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"A treasure, a schoolmaster, a pass-time" Dactyliothecae in the eighteenth and nineteenth centuries and their function as teaching aids in schools and universities[1]

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Introduction

On 21 July 1818, just a few weeks into his new post as Professor of Archaeology and head of the Archaeological Cabinet of Leiden College, Caspar Reuvens drafted a letter to the university's curators.[2] Under the title "Thoughts on the purchase of the necessary material resources for the new tuition in Archaeology", he compiled a preliminary list of all the objects and books that, in his view, the university ought to buy little by little over the course of time. Only if furnished with such teaching and learning aids, he believed, would his department be able to provide an education in archaeology that was worthy of the university's status.[3] There are two surviving drafts of the letter, whose crossings out, corrections and additions show that Reuvens compiled his wish-list in an organic

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1 "… der erlanget einen Schatz, einen Lehrmeister, einen Zeitvertreib…" The quotation is taken from an anonymous review of the first volume of Philipp Daniel Lippert's *Dactyliotheca Universalis*, in *Göttingische Anzeigen von gelehrten Sachen*, February 1756, 155. – I would like to thank the organizers for inviting me to take part in the colloquium. I received help from B. van den Bercken, R. Halbertsma (both Leiden), D. Graepler (Göttingen), R. Hiller (Leipzig), R. Miller-Gruber (Augsburg); C. Rummel (Berlin) and E. Zwierlein-Diehl (Bonn). L. van Hoof (Berlin) assisted me with the reading of archival materials written in Dutch. The translation from German was provided by K. Williams. The photographs of the Leiden dactyliothecae were taken by P. J. Bomhof and A. de Kemp.

2 Reuvens was appointed on 13 June 1818. The draft survives in two versions. I quote here from the reworked second version. The Leiden museum correspondence has been digitized in exemplary fashion; page numbers cited here refer to the digital version. Archive portal of the Rijksmuseum van Oudheden at http://archieven.rmo.nl/index.php/A, *Verzonden brieven 1818-1906*, 3 (17.0101/01| 1818-1825), 6-10. – On Reuvens' early years in Leiden and his concept of archaeology, see: Halbertsma 2003, 21-48. Hoijtink 2012, 45-57. I did not have access to Cordfunke 2007.

3 Reuvens expressed his views in a more elegant and scholarly form in his inaugural lecture, delivered in October 1818, on numismatics. Reuvens 1819. Summary in Halbertsma 2003, 25-27; Hoijtink 2012, 47-48.

Fig.1 Christian Dehn/Francesco Maria Dolce, 10 stackable trays with zolfi (tomo primo/secondo), Rome, undated. Leiden RMO GS-70012. Photo Rijksmuseum van Oudheden, Leiden.

process. The then 25-year-old professor ultimately gave first priority to the purchase of coins, copies of coins and dactyliothecae, followed by cork models of antique buildings and lastly by volumes of plate illustrations. Looking at antiquities in three dimensions, in other words, was fundamental to his understanding of archaeology as a study of classical antiquity conducted on the basis of its monuments. The university was slow to meet the demands of its fiery young professor, as subsequent letters make clear.[4] However, by the end of the 1820s Leiden owned, in addition to newly purchased antiquities, a comprehensive collection of plaster casts, dactyliothecae and cork models.

From today's perspective, it may seem unusual for an archaeologist to request, alongside large folio volumes of plates, a wealth of copies and small-scale three-dimensional reproductions of antique objects for academic teaching purposes. But Reuvens was by no means alone within the European university landscape in wanting such resources: in Göttingen, the first German university to offer lectures on archaeology, Christian Gottlob Heyne (1729-1812) had been using such reproductions in his teaching for decades. Dactyliothecae had been part of the "archaeological apparatus"[5] right from the start: all the way from Dorpat[6] (now Tartu in Estonia) to the newly founded University of Bonn, where Friedrich Gottlob Welcker (1784-1868) – arriving from Göttingen – built up a comprehensive collection of casts from 1819, in his capacity as Professor of Philology and Archaeology. Reuvens had himself visited Göttingen and would later travel to Bonn as well.[7] His patron, the Dutch statesman Anton Reinhard Falck (1777-1843), had also studied under Heyne, and one of the most important educational reformers in the Netherlands, Johan Meerman (1753-1815), had spent his formative

4 In detail and most importantly in the letter of 19 February 1820, where Reuvens also suggests buying a small-scale copy by John Henning of the Parthenon Frieze, along with Wedgwood copies of antique vases. See also the letter of 20 April 1825. Both documents in *Verzonden brieven 1818-1906*, 3 (17.0101/01| 1818-1825), 63-89; 433-435.

5 Graepler 2006, 39-43; Graepler 2014, 80.

6 During his tenure (1803-1837) as director of the university collections in Dorpat, the philologist Karl Morgenstern purchased a whole series of dactyliothecae. Anderson 2015, 98-114; 299-302.

7 For a detailed account of Reuvens' travels and networks, see the very informative work by Hoijtink 2012, 23-29; 54-55.

years in Göttingen, so Reuvens could hope to receive support for his requests, which doubtless appeared unusual within philological circles.

Why did three-dimensional reproductions and miniatures of antique artworks hold such importance for university archaeologists in the period around 1800, whereas in our own day dactyliothecae and collections of plaster-cast coins tend to belong to the curiosities gathering dust in the basement? To what extent did the philologist Heyne contribute to their popularity and – most importantly – with what methodological tools can we evaluate the expectations associated with these teaching aids and their actual effectiveness? In this article I propose to look first of all at the tradition of gem casts, or 'impressions' [8]and the 'invention' of dactyliothecae by Philipp Daniel Lippert (1702-1785, Fig.2).

As authentic testaments to classical antiquity, engraved gems were undoubtedly among the most important media affording an undistorted picture of antique iconography and art. In the eyes of contemporaries, the same was true – if not more so – of the collections of impressions of such antique gems, known as dactyliothecae, that were very widespread in the eighteenth and nineteenth century. They were manufactured and sold not just in Rome but also in countries north of the Alps. Thanks to historical holdings from Caspar Reuvens' day and new acquisitions in recent years, the Rijksmuseum van Oudheden in Leiden possesses a large number of such dactyliothecae, to which I shall return below.[9] My article is not about the original gems and their interpretation, but about their replication and organization into 'collections' that allowed them to be perceived in a concrete fashion at academies, universities and schools in the eighteenth and nineteenth century. I shall be asking how these 'images' were used in practice and inquiring into their possible influence upon knowledge of antique iconography and art. I shall conclude by asking in what form their reflections may perhaps be found in the illustrations accompanying contemporary anthologies of Greek mythology.

My investigation will have to be based almost exclusively on findings from modern-day Germany, since neither in the case of France nor Britain do we currently dispose of a level of information comparable to that which we know about the German-speaking sphere. It is true that Viccy Coltmann discusses the teaching given at English schools, which was to a large degree dominated by

Fig.2 Anton Graff, Philipp Daniel Lippert, 1774, oil on canvas, 63.5 × 51.8 cm, Leipzig, Kunstbesitz der Universität Leipzig, Photo: Marion Wenzel. © Kustodie der Universität Leipzig

Fig.3 Three editions of Philipp Daniel Lippert's Dactyliotheca. From left: 1767, Leiden RMO GS-70001; Rabenstein, after 1808, Leiden RMO AM 111; 1753, Leiden RMO inv. 1899/1.1. Photo Rijksmuseum van Oudheden, Leiden.

8 The term "cast" corresponds to the actual manufacturing technique. Since the eighteenth century, however, it has become the practice in the case of gems to speak of 'impressions' (It. *impronte*, Ger. *Abdrücke*). This is the term accordingly still used in specialist literature today.

9 See postscript.

Fig.4 Rabenstein's Selection, 9 stackable trays (of ten?), Dresden, after 1808. Leiden RMO inv. GS-70027. Photo Rijksmuseum van Oudheden, Leiden.

Latin classes. Whether and in what form Greek mythology or history was brought to life using visual media remains unknown, however.[10]

Philipp Daniel Lippert and the editions of his Dactyliotheca Universalis

Gem impressions had long served as a means of reproducing the images on engraved stones and had allowed these to be shared with other collectors. Initially made of wax or sealing wax, they were later also manufactured from glass or sulphur, the latter usually dyed red. Not until 1739, however, do we hear of Christian Dehn (1696-1770), valet and assistant to the great connoisseur Baron Philipp von Stosch, opening a shop in Rome where he made and sold 'sulphurs', as they were commonly known (Fig.1). Customers could choose the impressions they wanted from a large selection. Dehn packaged them in small wooden boxes, accompanied by an extremely brief hand-written inventory.[11]

The triumphant advance of gem impressions only truly began with Philipp Daniel Lippert and his Dactyliotheca Universalis. Lippert's life and career, which saw him rise from sickly orphaned son of a leatherworker to academy professor and acknowledged academic authority, have frequently been described and we shall only highlight a few aspects here.[12] Alongside his technical skills as an artist and craftsman, in 1753 Lippert had a stroke of genius when he conceived the idea of organizing a collection of 1000 impressions into a systematic order and of selling this with a catalogue.[13] In addition to

10 Coltman 1999; Coltman 2006, 28-37. On this point, see also the review by Collins 2007, 4. On dactyliothecae in England (without Tassie) see also Kurtz 2000, 332-336 and Wagner/Seidmann 2010. I would like to thank Claudia Wagner (Oxford) very much for the information she provided in this matter. On France, see: Oberlin 1796; Millin 1797.

11 A selection of 150 impressions by Dehn, dated February 1743 and thus the earliest testament to his commercial activity, was in an Italian private collection in 2006. I am grateful to D. Graepler for this information. After his death in 1770, Dehn's impressions were systematically catalogued by his son-in-law Francesco Maria Dolce. Dolce 1772.

12 Obituary: anonymous 1786. Most recently, for example, Zazoff 1983, 150-164; Kerschner 2006; Knüppel 2009, 61-64; Lang 2012. The Latin edition of Lippert can be accessed online: http://www.beazley.ox.ac.uk/gems/lippert/default.htm.

13 Lippert 1753. Anonymous 1786, 29-30. On the publishing history of Lippert's *Dactyliotheca* in detail: Kerschner/Kockel 2006. There is no room here to explore the question of whether Lippert adopted the organization of his impressions from earlier systems and – if so – from which ones. Knüppel 2009, 63, posits the *Museum Florentinum* edited by Antonio Francesco Gori (1731/32); Graepler 2015, 109-110 does not agree and considers the issue ultimately unresolved.

the stackable wooden trays that had been the convention up till then, he also provided a tall container which looked like an enormous folio volume on the outside and accomodated twenty drawers. This hermeneutic association of a book as the traditional medium of storing knowledge with the new medium of the three-dimensional impression was a huge success right from the start and accounted for almost all Lippert's sales, despite its high price. Reuvens, too, personally owned an example, the very one still preserved in Leiden today.[14]

Three editions were published up to 1776, of which the last was the most successful (Fig.3).[15] Having previously addressed himself to an educated readership, with captions exclusively in Latin, Lippert accompanied the third edition with a comprehensive text volume in German, with the intention of reaching fellow artists and other individuals who did not possess an extensive knowledge of the classical languages. After Lippert's death this German edition continued to be issued by his daughter Theresia (died 1807). It was subsequently republished – in a 'fourth' edition – by Gottlieb Benjamin Rabenstein (died 1816), a member of staff at the Dresden Antikensammlung. A copy of this dactyliotheca, which went on sale in 1808, is also housed in Leiden and hardly differs from its predecessor (Fig.3).

Lippert's innovations gave rise to a specific business model: unlike Dehn, for example, Lippert only sold his Dactyliotheca Universalis as a complete set, not in selected parts. He thereby emphasized the importance of his classification system as an entity, but was obliged to accept a lower overall turnover due to the high price of each complete edition. From Rabenstein, on the other hand, it was possible to buy individual impressions as well as a selection, one of which likewise made its way to Leiden (Fig.4).[16]

In a way that is barely conceivable today, Lippert's Dactyliotheca became the epitome of the visual transmission of antique art. The fact that, as a German, he had surpassed with his invention the volumes of plates by the French and English, only added to his fame. He was known for his directness and lack of diplomacy, traits exacerbated by his hardness of hearing. A little-known etching shows Lippert in his apartments in 'conversation' with the Swiss artist Adrian Zingg in 1773.[17] Lippert had thus become a highly regarded and relatively prosperous man, who was able to move from his third-floor apartment in 1776 to a more comfortable house in Dresden's Neustadt.

From the first edition of 1753 onwards, the appearance of Lippert volumes was accompanied by eulogistic reviews; the title of this article is taken from one of these. Far outside the sphere of classical studies, the intellectual world rhapsodized about the educational possibilities opened up by their use. It was widely agreed that, in their three-dimensionality, Lippert's impressions were able to convey the principles of antique art far more authentically than drawings or printed plates, and in so doing could contribute to the improvement of pupils' 'taste' and character.[18] Given that educational theorists in the latter part of the eighteenth century were postulating that teaching on the basis of illustrations and reproductions should be included to a greater extent alongside purely text-based learning, and bearing in mind, too, that the material remains of classical antiquity were being understood increasingly as sources in their own right, it was virtually inevitable that Lippert's Dactyliotheca should also be incorporated into university and school teaching.[19] While it is true that Lippert could still be heard complaining, in a letter of 1772, that his collection was being purchased neither by universities nor by schools,[20] in 1796, on the other hand, the Alsatian philologist and archaeologist Jérémie-Jacques Oberlin (1735-1806) claimed that there was hardly a grammar school in Germany that was not using the Dactyliotheca in the classroom.[21] So, where does the truth lie? Even today, we still do not know exactly how many copies of the 'Lippert' were produced and sold. More than 80 copies of all editions are documented to date. To these we may add text volumes that were perhaps sold without the book-shaped containers. If we map the locations of these dactyliothecae, a strong concentration emerges in central Germany and particularly Saxony.[22] Thus the academies in Dresden, Leipzig and Berlin, the universities in Leipzig, Halle and Wittenberg, and the Freiberg Mining Academy founded in 1765, all own or owned Lippert editions. The number of schools to which copies can be traced is also large. The three

14 Reuvens refers to it in his above-mentioned letter of 1818 and also used it in his classes. In 1899 Reuvens' Lippert was donated to the Rijksmuseum van Oudheden in Leiden by his grandson, C.L. Reuvens. Inv. Z 1899/1.1. I am grateful to B. van den Bercken for this information.

15 Lippert 1755-1762; Lippert 1767; Lippert 1776.

16 On the difficult history of Rabenstein's dactyliothecae and the composition of the *Selection,*, see Knüppel 2009, 154 note 555; for the other known copy in the Gleim-Haus-Museum, Halberstadt/Saxony-Anhalt, see Knüppel 2015 .

17 For the difficult history of this print, see Griffiths/Carey 1994, no. 27i.

18 See in depth Stante 2006 and Graepler 2013.

19 Bestle 2006 illustrates this in the case of Augsburg. In Bautzen, the headmaster of the grammar school taught Greek and Roman literature, philosophy and historical geography with the aid of a Lippert donated in 1795. Gedike 1796, 46-47 and 78; Gedike 1802, 18. Zittau: Lindemann 1829. See also Kerschner 2006; Haag/Kockel 2006; Knüppel 2009, 71-82.

20 Murr 1786, 100.

21 Oberlin 1796, 65.

22 See http://www.daktyliothek.de/lippertsche-daktyliotheken/.

so-called 'prince's schools' (Fürstenschule) in Saxony, for example, received the volumes as a gift from the Elector himself – an act of patronage whereby the Elector also gave financial support to Lippert. But dactyliothecae are also documented in other elite boarding schools as well as grammar schools in towns such as Guben, Zittau, Bautzen and Eisleben, to name just a few.

Dactyliothecae as teaching aids

How are we to picture dactyliothecae in practical use as teaching and learning aids? For his archaeological lectures in Göttingen, for example, we know that Christian Gottlob Heyne had a janitor on hand to open large volumes of plates to the corresponding illustrations, providing a series of views of the statues under discussion.[23] In London, the sculptor and archaeologist Richard Westmacott (1775-1856) also made use of illustrations, albeit of a different kind, in his lectures on antique sculpture. A lithograph after Georg Scharf (1788-1860) shows him lecturing in 1830 at Somerset House, the home of the Royal Academy, surrounded by plaster casts, in an auditorium whose walls are hung with large copies of famous paintings that probably served to illustrate other lectures.[24] In Bonn around 1820, Welcker insisted that the library and classroom should be directly connected to the room containing the plaster casts via a short flight of stairs, so that he and his class could easily move between rooms over the course of the lecture.[25] Lippert's impressions were very much smaller, however, and would not have been visible to a large public seated at a distance. Did Heyne perhaps refer to them by number in his lectures and students consult them afterwards in their corresponding drawers?[26]

It must have been the practical disadvantages of using small impressions in a lecture-hall situation, in conjunction with the high costs associated with buying the 'encyclopaedic' Lippert,[27] that inspired other 'business models'. The first of these appeared in 1781 under the title Versuch einer mythologischen Dactyliothec für Schulen and was compiled by Anton Ernst Klausing (1739-1803), Professor of Church Antiquities at the Theological Faculty in Leipzig and head of the university library, in collaboration with the Leipzig art dealer Christian Heinrich Rost (1742-1798). It comprised 120 red sulphur impressions, which were housed in four drawers in a small book-shaped container.[28] In his accompanying text, Klausing reiterated the arguments we have already heard for using the impressions and hoped that "teachers and men of insight" would encourage him to continue the project. Since several copies of this dactyliotheca survive from one and the same school library in a number of locations, its educational concept is clear: small groups of pupils could together acquire "the correct formation of knowledge and taste … in the humanities and the fine arts", as Klausing put it.[29] Other dactyliothecae were aimed at different levels of German secondary education, such as the Mythologische Dactyliotheca by Johann Ferdinand Roth (1748-1814), published in 1805, which was designed for "grammar schools, schools and in particular municipal schools for boys"[30], and the Auswahl von 50 Gemmen-Abdrücken für den Unterricht in der Mythologie und die anschauliche Kenntniss antiker Kunst by Martin Krause (dates unknown), published around 1850, a copy of which is housed in the museum at Leiden (Fig.5).[31]

Finally, of particular importance in our context is the Sammlung von [720] Abdrücken geschnittener Steine der Griechen, Römer und Ägyptier published in 1841 by Edmund Müller (dates unknown, Fig.6).[32]

Its accompanying text volume includes a list of buyers and subscribers and provides numerous references to donations to grammar schools and municipal schools.[33] Thus, we have confirmation from multiple sources that

23 The teaching methods employed by Heyne in Göttingen have been extensively reconstructed by Daniel Graepler. Graepler 2014.

24 Sir John Soane made comparable use of pictures as illustrations when delivering his lectures on architecture. Soane asked his pupils to prepare a large number of diagrams, which were then held up during his talk. On the days preceding and following lectures, models and plaster casts of the relevant architectural elements could be viewed at Soane's London home. Watkin 1996.

25 Ehrhardt 1982, 32; 42.

26 D. Graepler voiced this conjecture in conversation.

27 Knüppel 2009, 61 introduces this term as an organizational category.

28 "Attempt at a Mythological Dactyliotheca for Schools", Klausing 1781; on Rost: Schreiter 2014, 133-260.

29 Kockel in Kockel/Graepler 2006, 162-163 cat. 5; Knüppel 2009, 72-74.

30 "Mythological Dactyliotheca"; Knüppel 2009, 74-77.

31 "Selection of 50 Gem Impressions for the Teaching of Mythology and the Visual Knowledge of Antique Art"; ibid., 79-82. Krause was active between 1829 and 1866, see Knüppel 2009, 154 n. 555.

32 "Collection of [720] Impressions of Engraved Gems of the Greeks, Romans and Egyptians"; Müller 1841. The most exhaustive details are found in: Antiquariat Müller & Draheim (Potsdam), cat. 18, 2011, 60-63 no. 38. The text, which survives incomplete, can be found in digital form on the internet. I am acquainted with just one container for the gem impressions, but fragments of others can supposedly be found in various locations in North Germany. Müller's list of subscribers in Hanover alone includes, alongside numerous private individuals, the Polytechnische Schule and the Höhere Bürgerschule, each of which purchased collections of a different size. The Königliches Ober-Schulcollegium bought copies for 14 grammar schools (in the kingdom?), the Duke of Cambridge bought editions for a further four. Knüppel 2009, 34-35, notes 100 and 115, names a further copy in Lübeck.

33 An education at grammar school (in German, *Gymnasium*) qualified young men to study at university; municipal schools (Ger., *Bürgerschulen*) were run by the municipal authorities and prepared pupils for a commercial or other practical profession.

Fig.5 Martin Krause, Auswahl von 50 Gemmen-Abdrücken für den Unterricht in der Mythologie und die anschauliche Kenntniss antiker Kunst, Berlin, ca. 1850. Leiden, RMO inv. GS-70037. Photo Rijksmuseum van Oudheden, Leiden.

Fig.6 Edmund Müller, Sammlung von Abdrücken geschnittener Steine der Griechen, Römer und Ägyptier, Hamburg 1841. Frankfurt am Main, private collection. Photo: Antiquariat Müller & Draheim (Potsdam, 2011).

schools in German-speaking Central Europe owned copies of such dactyliothecae. Whether their classroom use was confined to what they had to teach about antique iconography, however, or whether it extended to an appreciation of artistic styles, may have depended on the abilities of the teachers, who were educated only in philology.[34] Lippert wrote angrily about their level of expertise in a letter of 1772: "...all these academics remain with their eyes stuck to their books without any discernment at all; in the same way they recite it to their young listeners, who believe what their teachers are telling them without improving their eye or their taste." Only Heyne's pupils showed "their taste [to be] educated according to the best rules" and "their judgement of art [to be] correct and applied to scholarship."[35] Contemporary documentary evidence points to an unfavourable shift in attitudes towards dactyliothecae over the course of time, as the following two examples may illustrate. In 1780 the gift of a Lippert to the prince's school in Grimma was celebrated by the headmaster with a Latin treatise on gems.[36] A similar gift, made in 1791 to a grammar school in Eisleben, was reviewed half a century later with far less enthusiasm. Writing in 1846, the school's then principal described Lippert's Dactyliotheca as "a present more expensive than useful" and as "highly overrated in its day". Instead he applauds the purchase of a small organ for the school, which in contrast to the dactyliotheca could evidently regularly be used in teaching.[37]

Still in the old – baroque – style?

However, the encyclopaedic Lippert in particular served as a teaching aid in another way, too. In several books on antique texts, its impressions are cited by individual numbers and thereby provide "one of the best means of visualization for archaeologists and artists".[38] The first example we may mention is Heyne's edition of Virgil, highly acclaimed in its day; first published in 1767, it subsequently went into several editions, reaching a wide public in Germany as well as England. The six volumes of the third edition[39] are generously illustrated with high-quality vignettes, based on drawings specially produced for the project by the Göttingen artist and art historian Domenico Fiorillo (1748-1821, Fig.7a).[40]

These vignettes reproduce antique works of art, either singly or combined into pasticci, and relate to specific

34 More research is required in this area. School curricula and timetables need to be examined. In his influential school directive for the prince's schools in Saxony, Johann August Ernesti – himself closely associated with the contemporary enthusiasm for classical antiquity thanks to his book *Archaeologia literaria* (1768) – names only maps as practical visual materials. Ernesti 1773. On Ernesti see also Graepler 2014, 99-104.

35 Murr 1784. The letter is cited in full and interpreted by Graepler 2015, 105-106.

36 Krebs 1780.

37 Ellendt 1840, 255-256.

38 Anonymous 1808, 338.

39 Heyne 1796-1800.

40 These remarks relate to the third edition; I have not seen the earlier, less substantial editions.

passages of text. In the final volume Heyne reserves over 50 pages for a Recensus parergorum et ornamentorum caelo expressorum, in which he names his visual sources and describes the objects illustrated. In the majority of cases the illustrations are based on books of plates, although Fiorillo has also regularly consulted Lippert's Dactyliotheca. A rapturous review of the third edition of Heyne's Virgil particularly emphasized the selection and quality of the illustrations, which – according to the reviewer K.A. Böttiger – only an author with Heyne's vast knowledge could have compiled.[41] Other works that make reference to Lippert are less lavishly illustrated and confine themselves to citing the volume and number of a gem by way of a visual link.[42]

In a review of the third volume of Lippert's Latin edition, Heyne remarked that the vignettes were "still in the old style".[43] Picking up on this criticism, Daniel Graepler has asked to what extent Lippert, as an artist, really satisfied his ambition to translate and communicate the exemplary characteristics of antique art at the stylistic level, too. We know little about the artistic tendencies of the self-taught Lippert. Preserved in Leiden, however, is an etching by Lippert, dated 1736, showing Diana in a heroic landscape (Fig.7b).[44]

If we compare this composition with the few vignettes above the chapter headings in the Latin edition, we see much that is similar. An essential difference, however, lies in the fact that the landscapes in the vignettes are now peopled with figures taken directly from the gems: the antique images are understood as excerpts, in other words, and are contextualized, so to speak. I would like to draw attention here briefly to a rather odd detail: below each vignette is a row of dots whose length symbolizes the actual size of the gem. In gem publications since Stosch, it had been the convention to indicate the actual size of the stones, which were, of course, mostly very small in relation to the magnified scale in which they appeared in the drawing. To give the size of a gem in a landscape picture, however, is somewhat bizarre.[45] Heyne's censure of the "old style" of the vignettes may be understood in this light. It was perhaps for this reason, too, that Lippert had the vignettes for the German edition designed in a more 'classicist' style, although his frontispieces remained in the Baroque tradition.

Fig.7a Christian Gottlob Heyne, P. Virgilius Maro (opera omnia). Varietate lectionis et perpetua adnotatione illustratus a Christ. Gottlob Heyne, editio novis, Vol. 1 (3rd edition), Leipzig 1797, frontispiece (illustration by Domenico Fiorillo). Göttingen, Institut für Klassische Archäologie. Photo: Stephan Eckardt.

Moritz – Ramler – Hirt: Illustrating mythological handbooks

Let us conclude with an attempt to gauge the artistic impact in particular of Lippert's Dactyliotheca. To what extent did dactyliothecae and reproductions of antique gems lead to the adoption of a uniform pictorial language in contemporary eighteenth and nineteenth century illustrations to Greek myths? Around 1800 there appeared on the market several, rival mythological handbooks that for

41 Böttiger 1800, 305-309.

42 For example, the German-language prose version of the *Aeneid* by Seehusen 1780. The revised and updated edition of Hederich 1770 covers antique artworks that are documented with reference to Lippert, among other sources. An anonymous reviewer discusses the question of what a mythology handbook for artists should deliver in: Anonymous 1773, 132-134. More examples in Kerschner 2006, 66.

43 Heyne 1776, 758; Graepler 2015, 112

44 Philipp Daniel Lippert, *Park Landscape with a Garden Vase* (dated 1736). Etching, reworked with brush and grey ink. 165 x 272 mm. Leiden University Libraries, Special Collections inv. PK-T-2320. URL: http://catalogue.leidenuniv.nl/UBL_V1:All_Content:UBL_ALMA51263448150002711.

45 Stante 2006, 113.

Fig.7b Philipp Daniel Lippert, Park Landscape with a Garden Vase (dated 1736). Leiden, Universiteitsbibliotheek PK-T-2320.

the first time married text and image. Probably the most famous is the 1791 Götterlehre by Karl Philipp Moritz (1756-1793), illustrated with 65 copper engravings by Asmus Jacob Carstens (1754-1798, Fig.8).[46] As Moritz acknowledges in his introduction, these illustrations are based on gems from Lippert's Dactyliotheca, selected by Carstens and himself and engraved as outline drawings.

Moritz also taught mythology for artists at the Berlin Academy, where he and Carstens were colleagues. In the eyes of contemporaries, the engravings in Moritz' Götterlehre perfectly translated the antique style into the present. Other authors adopted different visual strategies, however. One such was Aloys Hirt (1759-1837), "archaeologist, historian and art connoisseur"[47] and Moritz's successor at the Berlin Academy from 1796. Hirt's Bilderbuch für Mythologie, Archäologie und Kunst, published in two volumes in 1806 and 1815 respectively, was targeted – according to the announcement of the publisher – at a wide audience: "Friends of literature, lovers of classical studies, academics, artists, and as a gift for young men educating themselves".[48] Its 32 full-page plates and 34 vignettes by Erdmann Hummel (1769-1852) are conceived in a completely different manner to the illustrations in Moritz. Each plate brings together various statues, vase paintings, reliefs and gems illustrating the same theme and presents them in rows inside registers of equal height. All are portrayed in the same scale, regardless of their actual size; in their drawing, too, they are made to look somewhat alike. Each object is numbered for the purposes of identification. In other words, Hirt here draws upon a much wider repertoire of visual sources, but ultimately omits all context in order to concentrate entirely on a differentiated iconographical tradition.

In 1823 the Swiss professor and librarian Johann Jakob Horner (1772-1831) published his Bilder des griechischen Alterthums in Zurich. The album – which also appeared in French translation in 1824/5 – was intended to complement the basically sound knowledge of ancient Greece in Germany with images that conjured up antique

46 Platz-Horster 2005.

47 Hence the subtitle of Sedlarz 2004; Sedlarz 2014, 159-169. For illustrated school-books on mythology in general, see also: exhib. cat. Kunze 2005.

48 *Illustrated Book of Mythology, Archaeology and Art.* Hirt 1806/1815. Borbein 2004, 178.

Götterlehre

oder

mythologiſche Dichtungen

der Alten.

Zuſammengeſtellt

von

Karl Philipp Moritz.

Mit fünf und ſechzig in Kupfer geſtochenen Abbildungen,

nach antiken geſchnittnen Steinen und andern Denkmälern des Alterthums.

Zweite unveränderte aber wohlfeilere Ausgabe.

Preis 1 Rthlr.

Berlin,

bei Johann Friedrich Unger.

1795.

Fig.8 Karl Philipp Moritz/ Asmus Carstens, Götterlehre oder mythologische Dichtung der Alten, Berlin 1791, frontispiece and title. Universitätsbibliothek Augsburg. Photo: Klaus Satzinger-Viel.

sites and artworks directly before the viewer's eyes. Plans of major sites and illustrations of Greek art, including gems, were intended to aid the "imagination" to form a picture of Greece even in the "petty surroundings of its domicile".[49] Horner draws his illustrations from a wide range of sources and in each case retains their character.[50]

For our analysis of illustration strategies, however, the Kurzgefaßte Mythologie by Karl Wilhelm Ramler (1725-1798) is the most revealing work (Fig.9).

Ramler, who was greatly admired as a sensitive poet of the Enlightenment, taught at the Berlin Academy as Moritz's immediate forerunner. His Concise Mythology was written for poets and artists and therefore expressively avoids overly philological issues. The two-volume work was published in Berlin (1790) and subsequently in Vienna (1794), going through at least seven and nine print runs respectively.[51] The first Berlin edition was illustrated by Ramler's friend Bernhard Rode (1725-1797) with some

49 Horner 1823, p. III.

50 According to the *Allgemeine Deutsche Biographie* 13, 1881, 155-156 s.v. Horner, Johann Kaspar, his *Bilderbuch* is said to have earned praise from Goethe, whom it reached via the Swiss painter Heinrich Meyer. I have not yet been able to verify this source.

51 Ramler 1790 and numerous editions in Berlin and Vienna. I have only been able to consult a number of editions on the internet, whereby the quality of the digitization varies and in many cases does not allow the picture signatures to be read.

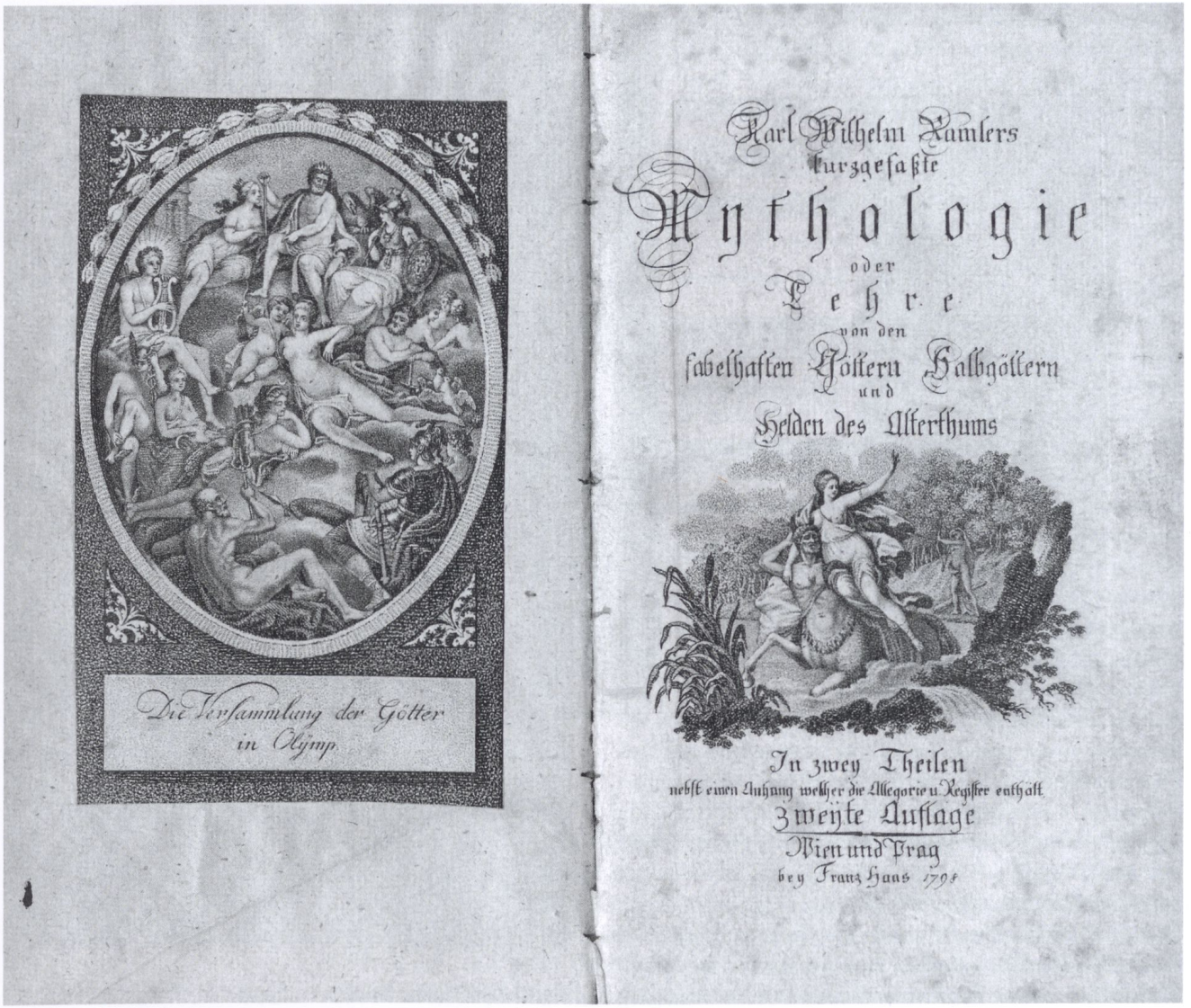

Fig.9 Karl Wilhelm Ramlers kurzgefaßte Mythologe, Vienna/ Prague 1798 (illustration by Caspar Weinrauch), frontispiece and title. Universitätsbibliothek Augsburg. Photo: Klaus Satzinger-Viel.

thirty etchings, whose delicate Frederician Rococo style bears little relation to antique art. The plates of the 1794 Vienna edition, by contrast, stem from the hand of Caspar Weinrauch (1765-1846), who likewise produced freely conceived compositions that we might imagine as ceiling paintings, for example. He nonetheless enclosed his illustrations within an oval surround, so that they at least called to mind the typical gem outline. In the years after Ramler's death, further editions were published in Berlin, accompanied by new illustrations far removed from Rode's style.

In the majority of plates, an artist whom I have not yet been able to identify portrays statues of Greek gods in monumental niches and devotes the area underneath to reliefs or coins. Occasionally, however, he also employs the gem form. Despite a change of publisher, these two parallel versions of the Kurzgefaßte Mythologie can be traced into the middle of the nineteenth century, until finally, in Berlin, the plate section underwent another radical redesign. At this point new printing technology allowed images to be inserted directly into the text in the form of simple wood engravings.

In the case of Ramler's Mythologie, the spectrum of illustrations described above also comes full circle, for we know of three volumes in quarto of a dactyliotheca with gems from the Vienna collection that were probably intended to illustrate this text.[52] A copy

52 Vols. 9-11. Bernhard-Walcher 1991, 36 with note 41. I have not yet seen the dactyliotheca in question.

of Volume 8, auctioned on eBay in 2016,[53] is stamped on the back as follows: "Ramlers Mythologie. Sammlung der [sic] im k.k. Antik Kabinett zu Wien".[54] Even if the precise context is not yet known, this renewed association of the Kurzgefaßte Mythologie with corresponding gems shows that dactyliothecae remained a popular visual resource for artists.

Summary

The present study is not concerned with antique engraved gems per se, but with the dissemination of knowledge about these gems via the medium of dactyliothecae. It looks in particular at the impact of dactyliothecae upon the knowledge of iconography and upon stylistic trends in art in the eighteenth and nineteenth century. It is able to show that the largest of these, Lippert's Dactyliotheca Universalis, was distributed surprisingly broadly in both the university and the school sphere, and that the dactyliothecae produced specifically for schools by other authors were even more widespread. A number of documentary sources also convey a concrete idea of how these dactyliothecae were used in teaching. Their impressions are frequently referenced as iconographical visual sources in the literature of the period, including publications destined for a broad public. Whether gem impressions indeed had the potential to educate tastes, as contemporaries regularly insisted, is nevertheless open to doubt. Lippert himself was not the only one to complain vehemently about the "blindness" of users. However, neither his system of classification – conceived even before Winckelmann published his defining works – nor his observations and autograph illustrations exhibit a particular awareness of the changing styles in antique art and their translation into a contemporary artistic language. Even before the close of the eighteenth century, gem reproductions had lost their initially almost exclusive reference value as authentic testaments to the art of classical antiquity. Christian Gottlob Heyne, for example, became the first to deliver archaeological lectures in the modern sense, in Göttingen from 1767 to 1804, and increasingly incorporated other visual media; the illustrators of concise histories of mythology likewise drew upon a very diverse range of visual sources and designs. Dactyliothecae nevertheless continued to be viewed as an indispensable means of visualizing antique art.

It is in this context that we may understand the young Caspar Reuvens' eagerness in 1818, directly after his appointment as professor of archaeology at Leiden University, to obtain a dactyliotheca for the newly introduced course in antique art. Specimens from the museum's founding years and acquisitions right up to recent years mean that today Leiden holds a sizeable collection of these media, whose individual histories and significance nevertheless remain to be researched.

Fig.10 Karl Wilhelm Ramler's kurzgefaßte Mythologie, Berlin 1821, p. 24 (illustrator unknown). Universitätsbibliothek Augsburg. Photo: Klaus Satzinger-Viel.

53 On 13 March 2016 vol. 8 of the series was advertised for sale via eBay USA ("seller from Woodstock GA"). In autumn 2016 this page no longer existed. The volume contained 60 impressions. The handwritten captions, written out in list form inside the book covers, comprise the numbers 66-165 of a catalogue that has not yet been possible to identify. The resolution of the images on the internet only allowed the gem pictures and the text to be partially deciphered.

54 This abbreviated sentence is grammatically incorrect in the German original, perhaps due to lack of space on the back of the book, and should probably read: "Sammlung der im k.k. Antik Kabinett zu Wien *aufbewahrten Gemmen*" ("Ramler's Mythology. Collection of the *gems housed* in the Imperial Royal Cabinet of Antiquities in Vienna").

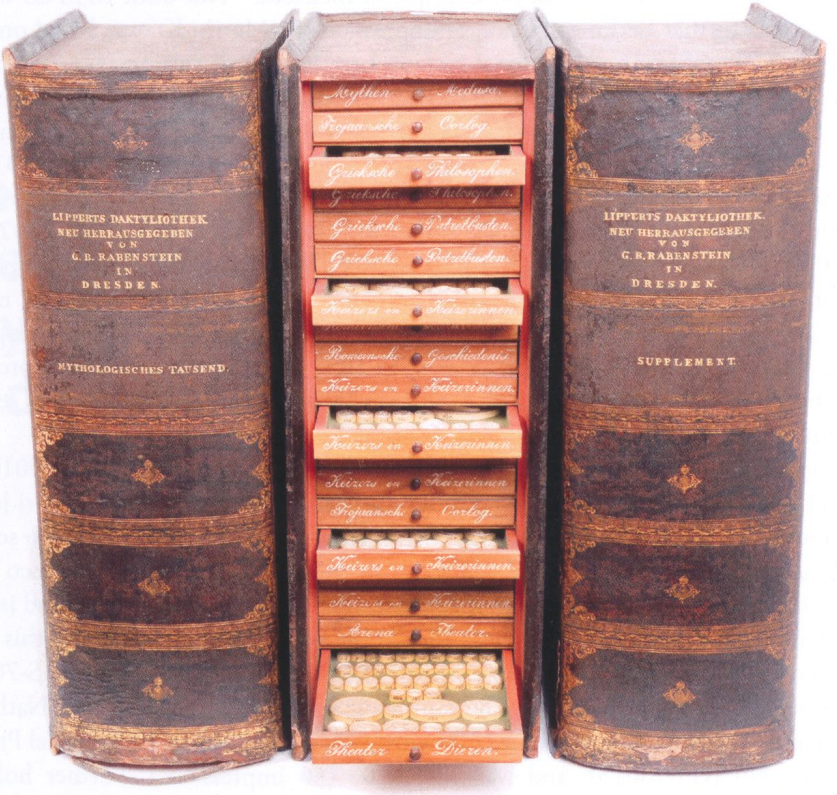

Fig.11 Lipperts Daktyliothek, new edition by G.B. Rabenstein, Dresden, after 1808. Leiden RMO Am 111. Photo Rijksmuseum van Oudheden, Leiden.

Postscript

The Rijksmuseum van Oudheden in Leiden owns a substantial number of dactyliothecae, which can be accessed via its online catalogue (inv. AM 111; Z 1899/1.1; GS-70001-70037).[55] While their individual provenances and dates of acquisition still need to be investigated in more depth, we can already say certain things about them. The 1753 edition of Lippert (inv. Z 1899/1.1) was the copy owned and used by Reuvens himself and was presented to the museum by his grandson in 1899. Other dactyliothecae are mentioned by Reuvens in a letter of 1820[56], in which he makes reference to the most recent catalogue of the Rijksmuseum in Amsterdam, and once belonged in the Rijksmuseum's original holdings when the institution was founded in 1808 as the Koninklijk Museum.[57] In 1825 the antiquities from Amsterdam were distributed between the collections in The Hague and Leiden; it remains unclear whether the dactyliothecae entered the Rijksmuseum van Oudheden at this time or later.[58] Rabenstein's Lippert (inv. AM 111, Fig.11), and probably also Rabenstein's Selection (inv. GS-70027),[59] as well as gems and cameos from the Bibliothèque Impériale in Paris (inv. GS-70021), plus a compilation of Spinthria ('pornographic' gems) after Tassie (inv. GS-70024), may also have reached Leiden from the Rijksmuseum. The dactyliotheca of the Stosch Collection in Berlin, procured by Carl Gottlieb Reinhardt in 1826 (GS-70004), was perhaps purchased during Reuvens' lifetime. Like the Lippert in Saxony before it, in Prussia this dactyliotheca in five mahogany chests was sold or presented by the Ministry to univer-

55 http://www.rmo.nl/english/collection/search-collection. Ben van den Bercken kindly provided me with the entries in the 2014 inventory of the RMO.

56 See note 4.

57 See Apostool 1809, 99, nos. 483-488 and Apostool 1816, 101, nos. 468-473: the descriptions are identical.

58 On this distribution, see: Anonymous 1903, p. XII. Many dactyliothecae were not inventoried until 1892. The models of antique temples certainly came to Leiden at this point. Bastet 1984, 154.

59 Identical with Janssen 1848, 369 no. 71?

sities, such as Bonn and schools, for example in Bielefeld.[60] Not until 1836 do we find mention of a further Berlin collection of impressions by Martin Krause, based on Ernst Heinrich Tölken's new organizational system, here in a small version (GS-70003).[61] It is hardly surprising that in Leiden we should find dactyliothecae from the Dutch royal gem collection in The Hague. Johannes Cornelis de Jonge's Catalogue d'Empreintes du Cabinet des Pierres Gravés de sa Majesté le Roi des Pays Bas appeared in 1837. Inv. GS-70002 comprises three sets of the entire royal collection (the three sets combined contain over 3000 impressions in six mahogany chests). By contrast, GS-70025 and GS-70026 comprise only small selections, totalling 10 and 307 impressions respectively.[62] At least one edition must be named here which is not available in Leiden, namely the Impronte gemmarie published by the Instituto di Corrispondenza Archeologica in Rome, which appeared in six volumes between 1831 and 1868. The financial problems faced by the Netherlands from 1830 meant that this first scholarly edition of securely authenticated gems could not be acquired for the Leiden collection.

Finally, two large series of a dactyliotheca by Tommaso Cades (GS-70010 and 70011) with a clear provenance were formerly owned by the numismatist Henri Jean de Dompierre de Chaufepié (1861-1911). We can currently only attach a name to some of the remaining collections, most of which are stored in stacking trays: Francesco Maria Dolce, represented by one dactyliotheca in two tomi (GS-70012), and a second in three tomi with two supplementi (GS-70020). I know of no other examples of this latter, which contains more than 3000 impressions); Pietro Bracci (GS-70016 and GS-70018); Nathaniel Marchand (GS-70014); Giovanni Pichler, [Tommaso] Cades and [Nathaniel] Marchand (?) (GS-70015); Giovanni Liberotti (5 vols. GS-70036); a Museo del Principe Boncompagni (GS-70013); and Martin Krause (50 impressions). Further holdings, most of them small in scale, still remain to be identified. GS-70023, a single drawer of a Lippert, may bear witness to another, destroyed copy.

60 Kockel in Kockel/Graepler, 2006, 174-177, no. 11; Knüppel 2009, 33.

61 Graepler, in Kockel/Graepler, 179-180, no. 13; Knüppel 2009, 108-109.

62 On the history of the collection: Maaskant-Kleibrink 1978, 15-54. On the different dactyliothecae see Riedl 2006; Knüppel 2009, 109. Identical with Janssen 1848, 369 no. 72?