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ENCYCLOPAEDIC PROJECTS OF HUMANIST DRAUGHTSMEN IN THE 16TH CENTURY

The beginning of my paper focuses on a miniature drawing of 14 by 9.5 cm (fig. 1). Viewed metaphorically, it represents the ultimate beginnings of all things, as it depicts nothing less than the genesis of the world out of chaos, reflecting the notions of existing antique cosmogonies since Hesiod. Taken literally, Ovid's account of creation is illustrated here in a way totally unique for the sixteenth century. The peculiar iconography of two creators and, moreover, their differing genders, a male and a female figure appearing at the beginning of creation, can be interpreted with the help of a rather vague passage in the *Metamorphoses*. There Ovid appeals simultaneously to *deus* and *natura*, to a principle pertaining to intellect (*mens*) and to one pertaining to matter (*materia*), if you will¹. Both figures sow seeds. The lower half of the drawing, and this is the actual point of my paper, is filled with a graphic structure defying all description. In contrast to the upper half of the sheet, where anthropomorphic pictorial signs seem to guarantee legibility and regular hatching defines the pictorial space, the lower part comprises, literally, total chaos. The draughtsman depicted the origin of the world out of chaos, in which no known structure existed, but the line that outlines no object leads a life and has an identity of its own. The actual constitutive character of the line reveals itself within the chaotic structure: in the following seventy drawings of the hand-illustrated manuscript, a history of the cosmos, the world and

¹ For an analysis of this miniature in the context of antique doctrines of creation, Christian pictorial tradition and humanist interpretation, see M. Thimann, «Weltschöpfung – Werkschöpfung. Zur Metaphorik von Chaos und Kosmos im 16. Jahrhundert am Beispiel des Archäologen Jean Jacques Boissard», in *Künstler und Literat. Schriftkultur und Bildkultur in der europäischen Renaissance*, Papers from the Colloquium held at Herzog August Bibliothek Wolfenbüttel, February 2005, ed. by B. Guthmüller, B. Hamm & A. Tönnemann, Wiesbaden, 2006, pp. 253-295.

the amatory adventures of the gods unfolds, by means of the line alone in a unique sequence of images. In 1556, Jean Jacques Boissard, an archaeologist, poet and author of emblem-books illustrated the first four books of the *Metamorphoses* with seventy-six drawings, which were executed with a pen on parchment for a German nobleman². The fact that in the manuscript the draughtsman dispenses with text altogether is as peculiar as the iconographic fertility of invention unequalled. The incommensurable magnitude of the genesis of the cosmos out of chaos in the first book is treated here in a minute scale with uttermost scientific precision. Not only iconographically but also in regard to the theme of the line, it is remarkable that an ordered structure follows upon a chaotic linear entwinement. An ordered cosmos of concentric circles, the planetary spheres, originates from the truncated, disoriented and knotted lines of the chaos folio sheet; these give way to the perfect unity of the circle, whose structure suggests that the line was drawn in a single flourish. A general remark can be added at this point: even in sixteenth-century natural science no models existed that revealed the structures of chaotic processes. They, indeed, required a chaotic graphic structure, as the comparison with the conventional cosmos diagram in the same manuscript displays. But also here, in miniature, the visually inconceivable, the cosmos with the planetary spheres and the winds as universal natural forces, that is to say, the traditional, Aristotelian-Ptolemaic conception of the world is rendered visible. The sequence of the six drawings portrays a thematic complex in the field of natural philosophy, of the creation of the world, and is of special interest from the viewpoint of encyclopaedic epistemic representation in the medium of miniature drawings. It is hardly too abstruse to assume an encyclopaedic representation of knowledge underlying the conception of this exceptional illustrated manuscript. For Boissard, a student of Philipp Melanchthon, Jacobus Micyllus, Joachim Camerarius and Petrus Apianus, read and studied the *Metamorphoses* as a scholar, and the text was, as is well-known, viewed as an encyclopaedic work containing the entire knowledge of antiquity. Not only Jupiter's erotic escapades and the attraction issuing from the fictionality of the transformations seemed to present a challenge to Boissard in his scholarly

² J.J. Boissard, *Ovids Metamorphosen 1556. Die Bildhandschrift 79 C 7 aus dem Berliner Kupferstichkabinett*, ed. with an introduction and commentary by M. Thimann, Berlin, 2005.

aspirations, but also the dimensions inherent in Ovid's text pertaining to natural philosophy and universal history. The choice of medium, pen-and-ink drawing without "ink-wash", allowed the draughtsman to depict even the minutest particle of knowledge explicated in the text. In doing so, the line acquired a privileged function, it constituted the knowledge it bore; the play with line became a key experiment of the epistemic image.

DRAWING AND DESCRIBING

Why did so many encyclopaedic projects of humanist draughtsmen remain fragments in the end? Was the repeated failure in attempting to describe the world in terms of drawing due only to external circumstances, such as dependence on a patron, or a result of the inner inconsistency of the medium itself? One need only recall the extensive encyclopaedic project undertaken by the draughtsman and architect Pirro Ligorio, who, in the mid-sixteenth century, hit upon the plan to produce and publish an encyclopaedia containing the entire knowledge of antiquity and paying particular attention to the pictorial tradition. Ligorio's objective was to summarize the immense accumulation of knowledge in one location «in un solo luogo», taking from many authors and drawing on archaeological practice³. It is noteworthy that Ligorio organized his planned encyclopaedia alphabetically in the final editing – after repeatedly trying out and discarding attempts to order the material thematically or trying out more abstruse arrangements⁴. Moreover, he included spheres of

³ Naples, Biblioteca Nazionale, Cod. XIII, b. 3, Libro X, pp. 38-39. Quoted after M.L. Madonna, «L'«Enciclopedia del mondo antico» di Pirro Logorio», in *1° Congresso Nazionale di Storia dell'Arte, CNR – Roma, 11-14 settembre 1978*, ed. by C. Maltese, Roma, 1980, pp. 257-271, esp. p. 257; A. Schreurs, *Antikenbild und Kunstsanschauungen des neapolitanischen Malers, Architekten und Antiquars Pirro Ligorio (1513-1583)*, Köln, 2000, pp. 36-44.

⁴ The collection in Naples comprising ten manuscripts, several including large-format drawings, can be described as preliminary work for the planned encyclopaedia. In contrast, the thirty volumes in the Archivio di Stato di Torino, completed in Ferrara after 1568 and around 1573 respectively, can be classified as fair copies. There the explanatory function of drawing has been reduced to mostly small sketches in the margins. Thereby it is outstanding that Ligorio also first began to organize the fair copies in thematically structured volumes; it was only when editing anew in 18 volumes that alphabetical ordering was adopted. Three volumes of the Turin collection do not belong directly to

knowledge in the drawing medium that could not be smoothly integrated in an alphabetical sequence, such as the so-called *Libro dei disegni*. Therein, exclusively *invenzioni* of mythological pictorial themes not to be found on extant antique monuments were contained⁵. They exemplified Ligorio's evaluation of poetic imagination: he regarded it as an additional form of knowledge, on par with archaeological, epigraphic, mythographic and numismatic documentation. He had, already in his drawings attempting to reconstruct antique monuments, proposed imaginative amendments that are to be understood as part of his encyclopaedic method if comprehended affirmatively. The antiquary displayed that he was in the position, as a scholar, to grasp and describe antiquity, while by means of *invenzione* he could simultaneously reconstruct and improve it⁶.

Thirty manuscript volumes of Ligorio's encyclopaedia have been preserved in Turin. As is well-known, the knowledge of antiquity in the form of a specialized, alphabetically organized encyclopaedia never eventuated but, instead, the project remained a gigantic fragment. In the sixteenth century, scientific and scholarly draughtsmanship differed from artistic drawing in an essential point: the overall plan was a long-term project comprising the collection and archiving of visual information not purely for the sake of it, but for the purpose of scientific and scholarly documentation.

The insight that the customary language, humanistic Latin, did not suffice to describe the new phenomena resulting from observation and empirical experience in the epoch of discovery, undoubtedly stimulated scientific and scholarly pictorial production in the early modern era⁷.

the encyclopaedia but, together with the sketched *invenzioni* after myths of antiquity (the so-called *Libro dei disegni*, vol. 30), a treatise on earthquakes (vol. 28), and another on *Nobiltà delle arti* (vol. 29), touch on related topics.

⁵ See *Il Libro dei Disegni di Pirro Ligorio all'Archivio di Stato di Torino*, ed. by C. Volpi, Roma, 1994.

⁶ For this interpretation see E. Mandowsky & C. Mitchell, *Pirro Ligorio's Roman Antiquities. The Drawings in MS XIII. B. 7 in the National Library in Paris*, London, 1963.

⁷ Regarding this problem cf. the introductory background in L. Olschki, *Geschichte der neu sprachlichen wissenschaftlichen Literatur*, vol. II: *Bildung und Wissenschaft im Zeitalter der Renaissance in Italien*, Leipzig-Florence-Rome-Genève, 1922, pp. 112-170; A. Grafton, A. Shelford & N. Siraisi, *New Worlds, Ancient Texts. The Power of Tradition and the Shock of Discovery*, Cambridge (Mass.), 1992.

Here the drawing takes over the function of a description, as it could give an account of the observed in a clearer and simpler way. In this sense, one can comprehend the drawing as a descriptive process that surmounted the boundaries of discourse laid down by the authorities of antiquity, especially, in this case, Aristotle and Pliny. Classical Latin proved insufficient in grasping and defining a new stock of knowledge related to natural science, geography and ethnology, as can be clearly seen in the very famous example of Galileo's Latin description of the moon's surface, in which he, aided by a telescope, resorted to the intensive use of drawings⁸.

It is not apt here to discuss Giorgio Vasari's conception of *disegno* as expounded in the *Introduzione alle tre arti del disegno* in the second edition of the *Vite* from 1568, that is, of the highly intellectual status ascribed to artistic drawing in paralleling it to the activity of poets and scholars. Since Alberti and Leonardo, *disegno* was developed into a central concept of early modern art theory. But it was Vasari who first systematically and deliberately elevated it to the status of being the basis of all arts⁹. By valuing *disegno* so highly, Vasari made drawing accessible for the intellect and history of knowledge. Indeed, as Georges Didi-Huberman noted critically, the making of images grew to be almost a scholarly activity and,

⁸ See H. Blumenberg, «Das Fernrohr und die Ohnmacht der Wahrheit», in G. Galilei, *Sidereus Nuncius. Nachricht von neuen Sternen. Dialog über die Weltsysteme (Auswahl). Vermessung der Hölle Dantes. Marginalien zu Tasso*, ed. with an introduction by H. Blumenberg, Frankfurt am Main, 1965, pp. 7-75, esp. pp. 77-78 (Einführung zu Sidereus Nuncius); S.Y. Edgerton, «Galileo, Florentine "Disegno" and the "Strange Spottedness" of the Moon», in *Art Journal*, 46, 1984, pp. 225-232; H. Bredekamp, «Gazing Hands and Blind Spots: Galileo as Draftsman», in *Galileo in Context*, ed. by J. Renn, Cambridge, 2001, pp. 153-192; H. Bredekamp, *Galilei der Künstler. Der Mond. Die Sonne. Die Hand*, Berlin, 2007.

⁹ Regarding this problem, see esp. W. Kemp, «Disegno. Beiträge zur Geschichte des Begriffs zwischen 1547 und 1607», in *Marburger Jahrbuch für Kunstwissenschaft*, 19, 1974, pp. 219-240; K. Barzman, «Perception, Knowledge, and the Theory of *Disegno* in Sixteenth-Century Florence», in *From Studio to Studiolo. Florentine Draftsmanship under the First Medici Grand Dukes*, ed. by L.J. Feinberg, Seattle-London, 1991, pp. 37-48; R. Williams, *Art, Theory, and Culture in Sixteenth Century Italy. From Techne to Metatechne*, Cambridge, 1997, pp. 29-73; G. Wolf, «Gestörte Kreise. Zum Wahrheitsanspruch des Bildes im Zeitalter des Disegno», in *Räume des Wissens. Repräsentation, Codierung, Spur*, ed. by H. Rheinberger, M. Hagner & B. Wahrig-Schmidt, Berlin, 1997, pp. 39-62; U. Link-Heer, «"Raffael ohne Hände" oder das Kunstwerk zwischen Schöpfung und Fabrikation. Konzepte der *maniera* bei Vasari und seinen Zeitgenossen», in *Manier und Manierismus*, ed. by W. Braungart, Tübingen, 2000, pp. 203-219.

thereby, opened them up for art-historical discourse on iconology. It was only by means of *disegno* that art was constituted as a sphere of intellectual cognition¹⁰. In Vasari's conception, the fact that *disegno* was considered a product of the intellect led to the conclusion that art could be related to scholarship and science. Within this framework, the dual usage of the pen, the instrument for writing and drawing, in its capacity to delineate letters and sketch representational lines, acquired a central meaning in the sixteenth century with the advent of the learned antiquary as a new type of artist. The professional humanists did not fail to criticize their semi-learned counterparts. In his *Discorsi sopra le Medaglie* of 1587, Antonio Agustín, cleric and scholar of antiquity, criticized the unlearned antiquaries because of their poor Latin and the fact that their works were mere compilations of information excerpted from other texts. He asks, how can an antiquary write on such a complex subject as the investigation of antique coins and medals without being well-versed in the Latin language? In the same breath he names the draughtsmen who documented the study of numismatics in extensive compendia:

Just like the way Hubert Goltzius, Enea Vico, Jacopo Strada and the others could write on a topic, on reading their books one could imagine that they had read or consulted all Latin and Greek books that were ever written. But they only helped themselves to the efforts made by others. Indeed, they were much more proficient with the compensatory use of the pencil, than they could write with the pen¹¹.

«[...] e con disegnar bene col pennello fanno altro tanto con la pen[n]a». The similarity between the two words *pennello* and *penna* alludes to the fundamental congruent nature of the instruments for writing and drawing. Critically viewed, however, it was the deficient humanistic background that led to the change of medium. But it appears that the generation of antiquaries alluded to perceived the specific articulate

¹⁰ G. Didi-Huberman, *Vor einem Bild*, trans. by R. Werner, München, 2000, pp. 84-89, p. 119.

¹¹ A. Agustín, *Discorsi sopra le medaglie et altre anticaglie divisi in XI dialoghi, tradotti dalla lingua spagnuola nell'italiana*, Venezia, n. d. [1587], pp. 66: «Come scrive Humberto Goltzio, & Enea Vico, & Jacomo Strada, & altri che chi legge i loro libri penserà che habbino veduto, e letto tutti i libri Latini, e Greci che sono scritti, aiutonsi delle fatiche d'altri, e con disegnar bene col pennello fanno altro tanto con la pen[n]a».

dimensions of the media and countered the misgivings of professional humanists with large-scale projects of archives and thesauri of images. In the following I wish to attempt to tackle the large-scale encyclopaedic projects of humanist draughtsmen, focusing on four key problems:

1.) How can the particular medium-specific role of the hand-illustrated book in the sixteenth century be described in the context of presenting scientific and scholarly knowledge?

2.) What is the actual achievement of the drawing in contrast to the usual technical means of publishing for books and pictures, such as printing with copperplate or woodcut? Can the epistemic status of the line for scientific drawing be defined more precisely?

3.) Can the introduced pictorial thesauri be described as encyclopaedic, and in what sense can the term be used as a classification? Do these manuscripts organize knowledge or are they only media for representation and illustration?

4.) Were there historical grounds for ordering the drawing albums and drawing collections as visual specialist encyclopaedias and for their use in the contexts of the *Kunstkammer* or cabinet of curiosities and libraries?

ORDERING AND MASTERING THE IMAGES

To begin with the last question: the interconnection between collections and the illustrated manuscripts as well as the albums' structuring can, to a large extent, be only hypothetically reconstructed. Although pertaining to prints, the *Indice* was a very important document for the arrangement of images, published by Antonio Lafréry in 1572-1573. For decades he published print sequences and single sheets on various themes, especially on fields of knowledge relevant for the antiquary and also on topographical subjects. Lafréry was a famous publisher, particularly on account of the *Speculum Romanæ Magnificentiae*¹². Perhaps not only for

¹² See C. Hülsen, «Das Speculum Romanæ Magnificentiae des Antonio Lafreri», in *Collectanea variæ doctrinæ Leoni S. Olschki bibliopole florentino sexagenario obtulerunt Ludwig Bertaloet, Giulio Bertoni et alii*, München, 1921, pp. 121-170; P. Parshall, «Antonio Lafreri's Speculum Romanæ Magnificentiae», in *Print Quarterly*, XXIII, 1, 2006, pp. 3-28; see also V. Pagani, «The Dispersal of Lafreri's Inheritance, 1581-89», in *Print Quarterly*, XXV, 1, 2008, pp. 3-23.

commercial reasons, he followed a concept that ordered the maps and engravings in the catalogue into five fields of study. Thereby, he categorized according to represented subject matter and decided against the obvious structuring by artists, formats or prices:

In order to structure the catalogue, I have divided it into five parts. The first part includes all geographic representations and, respectively, those of special locations such as cities or fortresses and also some battle formations. In the second part, I have collected a large number of things on Roman antiquity pertaining to the buildings and statues as well as other objects, to which I have added several inventions of modern artists. Many poetic inventions or ideas of imaginative artists and sculptors have been included in the third. In the fourth part stories and images of the Old and New Testaments have been included. In the fifth there are many portraits, many taken from coins, of famous personages, containing not only single sheets, but also anthologies¹³.

This endeavour to classify can be described as structuring the world and its parts in descending order (geography and topography; maps), proceeding from there to Roman antiquities and early modern art achievements, then to human actions (mythological representations, Roman history and bible stories), and finally to individuals (coins and *ritratti*). Within this superstructure, the section devoted to Roman antiquities was subdivided into further categories: starting with a city map, it was followed by antique monuments (first temples, then triumphal arches, amphitheatres

¹³ Florence, Biblioteca Marucelliana, Misc. 79.4. See D. Giannone, «L'Indice di Antonio Lafréry», in *Grafica d'arte*, xi, 41, 2000, pp. 3-5. The *Indice*, of which only one exemplar has survived, is cited here from F. Ehrle, *Roma prima di Sisto V. La pianta di Roma Du Pérac-Lafréry del 1570. Riprodotta dall'esemplare esistente nel Museo Britannico*, Roma, 1908, pp. 53-59, esp. p. 54: «Hollo, per dargli qualche forma, distinto in cinque parti. Nella prima son tutte descrizioni di Tauole di Geografia, o di particolari luoghi di esse, come città nobili o fortezze, e alcuni disegni d'attioni seguite e ordinanze di battaglie a tempi nostri. Nella seconda hò raccolto gran numero d'appartenenze all'Antichità di Roma tanto di fabbriche & edifice, quanto di statue, e altre cose, aggiungendoci alcuni modelli e disegni moderni d'artefici nobilissimi. Nella terza s'è messo molte Inventioni poetiche, o imagnate da diuersi e ingeniosissimi Scultori e Pittori. Nella quarta vi son poste assai historie & immagini del vecchio & nuovo testamento. Nella quinta son posti molti ritratti e medaglie di persone segnalate, si spicciolate[n]te disperse, come raccolte insieme, e alcuni libri d'Architettura di autori moderni, e d'ornamenti appartenenti a quella e di prospetiuue, e altri tali cosette. e per maggior sodisfattione di chi legga, s'è aggiunto a quelle, di che s'è hauuto cognitione, il nome del proprio Artefice».

and theatres, aqueducts, harbours, naumachia, trophies, triumphal columns, obelisks and antique buildings), then came the mausoleums and, finally, sculptures, murals, cameos and coins¹⁴. Analogous to Creation, Lafréry confronts the host of images he himself was answerable for by meaningful categorization: he brought forward a particular order, proceeding from the large to the small, from a world map to the individual.

The fact that virtuoso hand-drawing were highly valued and, likewise, illuminated manuscripts met with their historical eclipse under the conditions set by letterpress printing, it is surprising that, in the second half of the sixteenth century, there was obviously a great demand for books and albums that comprised simply drawings, the so-called “*libri di disegni*”. Their medium-specific and functional status is not always easy to define. They are neither sketch-books, whose form constitutes an archive of images primarily serving artistic purposes, nor illuminated manuscripts, but rather minutely worked codices whose use can best be described as scientific or scholarly. The library of the Augsburgian banker and book collector Johann Jakob Fugger paradigmatically displayed the great demand for visual documentation in the form of hand-illustrated books in the sixteenth century. After 1571, this library was transferred to Munich to become part of Albrecht V’s *Kunstkammer* (or cabinet of curiosities). Fugger had commissioned a number of books to be illustrated for his library collection. In Munich the manuscripts, comprising mainly hand-drawn representations, were not allocated to the *Hofbibliothek* (court library), but were added to the smaller book collection of the *Kunstkammer* and kept in a bookcase of their own¹⁵. Aside from the thirty-

¹⁴ See Hülsen, 1921 (note 12), p. 141.

¹⁵ See O. Hartig, *Die Gründung der Münchener Hofbibliothek durch Albrecht V. und Johann Jakob Fugger, München 1917*, pp. 93-96, p. 120; R. Hacker, «Die bayerischen Herrscher der Spätrenaissance und das schöne Buch», in *Das Gebetbuch Kurfürst Maximilians I. von Bayern. Bayerische Staatsbibliothek München Clm 23640*, Kommentarband, Frankfurt am Main-Stuttgart, 1986, pp. 7-28, esp. pp. 23-24. On the history of the *Kunstkammer*: O. Hartig, «Die Kunsttätigkeit in München unter Wilhelm IV. und Albrecht V. 1520-1579», in *Münchener Jahrbuch der bildenden Kunst*, 10, 1933, pp. 147-246; L. Seelig, «The Munich *Kunstkammer* 1565-1807», in *The Origin of Museums. The Cabinet of Curiosities in Sixteenth- and Seventeenth-Century Europe*, ed. by O. Impey & A. MacGregor, Oxford, 1985, pp. 76-89; L. Seelig & B. Angerer, «Die Münchner *Kunstkammer*. Geschichte, Anlage, Ausstattung», in *Jahrbuch für bayerische Denkmalpflege*, 40, 1986, pp. 101-138; L. Seelig, «Albrecht V. von Bayern – Sammler und Auftragge-

four volumes of Strada's books on coinage dealing with numismatics, portraits of the emperors and antique statues, the bookcase additionally contained manuscripts with biblical and historical pictures, hand-painted books portraying costumes, coats of arms, tournaments and the art of hunting. Representations of costumes, genealogies and heraldry books, maps, city views, portraits and depictions of animals in drawings, engravings and woodcuts served as bearers of knowledge and, by doing so, served directly as illustrative material for the *naturalia*, *artificialia*, *antiquitates*, *mirabilia* and *scientifica* exhibited in the *Kunstkammer*. Due to the fact that the drawings and engravings represented those objects not actually present in the *Kunstkammer*, the illustrated manuscripts and graphic sequences themselves served as scientific instruments. Here the functional determination of the picture albums benefitted, in the history of knowledge, from the 16th-century revitalized notion of *historia*. According to the Aristotelian understanding of knowledge as *scientia* based on theory and causal argument, *historia* necessarily remained an interim process of collecting information¹⁶. The images were the objective resources of *historia*, which was pursued as the study of natural history as well as antiquity and antiquities and was equally functional in verifying the antique authorities and documenting new fields of knowledge.

Samuel Quiccheberg's museological treatise *Inscriptiones vel Tituli Theatri Amplissimi* of 1565 postulated the ideal organization of dividing objects and subject matter into five categories within the *Kunstkammer* and stipulated explicitly that the images therein play a central role as bearers of knowledge. Images make a more immediate impression on the memory in contrast to the linear and continuous reading of books:

ber», in *Weltkunst*, 13, 1993, pp. 1645-1647; J. Fickler, *Das Inventar der Münchner herzoglichen Kunstkammer von 1598. Editionsband. Transkription der Inventarhandschrift cgm 2133*, ed. by P. Diemer in collaboration with E. Bujo & D. Diemer, München, 2004; *Kulturkosmos der Renaissance. Die Gründung der Bayerischen Staatsbibliothek*, Exhibition catalogue (Munich, Bayerische Staatsbibliothek, 7 March – 1 June 2008), ed. by B. Herad, Wiesbaden, 2008.

¹⁶ See A. Seifert, *Cognitio historica. Die Geschichte als Namensgeberin der frühneuzeitlichen Empirie*, Berlin 1976; *Historia. Empiricism and Erudition in Early Modern Europe*, ed. by G. Pomata & N. Siraisi, Cambridge, 2005; S. Kusukawa, «The Use of Pictures in the Formation of Learned Knowledge: The Cases of Leonhard Fuchs and Andreas Vesalius», in *Transmitting Knowledge. Words, Images, and Instruments in Early Modern Europe*, ed. by S. Kusukawa & I. Maclean, Oxford, 2006, pp. 73-96, esp. p. 76.

Soon the albums and loose folios of these institutions, thanks to the diligence of patrons, will have increased to such a degree that one will be able to acquire more scientific knowledge of many disciplines from the pictures alone. This is because observing an image impresses upon the memoria more immediately than reading many pages daily¹⁷.

Apart from the use of images in the single categories of the collection, in which he did not differentiate between the techniques of engraving, woodcut and drawing, Quiccheberg proposed, in analogy to the library, to establish a separate pictorial archive – he called it the *promptuarium imaginum* – where the depicted object alone counted. It is noteworthy that in Quiccheberg's encyclopaedically organized theatre of knowledge, the collection of drawings, engravings and woodcuts was ordered according to criteria concerning representation and not according to the artists' who executed them. Quiccheberg divided the illustrative material into three fixed areas or *regiones*: 1.) biblical pictorial subjects, such as the saints, historical Christian themes and portraits; 2.) nature study, profane iconography and antique mythology, *artes liberales*, eroticism, triumphal processions; hunting, traditional and national costumes, and heraldry; 3.) geography, city views, architecture, *artes mechanicae* and ornaments. In

¹⁷ Quiccheberg 1565, p. E IVv, quote from: *Der Anfang der Museumslehre in Deutschland. Das Traktat «Inscriptiones vel Tituli Theatri Amplissimi» von Samuel Quiccheberg. Lateinisch-Deutsch*, ed. and annotated by H. Roth, Berlin, 2000, p. 138: «Subinde ergo huius instituti fasciculi et materiae a diligentioribus patronis adeo augentur, ut quam plurimarum disciplinarum ex his solum imaginibus cognitio acquiri posse videatur, plus enim quandoque praestat memoriae inspectio solum alicuius picturae quam diuturna lectio multarum paginarum». On Quiccheberg and his conception of an image archive see also E. Hajos, «The Concept of an Engravings Collection in the Year 1565», in *Art Bulletin*, 40, 1958, pp. 151-156; Ead., «References to Giulio Camillo in Samuel Quiccheberg's "Inscriptiones vel tituli Theatri Amplissimi"», in *Bibliothèque d'Humanisme et Renaissance*, 25, 1963, pp. 207-211; D.J. Jansen, «Samuel Quicchebergs "Inscriptiones": de encyclopedische verzameling als hulpmiddel voor de wetenschap», in *Verzamelen. Van Rariteitenkabinet tot Kunstmuseum*, ed. by E. Bergvelt, D. Meijers & M. Rijnders, Exhibition catalogue, Heerlen, 1993, pp. 57-92; D.J. Jansen, «Antiquarian Drawings and Prints as Collector's Items», in *Journal of the History of Collections*, 6, 1994, pp. 181-188; P. Parshall, «Art and the Theater of Knowledge: The Origins of Print Collecting in Northern Europe», in *Print Collecting in Sixteenth and Eighteenth Century Europe*, ed. by P. Parshall & A. Griffiths, Cambridge (Mass.), 1994, pp. 7-36, see pp. 24-25; S. Braken-siek, *Vom "Theatrum mundi" zum "Cabinet des Estampes". Das Sammeln von Druck-graphik in Deutschland 1565-1821*, Hildesheim-Zürich-New York, 2003, pp. 40-81.

regard to cultural and art history of antiquity in the second and third *regio*, a topical division was made according to iconographical criteria and fields of knowledge relating to subjects such as *historiæ antiquæ profanæ, poetica et amores deorum, ludicra et impudica, spectacula et triumpho antiqua pleraque, antiqua monumenta*, and *numismata antiqua et nova*.

Quiccheberg's theoretical insistence on using illustrations is certainly noteworthy. On the one hand, within the single categories of the theatre of knowledge he underlined the function of the images as surrogates for objects not existing in the collection and for those things and events that *per se* could simply not be exhibited and embodied in such events as the actions of princes, celebrations and triumphal processions. On the other hand, the specially compiled pictorial archive mirrored the unity of the collection by reflecting its organization. The question remains open as to what extent already Quiccheberg conceived the pictorial archive as an instrument that could substitute the collection itself and, indeed, replace it. Quiccheberg already acknowledged the fact that knowledge, in its entirety, could not be compiled by a single person and that many fields of knowledge could only be studied with the use of pictorial representation¹⁸.

DRAWING AND TRAVELLING

Seen from this viewpoint, the illustrated books of the sixteenth century had acquired an outstanding function within the history of knowledge in early modern times. Only two illustrated manuscripts will be presented here that were intended as encyclopaedic works insofar as they attempted to comprehensively depict a field of knowledge. It has been emphasized that in the *Kunstkammer* in Munich the strong ethnographic orientation extended beyond the representation of ducal territory in the microcosm of the collection¹⁹. An illustrated book deserves our special attention at this point. It came to light again only recently in the Weimarian Anna Amalia library, and can be ascribed to the author and humanist Jean Jacques Bois-

¹⁸ See Brakensiek, 2003 (note 17), pp. 62-65.

¹⁹ See H. Bredekamp, *Antikensehnsucht und Maschinenglauben. Die Geschichte der Kunstkammer und die Zukunft der Kunstgeschichte*, Berlin, 1993, pp. 33-38; H. Roth, «Die Bibliothek als Spiegel der Kunstkammer», in *Sammler – Bibliophile – Exzentriker*, ed. by A. Assmann, M. Gomille & G. Rippl, Tübingen, 1998, pp. 193-210.

sard²⁰. Perhaps the hand-illustrated manuscript was even initially commissioned by Fugger. At least it is certain that immediately after it was executed in 1557-58, it found its way into his library. The work in question is a drawing book of traditional and national costumes with a total of 185 five pen-and-ink drawings on paper, bound with a leather cover typical for Fugger's library. This illustrated book project must be interpreted on the grounds of its function for the *Kunstammer* within the context of ethnology and natural science. The costumes (fig. 2) depicted are classified according to gender, to what men or women wear. The folio-sized coat of arms of the patron precedes fifty pairs of male figures, followed by 116 pairs of female figures, which are, in part, only drawn in outline. The national costumes are to a great extent Italian, leading to the presumption that Boissard made studies of styles of dress while he travelled through Italy, Calabria, the Greek Isles and the Peloponnes between 1555 and 1559. Among the male figurines, portrayals also of costumes from Russia, Greece, Turkey, Palestine and Ethiopia follow those from Italy, as well as several stemming from north of the Alps. The majority of the female costumes are from Italy, followed by those from France, Germany and Switzerland. A large number of folios have been also allocated to depicting national costumes from Turkey and Asia Minor, from Greece, Palestine, Assyria, Arabia, India and Libya. Boissard provided the single folio sheets with Italian legends written in his own hand. This is not the place to enquire into the significance of this manuscript from the perspective of the history of science and in the context of the abundance of books on costumes appearing from 1562 onwards. The peculiarity of oriental costumes and the possibility of acquiring a more extensive ethnographical and anthropological knowledge about far-off regions constituted the attractiveness of the illustrated costume books. The inquiry into alterity, accessing the world on the basis of exact observation and the documentation of antiquity in an encyclopaedic way found a mutual form of representation in text and image in book conceptions such as illustrated costume books, cosmographies, atlases, and antiquarian encyclopaedias and

²⁰ Weimar, Herzogin Anna Amalia Bibliothek, Cod. Oct. 193; also for earlier literature, see M. Thimann, «Erinnerung an das Fremde. Jean Jacques Boissards Trachtenbuch für Johann Jakob Fugger. Zu Provenienz und Zuschreibung der Bildhandschrift Cod. Oct. 193 in der Herzogin Anna Amalia Bibliothek in Weimar», in *Marburger Jahrbuch für Kunstwissenschaft*, 32, 2005, pp. 117-148.

iconologies. Especially sixteenth-century illustrated costume books are closely related to modern forms of organizing knowledge, urging on the effort to visually and empirically comprehend nature in its entirety. Abraham Ortelius implemented the project of compiling an atlas that presents the whole world in the form of a book in the *Theatrum orbis terrarum* (first published 1570 in Antwerp), in which the conceptional congruity to Boissard's costume books is apparent, that is, in displaying the world's inhabitants in all possible variations of regional identity and ethnic otherness²¹. In this similarity it is important to note that Boissard, among other things, corresponded with Ortelius and other famous, contemporaneous natural scientists²². The connection between the study of costumes, geography and natural history is explicitly formulated in the preface of the later edition of Boissard's costume book from 1581: the illustrations of cos-

²¹ See U. Ilg, «The Significance of Costume Books in Sixteenth Century Europe», in *Clothing Culture, 1350-1650*, ed. by C. Richardson, Aldershot, 2004, pp. 29-47, see pp. 33-40. On Ortelius and the history of the genesis of the *Theatrum orbis terrarum* cf. the most recent literature on the subject: P.H. Meurer, *Fontes Cartographici Orteliani. Das "Theatrum Orbis Terrarum" von Abraham Ortelius und seine Kartenquellen*, Weinheim, 1991; *De wereld in kaart. Abraham Ortelius (1527-1598) en de eerste atlas*, Exhibition catalogue ed. by D. Imhof, Antwerpen, Museum Plantin-Moretus, 1998; *Abraham Ortelius and the First Atlas. Essays Commemorating the Quadricentennial of His Death, 1598-1998*, ed. by M. van den Broecke, P. van der Krogt & L. Voet, Utrecht, 1998.

²² See Boissard's three letters dated from 1589, 1591 and 1593 to Abraham Ortelius written in Latin in: *Abrahami Ortelii (geographi Antverpiensis) et virorum eruditorum ad eundem et ad Jacobum Colium Ortelianum (Abrahami Ortelii sororis filium) epistulae. Cum aliquot aliis epistulis et tractatibus quibusdam ab utroque collectis (1524-1628)*, ed. by J.H. Hessels, Cambridge, 1887, nos. 167, 194, 233. The letters are mainly concerned with Boissard's problems concerning the publication of his Roman inscriptions. However, he also wanted to send Ortelius his *Poemata* (1589) and wrote of a twenty-year old friendship in the letter of 1591. In one letter Boissard's portrait was added. See the ill. in: *Abraham Ortelius (1527-1598). Cartograaf en humanist*, Exhibition catalogue (Antwerpen, Museum Plantin-Moretus; Brussel, Koninklijke bibliotheek van België), Antwerpen, 1998, p. 123. See now T.L. Meganck & E. Eyes, *Artists and Antiquarians in the Circle of Abraham Ortelius (1527-1598)* (PhD diss., Princeton University, 2003), Ann Arbor (Mich.), 2003; T.L. Meganck, «How to Publish a Manuscript of Roman Antiquities? Jean-Jacques Boissard's Plea with Abraham Ortelius», in *300 Jahre "Thesaurus Brandenburgicus". Archäologie, Antikensammlungen und antikisierende Residenzausstattungen im Barock*, ed. by M. Kunze & H. Wrede, München, 2006, pp. 213-230; Die Briefe an den Botaniker Carolus Clusius (1526-1609), in M.v. Groesen, «Boissard, Clusius, De Bry and the Making of "Antiquitates Romanæ", 1597-1602», in *Lias*, 29, 2002, pp. 195-213.

tumes are, as it were, to be understood as ethnological components of making world knowledge accessible by cartographic means, and thereby also embracing zoology²³.

At this point I would like to restrict my observations and comments on the function and materiality of the drawings. This is because Boissard developed a remarkable and meticulously precise style of drawing for his antiquarian and ethnological picture collections. He used delicate hatching instead of the quicker method of shading with ink-wash. Indeed, he abstained from using this altogether. The subtlety of his drawing method made it possible for him to render the most delicate patterns and depict the differing textures and qualities of material in clothing: ranging from the heavy brocade interwoven with gold-thread in the apparel of a Venetian gentleman to the almost transparent veil worn by an Arabian woman, the drawing methods of this draughtsman and virtuoso use of his drawing instruments made it possible to describe the world in a form that impressed on account of its almost scientific exactness even though the degree of stylization was also apparent. The working process is still visible on several folios and reveals the complex preparations required for the individual drawings. First of all, Boissard delineated the pictorial field and made an outline, presumably in pencil, of the figure. Only after doing this did he work out the drawing in detail with delicate hatching. This precise mode of drawing carries the marks of a *paragone*: Boissard's drawing style reveals the rivalry with the medium of engraving by aiming to create an effect typical for graphic reproduction. The peculiar margins on right-hand edge of the folios give the impression of being literally cut-off in some of the representations of costumes; this detail evokes the fiction of each folio being defined within a set type area. It is obvious that Boissard

²³ C. Rutz, *Vorrede*, in J.J. Boissard, *Habitus variarum orbis gentium. Habitz de nations estra[n]ges. Trachten mancherley Völcker des Erdskreysz*, Mecheln, 1581, unpaginated: «Cvm multi hodie tum scripti tum scalpti libri sint, qui regiones varias, variarumque regionum vrbes iis qui ex tabulis pictos addiscere mundos coguntur ob oculos ponant, operæ precium eos facere arbitror, qui ne huiusmodi peregrinatio nimis solitaria videatur aut difficilis, efficiunt. Sed qua id ratione efficiunt? Hac nimirum: si cum eæ tabulæ Oceanum ac Maria peregrinis cum piscibus tum nauibus, montes ac siluas vario tum bipedum tum quaprupedum [sic!] animalium emblemate ornata exhibeant, hominem, cuius vnus causa creata sunt & fiunt omnia, eo corporis habitu in scenam producant, qui singulis gentibus peculiaris est. Etenim sic non tantum prouincia prouinciæ, sed homo etiam homini quid intersit ex vario cultus genere, qui ingenium plerumque ac mores prodit, in oculos incurret. Qui sanè verus peregrinationis fructus est».

strove to give the medium of the pen-and-ink drawing the impression of being a print.

In his *Introduzione alle tre arti del disegno*, Vasari drafted a typology of drawing according to its techniques and functions. There were many techniques of drawing: for instance, the outline in pen with ink-wash and white highlights that, in the process of the design, aimed at creating the impact of painting. It is particularly remarkable that Vasari especially praised the simple pen drawing on the grounds of its difficulty. He argued that, using the pen, all the illuminated areas of the object must be left blank on the paper and not be highlighted with tempera: «Molti altri fanno con la penna sola, lasciando i lumi della carta; che è difficile, ma molto maestrevole»²⁴. Against this background it is apparent that the humanist pen-and-ink drawing I am scrutinizing in my investigations was not the simplest solution for scientific and scholarly drawings, but also indicates that the draughtsman aspired to virtuosity. To work alone with the pen demanded the highest mastery in the implementation of the drawing instrument.

On concluding the study of Boissard's costume book, one becomes conscious of the fact that only a fraction of his hand-illustrated books have survived. He already bewailed the loss of his archives, comprising mainly illustrated books, during the looting of Montbéliard by Lorraine troops in 1587:

all my picture collections (recuils) from Greece and Calabria were lost on account of the plundering and vandalization carried out by the Lorraine troops in the county of Montbéliard, where I kept all my books, all the records of my observations, medals and antique statues, as well as many parts of illustrated books, drawings on paper, cloth and parchment and similar objects I had collected with much effort and at great expense. Amongst them were representations of all the Italian cities and of Epirus, Macedonia and the Peloponnes with its mountains, harbours, springs, lakes, caves and other memorable sites. They likewise included records on the origins of each location, its laws and customs and traditions, as well as the specific costumes of the different regions and their antiquities²⁵.

²⁴ G. Vasari, *Le vite dei più eccellenti pittori, scultori e architetti* [1568], ed. by L. and C. Ragghianti, vol. I, Milano, 1971, p. 184.

²⁵ Not only in the Latin prologue of the topography of ancient Rome but also in the only recently published letter to Carolus Clusius from 22 August 1593, Boissard mentioned his ethnographic activities whilst travelling in Greece in the context of his despair at the loss of his manuscripts and collections during the plunderings and destruction car-

In these words the humanist mourns for the loss of his exteriorized memory established in the form of a pictorial archive²⁶. At the same time, he revealed that he acknowledged at least two forms of pictorial records: as a support for the memory and “*memoria cabinet*” in a sketch-book (*recueil*), and, as the thoroughly worked-out representation in the illustrated book that was used within the context of a collection, as was the case with the elaborate, hand-illustrated manuscripts commissioned by Fugger.

DESCRIPTIO IMAGINUM:

ANTIQUÉ COINS AS OBJECTS OF RESEARCH IN JACOPO STRADA'S WORKS

A very different type of person was likewise represented in the Fugger library and also engaged in such projects. Just like Boissard, he was under the auspices of royal patronage and similarly failed in his attempt to publish his manuscripts that claimed universality and contained ten thousands of folios with drawings and text. The person in question is Jacopo Strada. Since the 1540s, Strada had worked on the gigantic project of an illustrated encyclopaedia on the subject of coinage from the times of Julius Cæsar to Charles V (fig. 3)²⁷. In 1574 the project reached an inter-

ried out by the Lorraine troops in Montbéliard in 1587, cf. Groesen, 2002 (note 22), p. 203: «car tous mes recuils de la Grece et calabre me sont peris en ce degast que les Lorreins firent au Conté de Montbelliard ou estoient mes livres, observations, medalles, et statues antiques: et plusieurs fragments des livres de papier, linges, escorces, peaux, et autres telles matières: que javoy amassé avec grands despens et labours. mesme toutes les villes tant d'Italie, Epire, Macedoine, et du Peleponnese, avec les montagnes, ports de mer, fontaines, lacs, cavernes, et autres lièus memorables aux histoires: y adioustant l'origine des villes les loix et costumes de chascunes: avec les habillemens des païs et antiquités qu'on y voit».

²⁶ Boissard's self-depiction as a travelling scholar followed patterns typical for the time: the substantiation of chorographic interests with a comprehensive autopsy of the regions and their inhabitants in order to verify the authors of antiquity, on the one hand, and recording the subsequent changes, on the other. See M. Friedrich, «Chorographica als Wissenskompilation – Probleme und Charakteristika», in *Sammeln, Ordnen, Veranschaulichen. Zur Wissenskompilatorik in der Frühen Neuzeit*, ed. by F. Büttner, M. Friedrich & H. Zedelmaier, Münster, 2003, pp. 83-110.

²⁷ On Strada's biography and book projects for Fugger see D.J. Jansen, «Jacopo Strada et le commerce d'art», in *Revue de l'Art*, 77, 1987, pp. 11-21; Id., «Jacopo Strada's Antiquarian Interests. A Survey of his Museum and its Purpose», in *Xenia*, 21, 1991, pp. 59-76; Id., «Antiquarian Drawings and Prints as Collector's Items», in *Journal of the History*

im conclusion. The thirty volumes, today in Gotha, focus on imperial coins. Strada only completed the work up to late antiquity, up to Constantine; four volumes on Roman Republican coinage, executed for Albrecht V, are now in London²⁸. One can, of course, say that the drawings are only preparatory work for a future publication: however, the fact that they were bound opulently for the duke and occupied a prominent place in the *Kunstammer* makes it clear that they were in use and were so because they illustrated encyclopaedic knowledge.

The volumes are organized according to emperors, including a report of their lives within an illustrated memorial plaque. Portrait coins of the rulers themselves and their wives follow, as well as representations of the reverses (fig. 4). It will only be possible here to very briefly mention iconographic aspects of this work, even though this study of coins acquired its essential theme here: namely a compendium of antique iconography and not the simple presentation of the pieces imitated in exact detail. Even if they are not all by Strada's hand, the very factual rendering of the 6171 drawings in Gotha, partly using ink-wash, is astounding. The question of the medium specificity in illustrated book projects plays a decisive role. As is the case with Strada's coins, the pen can serve as an instrument to make things visible. The drawings do not at all attempt to render archaeological findings exactly, but rather an idealized representation of what could actually hardly be deciphered on the obverses and reverses of antique coins. For a start, the coins were enlarged significantly. The drawings generally have a diameter of 25 cm and the boundaries of the coins disappear. The way the objects were observed, as if they were seen through a magnifying glass, transformed their aesthetic impact. Particularly in the case of the mythological themes on the reverses, the style of representation appears animated in accordance with the contemporary art-theoretical ideal. And, to add to this observation, almost all the scenes depicted on the reverses, which

of Collections, 6, 1994, pp. 181-188; F. Haskell, *Die Geschichte und ihre Bilder. Die Kunst und die Deutung der Vergangenheit*, München, 1995, pp. 24-26; D.J. Jansen, «La famiglia Strada e il suo ruolo nella diffusione delle invenzioni meccaniche nel Rinascimento», in *L'Album fiorentino dei "Disegni artificiali" raccolti da Jacopo e Ottavio Strada*, ed. by V. Marchis & L. Dolza, Roma, 2002, pp. 39-70.

²⁸ On the fragmentary character of the project, see D.J. Jansen, «Antonio Agustín and Jacopo Strada», in *Antonio Agustín Between Renaissance and Counter-Reform*, ed. by M. Hewson Crawford, London, 1993, pp. 211-246, esp. pp. 214-216.

could be deciphered only with extreme difficulty when viewing the original, have been embellished imaginatively by the draughtsman. Strada abstained from portraying the damage, even though he always referred to the actual piece he had drawn and its provenance. Without exception, the accomplished rendering of coins presented them not only as being perfectly preserved but also as restored in an ideal form.

Our folio (fig. 5) is a nondescript motif of the reverse of a coin issued by Emperor Gallienus in the third century. It is from the fifteenth volume of the coinage compendia. The drawing of an ostrich is, on first sight, nothing more than the depiction of an allegoric motif from the reverse of an antique coin; to be precise, a representation made for archaeological and numismatic purposes, that is, for scholarly or scientific use. So one is, in fact, dealing with a drawing that does not call for speculation about its factuality as an illustration in ink and erased pencil on paper that primarily served the interests of the documentation of antiquity within the framework of a systematically planned and intellectually thought out corpus of work. Even so, the medium of drawing has a decisive manner and thematically reflects upon its own nature. Not only the enlargement of the coins to a monumental scale with a 25 cm diameter, amply filling a folio sheet, but also the imaginative embellishment of the bird deserves closer attention. In observing the bird's feet closely, one clearly perceives that they are possibly the product of empirical study of nature. Its feathers, however, denote the area in which the medium of drawing also focuses on itself as a theme. The wavy ink-wash on the neck and breast of the bird imitates the contours of the plumage. On the bird's back it was delineated using rocaille-like sweeps of the pen. The feathers have been transformed into ornaments and point out that they were created within the image by the drawing instrument of the quill.

Strada subjected the whole corpus of work to his unified style of drawing and thereby blurred the considerable stylistic differences inherent in the actual objects themselves. The draughtsman left the inscription of his own hand on the illustrated objects for the encyclopaedic corpus, triumphing over the individual styles of the objects. The claim to present a *corpus absolutissimum* of coinage is not only interesting as an antiquarian project. With it, the patron and banker, Fugger, made it unmistakably clear that he had the entire, visually manifest cosmos of coinage at his command. When compared to the utopian traits of this project that history proved impractical, other organizational proposals of the material seem

much more modest. Strada's project was subjected to the ambitious claim of a complete documentation and cataloguing; already his only published work *Epitome thesauri antiquitatum* of 1553 states in the title that it is only an excerpt of a complete corpus. The potential and capacity of the drawing medium as well as its attractiveness are especially clear if compared to the woodcuts in small format of the printed book. Lines, which have been sketched first by pencil and then drawn over in brown or black ink, create a much more subtle effect than is possible with the woodcut. Ink-wash in brown or grey not only animates the representation, but also underlines the three-dimensionality of the coins. The choice of this technique to delineate a three-dimensional object was the result of a well-thought out consideration, whereas Boissard with his costume drawings gave precedence to the fine or delicate line so as to reproduce the materiality of the different qualities of cloth. At this point it becomes clear why Strada's gigantic drawings of small objects actually portrayed more than models for a printed book. With his imaginative amendments, sometimes born totally of fantasy, Strada demonstrated that the moderns were also in the position to not only acquire close knowledge of antiquity and organize it into accessible structures. But they were also able to carry this further and improve upon it by using contemporary means of visual representation and adding the beauty of the *disegno* of the High Renaissance to the objects of antiquity. In this case, an ideal conception of the coins was realized rather than the minutely related documentation of single pieces. Strada likewise apparently applied to depicting his own idea of the finished portrait for the respective rulers and of the corresponding mythological scenes on the reverses in order to make an authoritative representation in the scholarly context of a *historia* of coinage. Already in the title of the complete work, the *descriptio* declares the aim to follow this concept: «MAGNUM AC NOVVM OPVS Continens descriptionem Vitæ, imaginum, numismatum omnium tam Orientalium quam Occidentalium Imperatorum ac Tyrannorum, cum collegis coniugibus liberisque suis, usque ad Carolu[m] V. Imperatorem».

ALLEGORY AND THE OBSERVATION OF NATURE

On the other hand, the inconceivably large can be reduced by means of the subtle drawing, as can be demonstrated in the case of Jean Jacques

Boissard's illustrated manuscript dating from 1556 that was introduced at the beginning of this paper and concentrated on natural philosophy and Ovid's *Metamorphoses*. There, in small format, the well-nigh visually inconceivable, namely the origins of the cosmos with the planetary spheres and the winds as universal natural forces, was given a visible form. The sequence of drawings dedicated to the portrayal of themes concerning natural philosophy and creation of the world is of particular interest from the point of view of encyclopaedic epistemic representation in the medium of miniature drawings. At this point I will focus on the one sheet that contains, highly compressed visually, Ovid's description of the four ages of the world, from the Golden to the Iron Age, and, at the same time, the seasons (fig. 6). As in the cabinet miniatures by the likewise humanist and layman in drawing in the broad sense, Joris Hoefnagel, Boissard had the opportunity of combining knowledge in natural-history with allegorical meaning. The course of the world and the years as the foundation of nature's cyclic coming to be and passing away are the subject of his pictorial discourse. Hoefnagel's sheets show the seasons, the ages of man and, at the same time, the elements²⁹. The seasons were depicted in microscopic form and with a concentration on the individual scientifically viewed object: in this case, those plants and animals, such as the walnut, seal, beaver, kingfisher and wood-louse, etc. related to winter and old age and which were equated with *dolor*.

²⁹ For example, see the *Seasons* series in Paris, Musée du Louvre, Département des Arts graphiques, inv. nos. 52483-52486, in *In Europa zu Hause – Niederländer in München um 1600*, Exhibition catalogue (Munich, Staatliche Graphische Sammlung, 12 October 2005 – 8 January 2006), ed. by T. Vignau-Wilberg, München, 2005, pp. 263-267, cat. nos. D39-D40 (Thea Vignau-Wilberg). In this case it is especially important to point out the series illustrating the elements in the Prince of Liechtenstein's collection, see T. Vignau-Wilberg, «Unbekannte Kabinettminiaturen von Joris Hoefnagel», in *Jahrbuch der Kunsthistorischen Sammlungen in Wien*, 85/86, 1989/90, pp. 67-77, esp. pp. 71-72. Concerning this problem, see T. Da Costa Kaufmann, «The Sanctification of Nature. Observations on the Origins of Trompe L'Oeil in Netherlandish Book Painting of the Fifteenth and Sixteenth Centuries», in *The Mastery of Nature. Aspects of Art, Science, and Humanism in the Renaissance*, Princeton, 1993, pp. 11-48; T. Vignau-Wilberg, «Registrierender Blick und enzyklopädischer Geist: der Miniaturist Joris Hoefnagel (1542-1600)», in *Aspekte deutscher Zeichenkunst*, ed. by I. Lauterbach & M. Stufmann, München, 2006, pp. 85-94; U.D. Ganz, *Neugier & Sammelbild. Rezeptionsästhetische Studien zu gemalten Sammlungen in der niederländischen Malerei ca. 1550-1650*, Weimar, 2006, pp. 135-163.

Hoefnagel's drawings are inconceivable without intensive study of nature. However, when illustrating the *res* of natural-history, these were set up within the Christian-allegorical framework of the ages of man. With Boissard it is a different matter, but nevertheless his work reveals that he also did combine formal allegorical imagery with encyclopaedic representation of knowledge. Already the fact that he compressed Ovid's four closely described world ages onto one sheet, graphically surpassed traditional print illustrations, in which it was usual to devote an entire sheet or a single composition to one age. Boissard compressed this together onto one page and was extremely precise in rendering the details. He brought natural philosophy and mythopoetic imagination equally into line. He characterized the ages of the world very exactly. First they appear as the seasons with their attributes. At least, the personification of spring, fitted out with a cornucopia and the oak twig, is a marked reference to Ovid's delineation of the Golden Age, at which time mankind could collect the fruits of the earth without any pains or effort and received Jupiter's gift of acorns from oak trees. Characteristic for this age was the everlasting state of spring (*ver aeternum*) that is expressed in the nakedness of the figure. In contrast, the figure on the right unfolds itself as the allegorical figure of winter. Clad in armour and armed with a lance, it triumphs over the female figure lying on the ground with a burning heart in her hand. The artist possibly referred less to winter here than to the Iron Age, when weapons, war, pillaging and destruction determined the life of man. Love is dying – the burning heart lies on the ground («*victa iactat pietas*») – and the virgin Astræa, the embodiment of justice, has departed from the earth. One hardly exaggerates by surmising an encyclopaedic assertion behind the artistic conception of this unusual book illustration, because Boissard, as a scholar, had closely studied Ovid's *Metamorphoses*.

Views of the Golden Horn. Melchior Lorck in Constantinople

Impressed more with Boissard's style of drawing than Strada's, Melchior Lorck, who accompanied an imperial legation to Constantinople between 1555 and 1559, was driven by the strong desire to study antiquity and ethnological aspects of foreign countries³⁰. During his almost four-

³⁰ Research work on Lorck's biography is still in its infancy due to missing sources, the large number of undertaken journeys, and the great difficulty in reconstructing the artist's change of locations, see H. Harbeck, *Melkior Lorichs, Ein Beitrag zur deutschen Kunstgeschichte des 16. Jahrhunderts* (Phil. Diss.), Hamburg, 1911; E. Fischer, *Melchior Lorck*,

year stay in the Ottoman Empire he drew a panorama of Constantinople that was almost twelve metres wide (fig. 7). Additionally, he collected material for the publication of his travel book that was to also contain an illustrated treatise on the antiquities of the city³¹. Also this ethnographical book project of a draughtsman, who – even if it is a topos – described his journey to the East in his personal autobiography from 1563 explicitly as being instigated by reasons of knowledge and not to acquire wealth, did not exceed the planning stage³². Because of the similar style of drawing in minute detail that, despite the graphic mannerisms, primarily aimed at reproducing an exact copy of the object, Boissard and Melchior Lorck both equally exemplified the antiquarian draughtsman, an artistic type of that took on its distinct form in the mid-century. An encyclopaedic objective characterizes Lorck's panorama of Constantinople, a work that counts as one of the very few drawings on a monumental scale dating back to the sixteenth century³³. Lorck executed the vedute from Galata, the European

Drawings from the Evelyn Collection at Stonor Park England and from the Department of Prints and Drawings The Royal Museum of Fine Arts Copenhagen, Copenhagen, 1962; M. Müller-Haas, «Ein Künstler am Bosphorus. Melchior Lorck», in *Europa und der Orient. 800-1900*, Exhibition catalogue, (Berlin, Martin Gropius-Bau, 28 May – 27 August 1989), ed. by G. Sievernich & H. Budde, Berlin, 1989, pp. 240-244; *Archäologie der Antike. Aus den Beständen der Herzog August Bibliothek 1500-1700*, Exhibition catalogue (Herzog August Bibliothek Wolfenbüttel), ed. by M. Daly Davis, Wiesbaden, 1994, pp. 73-74; E. Fischer, «Artikel: Lorck [Lorichs; Lorch], Melchior», in *The Dictionary of Art*, vol. 19, London-New York, 1996, pp. 661-663; Id., «Melchior Lorck. A Dane as Imperial Draughtsman in Constantinople in the 1550s», in *The Arabian Journey. Danish Connections with the Islamic World Over a Thousand Years*, ed. by K. con Folsach, T. Lundbæk & P. Mortensen, Århus, 1996, pp. 30-43; A. Wunder, «Western Travellers, Eastern Antiquities, and the Image of the Turk in Early Modern Europe», in *Journal of Early Modern History*, 7, 2003, pp. 89-119; *Byzantium. Faith and Power (1261-1557)*, Exhibition catalogue (New York, Metropolitan Museum, 23 March – 4 July 2004) ed. by H.C. Evans, New Haven, 2006, pp. 406-408, cat. no. 249 A, B; M. Iuliano, «Costantinopoli ottomana, 1559. Architettura e città nel panorama di Melchior Lorichs», in *Tra oriente e occidente. Città e iconografia dal XV al XIX secolo*, ed. by C. De Seta, Napoli, 2004, pp. 78-92.

³¹ *Wolgerissene und geschnittene Figuren zu Roß und Fuß samt schoenen tuerkischen Gebaewden und allerhand was in der Tuerkey zu sehen*, Hamburg: Michael Hering, 1626. A second edition was published in 1646.

³² See Friedrich, 2003 (note 26), p. 93.

³³ Leiden, Universiteitsbibliotheek, BPL 1758, pen, 45 x 1145 cm. Facsimiles of the panorama by E. Oberhummer, *Konstantinopel unter Sultan Suleiman dem Grossen. Aufgenommen im Jahre 1559 durch Melchior Lorichs*, München, 1902; C. Mango, *Melchior Lorichs' Panorama of Istanbul, 1559*, Bern, 1999.

district of the city. At least this is what the panorama suggests in creating the fiction of the topographic record as an artistic act. A Turkish assistant holds the ink-pot for the nobly dressed European draughtsman, who wishes to, at that very moment, dip his pen into it as if he wanted to draw a last line and complete the work. The fiction is obvious, as Lorck presumably first executed the panorama when the legation returned to Vienna, using a great number of individual studies made from different views. That is, the individual views were first united into one with the finished drawing.

The autopsy of the city panorama, however, was not only made authentic by the presence of the draughtsman as a witness but also by a personal inscription «the location near Galata or Pera, where I, Melchior Lorichs [sic] have, above all others, made a likeness of the city or of the greatest part of it in the year 1559» («das ortt zu Gallata oder Pera da ich Melchior Lorichs die Statt am meisten oder den meisten theil der Statt geconterfeit habe Anno 1559»). This succinct comment contains the decisive information on the drawing's claim to truth. The date and given location verify that Lorck was present and certify the veracity of his drawn representation. With the accurate information that Lorck «made a likeness» («geconterfeit») of the city, a key term for an image drawn after nature in the 16th century, is brought into play: The *Conterfei* or “likeness” corresponded to imitating nature directly and harboured, as Peter Parshall has substantiated, the common claim of the image to truth or similarity that was initially practised when making portraits³⁴. Melchior Lorck authenticated by means of a twofold signature: with his name and a portrait, which is, in fact, a likeness or «Conterfei». The picture's authenticity relied on the artist witnessing the location with his own eyes, even though the working process reveals that also this topographic diagram was based on many studies that he first unified by his judgment into a continuous whole. Is the idea of the city formed by observation here also the matrix of its drawn reconstruction?

³⁴ P. Parshall, «Imago contrafacta: Images and Facts in the Northern Renaissance», in *Art History*, 16, 4, 1993, pp. 554-579. See also J. Woods-Marsden, «“Ritratto al naturale”: Questions of Realism and Idealism in Early Renaissance Portraits», in *Art Journal*, 46, 1987, pp. 209-216; B.W. Meijer, «Disegni dal vero o meno, e l'illustrazione scientifica», in *Documentary Culture. Florence and Rome from Grand-Duke Ferdinand I to Pope Alexander VII*, ed. by E. Cropper, G. Perini & S. Francesco, Bologna, 1992, pp. 127-139.

Lorck completed the architectural history of the more than one thousand year old city that was the subject of his pictorial reconstruction. The city view's encyclopaedic objective is apparent in the choice of medium that indiscriminately recorded and labelled every modern residence, every mosque, and every building dating to antiquity, ranging from the Hagia Sophia to the Hippodrome and the Aquaduct of Valens. The precise pen-and-ink drawing that is restricted primarily to lineal outlines hardly differentiates between proximity and distance, and does not allow for much shading and great complexity within the individual buildings. Every detail was depicted with the same line, even if it was an ephemeral phenomenon such as boats sailing by on the Golden Horn. The panorama makes its characteristic, peculiar impression by representing every architectural detail while, at the same time, refraining from creating the effect of depth by gradation. One line, however, deserves special attention because it leads a life of its own, standing out against the delicate hatching on the buildings. It runs along the horizon delineating the mountain range and is no more than a thin, waving line. At this point the potency of the line as a medium for describing and creating the world becomes apparent in a compressed and totally abstract form. The panorama comprises, as a finished picture, the sum of the exactly recorded details, and very probably optical instruments were also used as aids. It offers a microscopic viewpoint by reproducing details and, simultaneously, a graphic macrostructure presented by the twelve metres of illustrated paper. By consulting Henry Peacham's explicitly written first treatise on drawing of 1606 for laymen and dilettanti, light is shed on the subject. In the section on landscape drawing, Peacham points out that the draughtsman should decrease the details of the buildings as their distance to the viewer increases; to put it succinctly, the artist should use aerial perspective. He argued that, at a distance, the observer could no longer differentiate between a normal residence and church³⁵. Lorck, of course, was well-acquainted with such tech-

³⁵ H. Peacham, *The Art of Drawing with the Pen* [London 1606], reprint, Amsterdam-New York, 1970, p. 30: «[...] and you must be very dainty in lessening your bodies by their distance & haue a regard, the farther your Landskip goeth to those *uniuersalia* which as *Aristotle* saith (in respect of theyre particulars concealed from our senses) are *notiora*: as in discerning a building 10 or 12 miles off, I cannot tell whether it bee Church, Castle, gentlemans house, or the like: So that in drawing of it I must expresse no particular signe as bell, portcullies &c, but shew it as weakly and as faintly as mine eie iudgeth of it, because all those particulars are taken away by the greatness of the dis-

nical principles of drawing. One of the few surviving drawings sketched on location for study use is now in Copenhagen (fig. 8). It dates back to 1559 and is one of the most fascinating documents of empirical drawing from the mid-sixteenth century. From a window of the embassy, looking over the roofs of houses, Lorck has captured a view of the Sea of Marmara. In the parts that have not been worked out in detail in the background (or is it the vague distance), the tip of the Arcadius' column and the dome of a mosque with a minarette can still be discerned. The choice of viewpoint with the spectacular foreshortening of the roofs leads to the spontaneous impression made by the drawing. Lorck displays only a superficial interest for the architectural and archaeological monuments that he otherwise portrayed on folio sheets with antiquarian ambition in his minute style of pen-and-ink drawings. In this work he was obviously quite taken by the sight of the roofs; that is, every roof-tile, every stone and every wooden plank, so typical for Constantinople's architecture, fascinated the curiosity of the draughtsman.

Without doubt the illustrated subject determined the mode of drawing used for the panoramic view of the city. In the first instance, it served to document the journey made by the legation and could well have been commissioned to provide visual information for technical purposes pertaining to political, military and trade interests. Today its actual function can no longer be reconstructed in detail. On the grounds of its artistic character, the panorama landed for an interim period in the *Kunstkammer* of Rudolf II in Prague before it finally was acquired by the Leiden University Library. Herewith I return to the starting point of my reflections and observations on the function and medium specificity of scholarly or scientific drawing, of the epistemic impact of the line in the sixteenth century. I have presented areas of knowledge from the different disciplines and sciences that proved to be a challenge to the drawing activity of scholars: ethnographic, antiquarian-numismatic, mythographical and topographical projects of great dimensions were among them. These have hardly been scrutinized, to date, because of the fact that they, according to the

tance». See F.J. Levy, «Henry Peacham and the Art of Drawing», in *Journal of the Warburg and Courtauld Institutes*, 37, 1974, pp. 178 f.; W. Kemp, «... einen wahrhaft bildenden Zeichenunterricht überall einzuführen». *Zeichnen und Zeichenunterricht der Laien 1500-1870, ein Handbuch*, Frankfurt am Main, 1979, pp. 28, 60, 132.

paradigm of “art”, held little attraction for research. In contrast I would like to shift the focus of interest to the epistemic relevance of the drawn line in the age of letterpress printing. Not only the utilization of these drawings in the various cabinets of curiosities and pictorial archives, as described in the cases of Quiccheberg and others, is remarkable from the viewpoint of illustrating knowledge and establishing different kinds of pictorial disciplines and sciences. But also the kind of knowledge production determined by the very act of drawing itself should be the cause of further anthropological speculation that goes beyond the comprehension of just “making” scientific or scholarly drawings that comprise no more than mere representations of actual objects.



[1.]



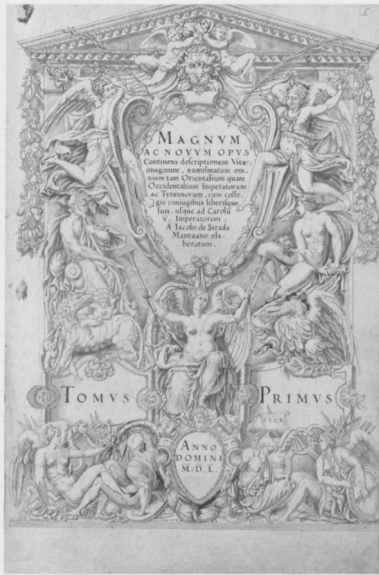
[2.]

Costumi Nobili Thraci

MICHAEL THIMANN

1. Jean Jacques Boissard, *Chaos*, Berlin, Kupferstichkabinett.

2. Jean Jacques Boissard, *Costumes of Thracian Noblemen*, Weimar, Herzogin Anna Amalia Bibliothek, Cod. Oct. 193.



[3.]



[4.]



[5.]

MICHAEL THIMANN

3. Jacopo Strada, *Title-page of the first volume on Roman coinage*, Gotha, Forschungsbibliothek.

4. Jacopo Strada, *Portrait coin of Julius Cæsar*, Gotha, Forschungsbibliothek.

5. Jacopo Strada, *Drawing of an Ostrich*, Gotha, Forschungsbibliothek.

6. Jean Jacques Boissard, *Four Ages of the World and Seasons*, Berlin, Kupferstichkabinett.



[6.]



[7.]

7. Melchior Lorck,
*Panorama of
Constantinople,*
Leiden,
Universiteitsbiblio-
theek (detail).



[8.]

8. Melchior Lorck,
*View of
Constantinople and
the Sea of
Marmara,*
Copenhagen,
Statens Museum
for Kunst,
Department of
Prints and
Drawings (detail).