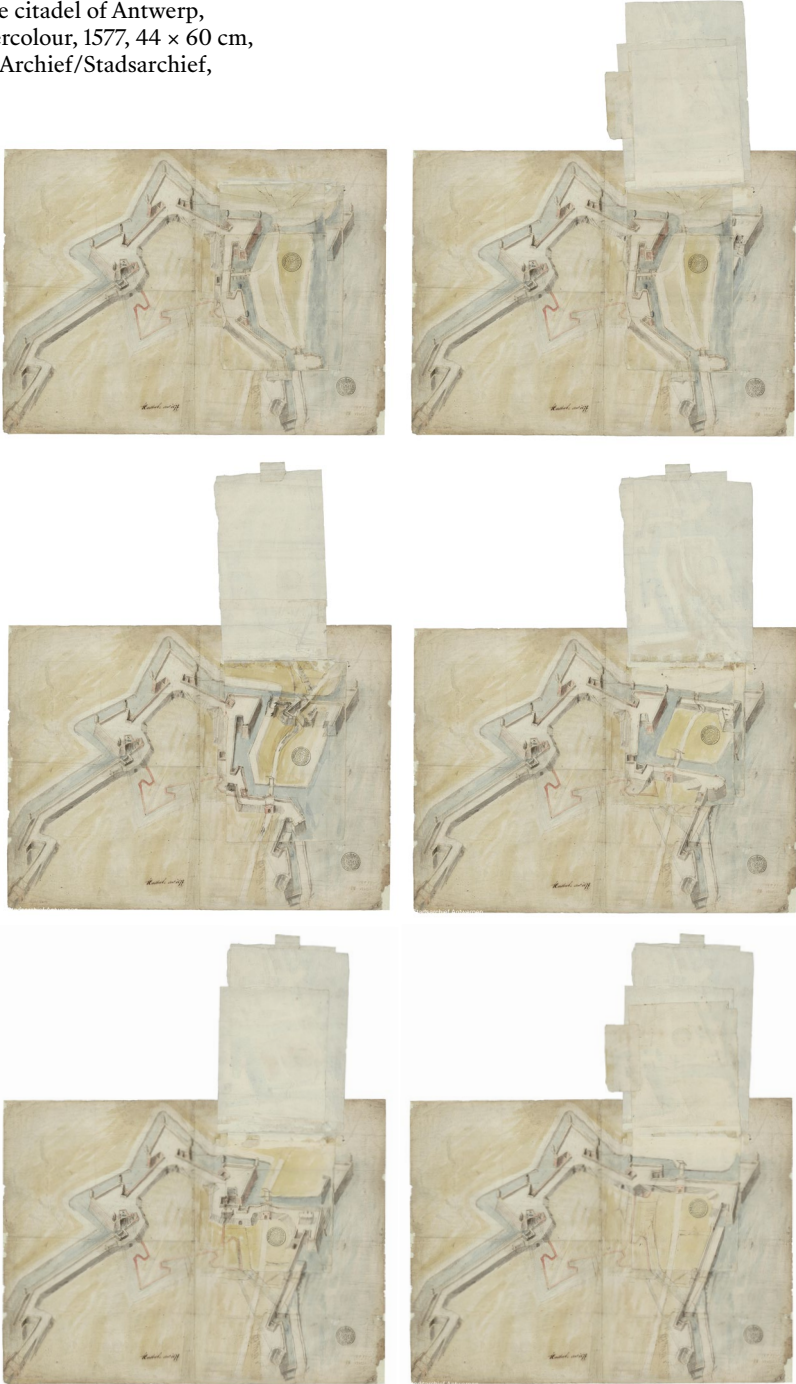




Fig. 6a, 6b (closed)/open
 [Johann Hardmeyer?], *Warhafftige Abbildung des Fläckens Pluses: in den Grawen Pündten gelägen*, ca. 1618, etching, 26 x 40 cm, Zentralbibliothek Zürich, 3 Ge 03:11



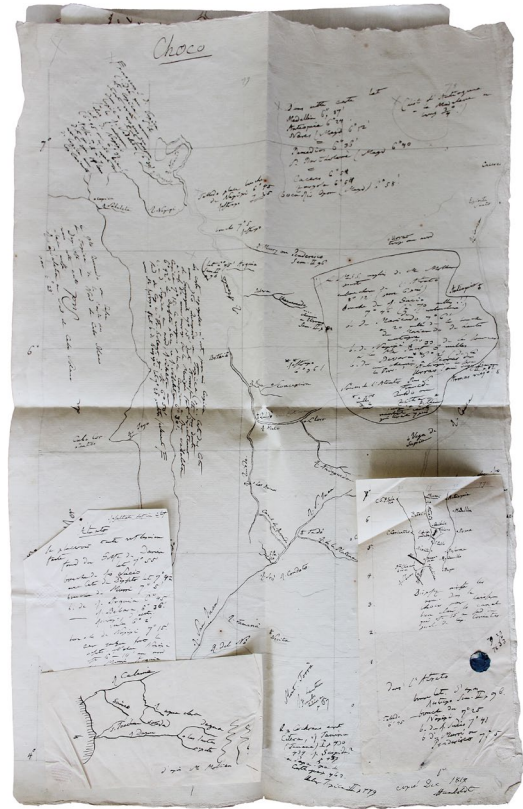


Fig. 7
Alexander von Humboldt, sketch for the *Carte hydrographique de la Province du Chocó*, pen and pencil on paper, between 1825 and 1831, Biblioteka Jagiellońska, Krakau, Berol. Ms. Nachlass von A. v. Humboldt, 8

a topography to be made visible. Humboldt's scientific archive contains several examples in which images of past geological events, geological layers or topographic formations can be combined (**Fig. 7**). The naturalist mounted drawings on papers on top of each other, sticking them together at one or several points, in order to be able to visually compare alternative theories. Here then, we can observe gluing at work as a heuristic technique that facilitates the thought process. In such contexts, glued topographies are ephemeral intermediary products in practical working or thinking processes, and do not usually survive.⁴³

⁴³ Most of Alexander von Humboldt's scholarly archive is kept in the manuscript department of the Staatsbibliothek zu Berlin and is also available in digital form. Further information at URL:

<https://humboldt.staatsbibliothek-berlin.de/#toggle-id-1> (accessed 12.12.2022).

Conclusion

The three categories of gluing and pasting topographic image media proposed here – gluing together as a prerequisite for larger representations of spatial continua, the arrangement of individual images in books, and the visualisation of spatial alternatives – relate to the production of topographic visual media in different but fundamental ways. The option of gluing facilitates specific topographical representations on paper, thus also shaping our ideas of geographical space. Our analytical focus here is on the material production process and thus on the “madness” of spatial representations, i.e. on operations that are usually hidden. This approach enables us to address the cultural dimension of technical procedures: gluing allows the joining, overlapping or interlocking of parts that are ultimately conceived as a whole. It facilitates representations of spatially and temporally uniform, wide-ranging topographies, making them seem manageable and controllable for the purposes of travel, planning, surveillance, surveying and knowledge transfer (even if this does not correspond to our everyday physical experience of spaces, which is rather partial and fragmented). The concrete implications of the cultural technique of gluing for the representation of spaces need to be considered anew and on a case-by-case basis within its different contexts – this is precisely what the contributions in this volume do for their respective fields.