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A Question of Mentality: The Changed Appreciation of Thomas Murner’s Logical Card Game (c. 1500)

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Nowadays, the Franciscan doctor of theology and law Thomas Murner (1469/75–1537), a contemporary of Erasmus, Luther and Rabelais, is remembered for different reasons than he was a few centuries ago.¹ Students of German literature now look upon the monk from Strasbourg as one of the most important German satirists of his time, even though he is usually no longer believed to be responsible for the first edition of the well-known adventures of Till Eulenspiegel. Moreover, Murner is said to have broken new ground with his translations of classical fiction and non-fiction, such as Virgil’s Aeneis (1515) and the Institutes of Justinian (1519). The latter translation, dealing with a basic text of Roman Law, has procured him a place of honour in the history of law.² To historians of the Reformation Murner is a typical, if minor, representative of uncompromising orthodox Catholicism. His satire About the great Lutheran fool (1522) is considered unequalled for its wit and ferocity. Not surprisingly, a number of Lutheran pamphlets were written against Murner, and contemporary cartoons show him portrayed as a cat (Mur) with a snake-tail, standing next to acknowledged champions of the Roman Catholic cause, such as Hoogstraten and Eck.

So, whereas today Murner has been granted a deserved place in the history of German literature, law and religion, he once was remembered for a completely different reason. By the middle of the eighteenth century all of Murner’s works had fallen into oblivion, except for one, his Logica memorativa or Logical card game (Chartulidium logice), dating from the first decade of the sixteenth century.³ It is this work, together with a juridical card game he devised, that has given Murner a place in the history of playing cards as well. Murner is recognised as the first to have invented a game of playing cards for educational purposes, and with his card game he stands at the threshold of the history of the modern game called “happy families” (“le jeu des sept families”).⁴ This paper will deal with this rather unpretentious part of Murner’s writings, which is, however, not without importance to the history of memory and the art of memory. It will focus especially on the Logical card game. This set of playing cards, designed as an aid to his lectures on logic, is not Murner’s only educational game, but for those studying the art of memory in early modern history it certainly is his most intriguing creation of this sort.⁵

In the Logical card game, which is only known to us in the form of a book, Murner presented an abridged and revised version of the standard textbook on logic of his time, written by Peter of Spain.⁶ What concerns us here, however, is not so much the text, as the way Murner, inspired by traditional mnemonics, enabled his students to memorise it. He visualised each chapter of the logical text in one single woodcut, showing a central figure manipulating attributes and objects that represented the subject-matter of the chapter. In this way, Murner transformed highly abstract concepts into attractive and vivid pictures, creating fifty-one extraordinary woodcuts that together could be used as a set of playing cards.

This paper will not discuss in detail the form of the cardgame, nor the logical subject-matter or the woodcuts as such. Instead, it will concentrate on the way Murner devised visual images to represent the logical text. His efforts to find appropriate visual equivalents for logical concepts have evoked quite different reactions from Murner’s time to our own. The analysis and explanation of these different re-

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actions will, eventually, reveal a significant aspect of the mental equipment of early modern men of letters.

The Reception of Murner’s Imagery

The history of the reception of Murner’s imagery shows a remarkable shift of judgement from the early modern period to our own time. Until the eighteenth century Murner’s imagery met with few explicit words of criticism. To be sure, there were critics in the sixteenth and seventeenth centuries who questioned Murner’s claims, aims and methods, but the appropriateness of his imagery does not seem to have been an issue. On the other hand, we do have evidence of the use and success of the Logical card game in this period. The book was printed three times in the first decade of the sixteenth century. Subsequently, in the seventeenth century it was reprinted once or twice. And we know it was actually used in schools and universities.

We also have some evidence of its effect on students. Murner himself tells us that his use of the Logical card game at the University of Freiburg was very effective. And whereas Murner’s own words are hardly enough evidence, there are other indications that his game was a success. At the end of the
Strasbourg and Brussels edition of the Logical card game we find a Testimonium, written by the Krakow professor of logic John of Glogow (c. 1445–1507), apparently on behalf of his University. The reason for writing this testimony was an accusation brought forward against Murner during his stay in Krakow (1499/1501) concerning his educational methods. Murner’s students had made such extraordinary progress that he was accused of using magic to teach them logic: even those students not yet educated and trained in logic had gained a thorough knowledge thereof within a month. Murner was called upon by a council of magistri of the University to explain and demonstrate his method. This made such an impression on the masters that they rewarded him with an amount of money and admission into their ranks.13

From the eighteenth century onward, however, the doubts about the efficiency of Murner’s imagery accumulated, even to such an extent that the evidence of the Krakow Testimonium was called into question.14 The Logical card game was now repeatedly discredited as incomprehensible, far-fetched and inefficient. Moreover, from this time on writers unjustly suggested that Murner’s card games were incomprehensible in his own time. At the end of the eighteenth century Murner’s first biographer, Georg Ernst Waldau, flatly called the Logical card game a monstrous piece of work, referring his readers to more explicit previous critics, such as Walch and Niceron.15 In his “Historia Logicae” (1721) Johann Georg Walch had denied that there existed any connection between the logical concepts and Murner’s images.16 In 1733 Jean Pierre Niceron had pointed out that Murner’s bizarre pictures were more difficult to understand than the rules of logic taught in his own time.17 And Prosper Marchand, who, in 1759, wrote a comprehensive survey of the preceding literature concerning educational card games, echoes this judgment when he comes to the conclusion that Murner’s images or figures are so badly suited to symbolise logical concepts, that in his work the dark alleys of logic seem to be enlightened only by the obscurity of the visual riddles.18

Now, one could suppose that these eighteenth-century criticisms were inspired by enlightened prejudice against mediaeval monks and scholasticism, especially since Murner was known as a fanatical defender of Catholicism. However, in the nineteenth and twentieth centuries most writers on the Logical card game once again expressed disbelief in its usefulness, even if they did not repeat the earlier enlightened or Protestant criticism of Murner’s character or religious orientation. The Strasbourg scholar Charles Schmidt, for instance, who, in 1879, wrote the best general account of Murner’s life and works to date, questioned the way Murner tried to realise his aims. “There is so little relationship”, Schmidt wrote, “between the images and the ideas, that the former never remind us of the latter; ... the mnemotechnical value of Murner’s method is therefore very contestable, to say the least”.19 And again, Theodor von Liebenau, the author of Murner’s latest full-scale biography, although he tends to defend his subject against any criticism, still finds himself in agreement with eighteenth-century scepticism when he discusses the practicability of the Logical card game.20

Even twentieth-century scholars who are familiar with the mediaeval traditions of book illustration and the art of memory, such as John Murdoch and Helga Hajdu, have criticised Murner’s imagery. Hajdu wrote in 1936 a history of the art of memory in which she called his “device ... completely superficial”.21 And according to John Murdoch, who published in 1984 an impressive history of mediaeval scientific illustrations, the connection between visual image and logical concept in Murner’s Logical card game is too difficult to understand. Therefore, he concludes, “it is doubtful how effective Murner’s work may have been”.22

The study of the reception of Murner’s Logical card game brings us, therefore, to the conclusion that until the eighteenth century Murner’s book and method were quite successful—so successful that at one time this game was the only reason why Murner was remembered at all—whereas after 1700 most scholars found the Logical card game at best impracticable and judged the mnemotechnical value of its imagery to be very doubtful. How can these differences in evaluation be explained? To answer this question, we will have a closer look at the game, concentrating on the way Murner constructed his logical images.
Murner’s Construction of Logical Images

From a modern point of view, the *Logical card game* hardly looks like a set of playing cards. We have, for instance, difficulty discerning the face cards from the numerals, because *all* cards display images of some sort. Again, instead of the four suits we are familiar with, Murner’s card game consists of no less than sixteen suits, each treatise having its own suit of cards, marked by a distinctive suit sign (Fig. 1). Of these suit signs only the hearts are still used in present-day card games. Furthermore, in contrast to a regular card game, not all suits consist of the same number of cards. Thus, it seems that only one way of playing Murner’s game is conceivable: after shuffling the cards, each player had to draw a card and recite the text of the corresponding chapter, using the symbols on the cards as memory aids.

Regarding the anomalies of Murner’s logical card game as a game, it is important to note two things. First of all, most of the peculiarities of the game as such fit in quite well with some noted characteristics of contemporary card games from the Upper-Rhine area—the region Murner originated from. Secondly, as a rule Murner used the formal features of a card game only to express the order and sequence of the cards, and therefore, of the book. They were, on the whole, not meant to represent the logical content.

This general rule becomes evident through the one explicit exception to it. In the treatise on fallacies the face cards do not portray the usual sequence of king, queen, jack and maid; instead, all of them, as well as the subsequent number cards, display women (Fig. 2,3). In a note Murner explained this deviation from the normal suit of cards: “When we treat fallacies, we shouldn’t forget the women”, he
writes, “because deceiving, as people say, is an innate property of them”, and although Murner himself professes not to share this view, he believes that imagining fallacies as women will help his students to memorise them. That we have to do with a commonplace association is confirmed by the allegorical picture of logic in a contemporary encyclopaedia written by Gregor Reisch, a picture which Murner had reprinted at the beginning of his Logical card game. Here we see Dame Logic, dressed as a huntswoman and accompanied by two dogs, one called truth, the other untruth or falsity, hunting after a problem, represented by a rabbit. The picture is quite explicit on the gender of both dogs: truth is shown to be a male dog, while falsity is depicted as a bitch (Fig. 4).

This example illustrates fairly well how Murner used contemporary commonplaces and associations to form mnemonic images that could represent logical concepts. In similar ways, Murner represented approximately four hundred logical definitions, rules and properties by about one hundred different symbols, which he used in combination with several antithetical binary properties, of the following type: above-below, in front of-behind, one-several, small-big, whole-broken, together-apart, abnormal-normal. The 100 symbols may be divided into five categories: parts of the body of man or beast (head, legs, ears, tongue, hand, heart etc.); other natural phenomena (all sorts of animals, plants, celestial bodies); clothes (shoes, different sorts of headgear, dresses); religious phenomena (devil, angel, nimbus); and, the largest category, human artefacts (from pen to key, trumpet to bells, wheel to plough).

These symbols are associated in several ways with the logical concepts they are supposed to represent. We hardly need to speculate about these ways of associating concepts and images, because Murner himself explains most symbols on every card, the connection between logical text, image and explanation being established by using the same number to indicate all three. From Murner’s explanations we can deduce the several ways that have lead him from the logical concepts to the visual image—and which may have lead his pupils from the image to the concept. There are four ways. First of all, the association is sometimes established by formal similarity, or etymological kinship, between the words which are used to designate the logical concept or its definition and its representation. For instance, throughout the book “categorical” (as in proprieto categorico) is symbolised by a cat (catus), species by a mirror (speculum), the affirmative sense by a stone firmly attached (affirmare) to a rope (Fig. 7.8).

The second way is through associations which are intrinsically connected with the nature of the objects depicted. Most associations with parts of the body and some with other natural phenomena fit into this category. We understand why Murner chose a finger pointing to the forehead to symbolise a “mental term”, an arid plant or worms to symbolise corruption; the belly or a flowering plant to symbolise “generation”. And, after being told by Murner that pigeons are known for their numerous progeny, we may understand and accept their representation of “genus”. A lot of associations which have to do with human artefacts or actions also belong to this easily understandable category, for instance, a bell to symbolise sound, a potter in action to symbolise “form”, a painting of a nude to symbolise “figure”, a clock to symbolise various temporal aspects, a pen to symbolise description or reduplication, a key to symbolise conclusion or exclusion, a sceptre to symbolise authority (Fig. 5.6).

One of the most frequently recurring representations, which Murner formed by associating words as well as meanings, is a string of beads, specified by Murner in his explanation as a rosary (legibulum or pater noster). Associating the string of beads by this specification with prayer, and therefore with words, Murner uses it to represent oratio, which in fact not only means “prayer”, but also the logical concept of a verbal expression or a sequence of words, some of which by themselves do signify something. This symbol can also be used to illustrate Murner’s third way of forming symbols: that is, combining previously used symbols to represent a new concept. Before defining oratio Murner used the tongue to represent any arbitrarily significant utterance. Now, if the oratio is a complete arbitrarily significant utterance we have a proposition; accordingly, a proposition is represented on the cards by a string of beads affixed to a tongue (Fig.
In the same way Murner combined several other symbols to form new ones.

The last way of associating objects with logical concepts is the most difficult to understand for modern commentators. In these cases the connections Murner establishes between objects and concepts are not inherently related to the objects depicted, but instead depend heavily on secondary, i.e. cultural and traditional, associations. When we understand why Murner chose donkey’s ears to represent ignorance, it is because this symbol is still part of our cultural stock in trade. Often, however, Murner’s associations are lost on those who are no longer familiar with the traditions he drew on, especially when religious phenomena are concerned. Someone who does not know the Biblical story of Judith and Holofernes may not understand the humour in Murner’s choice of the head of Holofernes to represent an “error of judgement”, in contrast to an error of words—but his pupils surely had no problems with such an image. A devil with a nimbus is likely to have been a most effective image of the concept of “impossibility” to Murner’s contemporaries, the concept of “possibility” being subsequently symbolised by a human being with a nimbus (Fig. 8). One of the best examples of the peculiar way religious tradition influenced Murner’s symbols is the Host, which represents the inessential or accidental (Fig. 5). This symbol is only understandable to those who are familiar with the Catholic doctrine of transubstantiation—and we may safely assume Murner’s pupils were: during the Eucharist the substance of the Host is supposed to change from the bread into the body of Christ, while its accidental form remains the same.

Factors other than lost religious traditions have hampered the understanding of Murner’s imagery. For instance, since Antiquity philosophers considered risibility (i.e. being able to laugh) a specific human property, and as such it was widely used in logical treatises to illustrate the logical concept of proprium: a specific, but inessential property. So, when Murner chooses a smiling woman to represent proprium, he not only uses an excellent example of the concept in question, but he also conforms to a long-standing tradition (Fig. 5). And if we do not understand the connection between the interrogative mood and its symbol, the rod, this means we are not familiar with a common educational practice of the time. Murner’s explanation of this symbol is quite clear: “because with a rod we question the young ones” (Fig. 8). In fact, in contemporary pictures of classroom scenes the rod is widely used as a shibboleth for the teacher.

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These few examples should be sufficient to support our conclusion that most of Murner’s images must have appeared well chosen and obvious to his pupils. In defence of the efficiency of the Logical card game it should be noted, furthermore, that Murner’s imagery reflects at least in part the coherence of logic through his consequent use of the same symbols for recurring concepts and through the combination of already introduced symbols to form new ones. The economy of Murner’s imagery is re-
lected by the four to one ratio of logical rules and symbols. That most modern scholars, in contrast to this favourable conclusion, doubt the efficiency of Murner's imagery may partly be explained by the fact that Murner seems to have invented most symbols himself; accordingly, his images look strange even to scholars familiar with the iconographic traditions of the West. Besides, the fact that Murner based later symbols on previous ones forces one to work one's way through the whole book to understand all of them. It seems that few scholars have bothered to do so. Again, Murner's associations must seem far-fetched to those who are not familiar anymore with the language, the objects depicted, or the associations attached to them, and do not realise their alienation from early sixteenth-century culture. In sum, far from denying that we have problems understanding some of Murner's symbols, it is important to note that the defect in most of these cases is on our side, not on Murner's.

Moreover, the usefulness of Murner's imagery was often measured by the wrong standard, owing to a misunderstanding concerning aim and function of his game. This misunderstanding must, at least in part, be attributed to the success of the humanist criticism of traditional memory training. From 1500 onwards doubts on the use of memory training seem to have gradually accrued. In the sixteenth century, acknowledged "foremen" of modern thought and sensibility, such as Erasmus, Montaigne and Cervantes, were early representatives of this development. Their doubts, however, concerned not so much the practicability or efficiency of memory training, as the appreciation of memory as an intellectual faculty. Gradually, the prominent position memory had held in mediaeval education, was taken.
intellectual judgement and understanding. This view became such a fundamental trait of modern education that later commentators on Murner’s Logical card game automatically, though incorrectly, supposed that it was designed in order to create a better understanding of logic—and, not surprisingly, concluded that it was not fit to do the job. But, of course, Murner didn’t think his images as such would make his students more clever or that they would make them think more logically. His images were not in the first place meant to help the understanding of logic, but to help students to memorise the numerous technical terms, definitions and rules of logic. In fact, most commentators did not bear in mind that Murner’s book was not meant to substitute for oral lecturing, but to supplement it.

All the reasons mentioned so far to explain the later unfavourable reception of Murner’s game have to do with misunderstanding and lack of knowledge. However, factors of this sort, which depend highly on the individual qualities of the commentators in question, seem hardly sufficient to explain their sheer unanimity of opinion. Without going into all the reasons for the initial success of Murner’s book, some of these seem to suggest a more fundamental explanation of the changed appreciation of the Chartiludium. One of the traditions that influenced Murner was, of course, the classical and mediaeval tradition of memory-training. In the prologue of the Logical card game and in the defence of his juridical card game Murner justified his method with reference to classical and contemporary mnemonics. Murner followed classical precepts concerning the formation of mnemomical images (preferably showing action, preferably being extraordinary or shocking), using the playing cards as mnemomical “places”. Typical mediaeval mnemonics are present in his effort to abridge, divide and number the logical text. Anyone familiar with Hajdu’s and Carruthers’ studies of artificial memory in mediaeval culture, and with Volkmann’s description of numerous mnemotechnical works from the beginning of the sixteenth century, can easily see how well Murner’s Logica memorativa fits into this aspect of the intellectual life of his time. The facts assembled in these and other studies on visual memory training in the mediaeval and early modern period seem to suggest that it was, at that time,
position of the mind that led between 1400 and 1700 to numerous symbolical interpretations of the card game, amounting to more or less elaborate allegories of society, love, impurity etc. In a way, Murner’s *Logica memorativa* may be considered as a specific and technical version of these symbolical interpretations of the card game.

We may conclude, therefore, that the unanimity of the modern commentators on the impracticality and inefficiency of Murner’s *Logical card game* and the inappropriateness of its imagery is not only a consequence of misunderstanding and lack of knowledge, but also a consequence of changed mental habits and abilities. The declining appreciation of memory in an increasingly documentary culture, and the gradual disappearance of visual memory training from the common educational practice seem to have contributed to the gradual and general decline of the symbolist mentality and the growth of “literal-mindedness” (to use an expression of Peter Burke) in modern art, science and literature. If this is true, one eighteenth-century critic of the *Logical card game* hit the mark, when wondering about the strangeness of its images. “It seems”, he wrote, “that the minds [les Esprits] in those times were disposed quite differently than they are today”.

Notes

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sance" in the first half of this century: Richard Newald, "Wandlungen des Murner-
bildes", in: Beiträge zur Geistes- und Kultur-
geschichte der Oberrheinländ. Zum 60.
Newald also wrote a comprehensive biographi-
cal sketch, Richard Newald, "Thomas Murner", in: Probleme und Gestalten des deutschen
Humanismus. Studien von Richard Newald,
1944), pp. 387–443.

2 See especially A. Erler, Murner als Jurist,
Frankfurt 1956; and Erlers’s lemma on Murner
in the Handwörterbuch der deutschen
Rechtsgeschichte, A. Erlers, E. Kaufmann (eds.),
Berlin 1964f.

3 See Prosper Marchand, Dictionnaire historique,
The Hague 1759, pp. 94–95. Georg Matthias
König, in his bibliographical reference work of
1678, specifies just one other publication by
Murner next to the Logica memorativa, whereas
the eighteenth-century bibliographer Frid.
Gotthelf Freytag in 1750 only refers to the logi-
cal card game; see Georg Matthias König,
Bibliotheca vetus et nova, Aixdorf 1678, p. 561;
and Frid. Gotthelf Freytag, Analecta literaria

4 At least since abbé Menestrier (Bibliothèque
curieuse et instructive, Trevoux 1704) Murner
is considered by historians of the playing
card as the inventor of the educational card game.

5 Another educational game Murner designed
was a card game to teach the Institutes of Justi-
tinian. Murner used this game already in 1502
in his lectures, but it was printed only in 1518:
Thomas Murner, Chartiludium Institute
summarie doctore Thoma Murner memorante
et ludente, Strasbourg 1518; see Ludwig Sieber,
"Thomas Murner und sein juristisches
Kartenspiel. Vorgetragen in der antiquarischen
Gesellschaft den 18. December 1873", in:
Beiträge zur vaterländischen Geschichte
herausgegeben von der historischen Ge-
sellschaft zu Basel, Vol. 10 (1875), pp. 273–
316, and (not seen by us) C. Alberici, "Un
mazzo di carte istruttivo, tedesco, del sec. XVI
per insegnare le ‘Institutioni’ di Giustiano",
37–60. Murner also designed several games to
teach his pupils the rules of prosody: a game of
checkers and a game with a turntable, which
were printed in different editions and with dif-
ferent titles between 1508 and 1512, lastly un-
der the title Ludus studentum Friburgensium.
The most detailed bibliographic account of all
these educational writings is to be found in two
articles by Moritz Sondheim, ‘Die ältesten
Frankfurter Drucke’, in: idem, Gesammelte
Schriften, Frankfurt 1927, pp. 36–81; Moritz
Sondheim, ‘Die Illustrationen zu Thomas
Murners Werken’, in: Elsaß-Lothringisches
Jahrbuch, Vol. 12 (1933), pp. 5–82.

6 In fact there are numerous differences between
Murner’s text and the text of the earliest manu-
scripts of Peter of Spain’s Tractatus. Some of
these may be explained by considering that
Murner probably knew Peter’s text from one
or more of the early printed editions of Peter’s
work, which contain numerous interpolations;
“corrections” and commentaries, and, in con-
sequence thereof, differ considerably from the
earliest manuscripts (see L.M. de Rijk, “Intro-
duction”, in: Peter of Spain, Tractatus, called
afterwards Summule logicales, Assen 1972, pp.
C–Cl). The differences between Murner’s text
and Peter’s concern the range and order of the
subjects treated, as well as the definition of cer-
tain logical concepts. Murner’s first seven tre-
ates treat more or less the same subjects as
Peter’s treatises I–VII, Murner being on the
whole less elaborate and changing the sequence
of the sixth and the seventh treatise. Murner’s
very short treatises from number VIII onwards,
dealing with the logic of terms, show ever in-
creasing deviations from Peter’s text, some due to extreme abbreviation, others due to alternative interpretations and the treatment of subjects not to be found in Peter’s Tractatus. For example, the twelfth treatise of Murner’s Logica memorativa concerns the propositio exponibilis, a subject that does not appear in the early manuscripts of Peter’s work. Murner considered corrections necessary, because, as he writes in the preface (Aij), the untruths of Peter’s text are as numerous as the spots of a panther (“eum videlicet Petri Hispani textum, quod maculis pardus, tot esse falsitatibus respersum”). One of these corrections was, for example, the definition of suppositio. Whereas Peter defines suppositio simply as “acceptio termini substantivii pro aliquo”, Murner’s definition reads: “acceptio termini in propositione pro aliquo vel aliquibus, pro quo vel quibus talis terminus natus est verificari, mediante copula talis propositionis, vel sibi equivalentis in acceptione terminorum”. The source of Murner’s deviating definitions may have been Expositio in Summulas Petri Hispani, (Freiburg 1494) by Petrus Tarettus, where in the explanatory notes the same definitions are to be found. Carl Prantl’s bold assertion, repeated by later scholars that Murner based his text on Gregor Reisch’s Margarita philosophica (1503/17), is not correct (see Carl Prantl, Geschichte der Logik im Abendlande, Vol. IV, Berlin 1955 (1st edition 1870), pp. 294–95).

Unfortunately, we have not been able to consult Johann Herdegen, Schediasma de rarissima Thomae Murneri Logica memorativa, Nürnberg 1739, nor J.J. Oberlin’s discussion of Murner’s Logical card game in the programme of 1792 for the Strasbourg Gymnasium.

In a letter of recommendation in Murner’s Ludus studentum Friburgensium (Frankfurt 1511) Veit Geissfell mentions unspecified critics of Murner’s use of cards to teach logic and a kind of chessboard and dice to teach Latin prosody: “...while scorning the importance of such an admirable invention and even tenaciously maintaining that no one has been able to understand the intention of the doctor, they say that what he promises is impossible, or that it was just a deceptive dream” (“dicunt vel non esse possibile quod promittit, veluisse fallax somniolum, rem tam admirandae inventionis asperantes, nullum doctoris mentem intelligere potuisse etiam pertinaciter affirmantes”, a2). Moreover, several passages in the Logical card game itself indicate that Murner expected and received criticism: in the preface he writes that scholars might be offended by the playfulness or even the name of his Chartiludium; at the end of the book there is a Testimonium from Kraków University which absolved Murner from the accusation of using magic: Thomas Murner, Logica memorativa. Chartiludium logice sive totius dialectice memoria. & novus Petri hispani textus emendatus. Cum incundo pictasmatis exercitio. Erudiri viri f. Thome Murner Argentini, ordinis minorum, theologie doctoris eximij, Strasbourg 1508, Aii, Aiii and Nv. See also Murner’s preface “To the students” in his Chartiludium Institute: “people say a demon has inspired me to do all these completely new things and assisted me continuously during the writing of it” (“demonem inquit illa omnia tam inaudita prodidisse nobis et mihi scribenti assidue astare”): cited by Sieber, op. cit. (see note 5), p. 43. This accusation might be the reason why, since Marchand, several authors, among whom Liebenau, have suggested that Erasmus’ colloquy Ars notoria (1529) was directed against Murner. Murner is, however, not mentioned in the colloquy. Furthermore, it seems questionable whether Erasmus was here attacking artes memoriae of any sort: usually, mediaeval, contemporary and later authors distinguished ars notoria clearly from ars memoriae. At least since the thirteenth century the ars notoria was considered a forbidden magical art, that tried to attain knowledge by means of prayers, signs, figures and with the help of demons: see L. Thurndike, “Salomon and the ars notoria”, in: History of Magic and Experimental Science During the First Thirteen Centuries of Our Era, 2, New York 1923, pp. 279–89, esp. p. 281; A. Jacoby, “Ars notoria”, in: Handwörterbuch des deutschen

Another supposedly critical passage that later commentators repeatedly have brought into connection with Murner’s games, was written by Rabelais in his *Gargantua* (1535: I, 23). However, no more than Erasmus does Rabelais actually mention Murner. Rabelais indeed seems to mock the educational use of card games in general, but there is no need to suppose that he referred to card games that were different from the ordinary ones: we are told Gargantua used playing cards to study arithmetic. Furthermore, Paul Smith has shown that Rabelais’ attitude towards memory and mnemonics was not as negative as is sometimes supposed. See Paul J. Smith, “Gedächtnis und Gedächtniskunst bei Rabelais”, in: *Ars memorativa. Zur kulturgeschichtlichen Bedeutung der Gedächtniskunst, 1400–1750*, J.J. Berns and W. Neuber (eds.), Tübingen 1993, pp. 222–36.

In fact, the only explicit contemporary mention of the *Logical card game* we know of, except for the passages cited above, is in the *Epistles of obscure men*, but the passage that several later commentators (e.g. Marchand, *op. cit.* (see note 3), p. 95–6 and Ludwig Volkmann, “Ars memorativa”, in: *Jahrbuch der kunsthistorischen Sammlungen in Wien*, NF, Vol. 3 (1929), pp. 111–200, esp. p. 142) interpret as ironical, is actually stated in such an indifferent way that it is impossible to tell what sort of criticism, if any, is implied; see A. Bömer (ed.), *Epistolae obscurorum virorum*, Heidelberg 1924, II, ep. 3. The same is true of the passage in Fischart’s adaptation of Rabelais’ *Gargantua* (1575), where two of Murner’s games are mentioned: “Darumb war unsers Barfüsersischen Superioristen Murnnars Fund Mächtig wol bedacht, und nimbt mich wunder, wie es Polydor Vergil [ed. 1582: in sein Buch von Erfindern allerhand sachen] hat außlassen können: er sahe wie ärgerlich ding oft inn Büchern stand, derhalben erfand er Cartiludium Institutionum, und ein Schachspiel, vbi trahunt quantitates”. See Johann Fischart, *Geschichtsklitterung (Gargantua)*, A. Altsleben (ed.), Halle a. S. 1891 (1st edition 1575), p. 28. To sum up, there is no evidence to support Liebenau’s opinion that “die Koryphäen der Wissenschaft ... sich entschieden gegen Murner’s Methode aus[sprachen]”, Liebenau, *op. cit.* (see note 1), p. 50.

The first explicit and public denunciation of the *Logica memorativa* seems to have been the one by Matthias Bernegger, who does not, however, discuss the appropriateness of Murner’s imagery; Bernegger calls Murner’s *Logica memorativa* trifling and clumsy (“Logicum chartiludium vidi, stoliditatem artis vanissimae detestatus. Talia, inquam, et similes alias afferam hic non referam”). He compares Murner’s promise that his method will enable students to learn the logic of Petrus Hispanus within a month or so, to the ridiculous claim of someone in Strasbourg to be able to teach pupils Greek in a week or a fortnight. It is not
quite clear whether Bernegger objects to Murner’s *Logica*, because he regards this particular work as inefficient, or because he rejects artificial memory in general (as he seems to do on grounds similar to the ones Quintilian had given in his critique). See Bernegger, “Oratio habita in promotione Magistrorum Philosophiae, Argentorati 29 Aprilis, A.D. 1619”, in: idem, *Orationes academicae*, Strasbourg 1640, p. 47.

Another seventeenth-century negative judgement was formulated by the Philosophical Faculty of the University of Strasbourg in 1635–6: when a certain master, named Dauphin, asked the dean of the Philosophical Faculty permission to teach logic using Murner’s card game, the request met with a refusal, not only because its author was a fierce enemy of Luther and several of its images “wider unser Religion” (e.g. devil’s heads and naked men, and especially the rosary, the monk’s hood and the monstrance), but also because the Faculty thought it was of no use to the better understanding of logic: “Einer der schon ein logicus ist, der kann es verstehen: aber einen logicum daraus zu machen, ist unmöglich”. See G. Knod, “Ein Urteil der Philosophischen Fakultät der alten Universität Strassburg aus dem Jahre 1636 über Thomas Murners Chartiludium Logicae”, in: *Mitteilungen der Gesellschaft für deutsche Erziehungs- und Schulgeschichte*, Vol. 7 (1897), pp. 107–10.

In contrast to Murner’s *Logical card game* his juridical card game was more explicitly attacked during his lifetime, but the accusations had nothing to do with its practicability: Murner’s critics found the form of a card game a debasement of Roman law and accused him therefore of lèse majesté.

Murner conceived the logical card game during his stay in Kraków, c. 1499–1501. The first edition, which according to Sondheim must have been non-authorised, appeared in Kraków, and was printed at the expense of Johannes Haller in 1507; no copies of it seem to be extant; see Sondheim, “Illustrationen” (note 5), pp. 19–21. Within two years two new editions were printed, one in Brussels by Thomas Van der Noot (not mentioned by Sondheim), the other in Strasbourg by Johannes Grüninger. The title and content of both editions are the same, except for printing errors (the Brussels edition has all the errors of the Strasbourg edition, and adds a few of its own). The dates of publishing as mentioned in both editions –28/8/1509 in the Brussels edition and 29/12/1509 in the Strasbourg edition– cannot be taken at face-value. For several reasons, which we expound in the *Jaarboek voor Nederlandse Boekgeschiedenis* 5 (1998), pp. 7–26, we have come to the conclusion that the Strasbourg edition was actually printed in 1508, before the Brussels edition. Liebenau and Eckle consider “1509” in the “Conclusio operis” of the Brussels edition to be a misprint for “1519”; however, they give reasons nor facts to support their view. See Liebenau, *op cit.* (see note 1), p. 47 n.3, and F. Eckle, *Der Fremdwortschatz Thomas Murners. Ein Beitrag zur Wortgeschichte des frühen 16 Jahrhunderts, mit einer vollständigen Murner-Bibliographie*, Göppingen 1978. Some but not all copies of the Strasbourg edition have a “Modus practicandi” attached to it, with a separate page numbering (A, Aii, Aiii). Unfortunately, the copy of the *Logica memorativa* in the Royal Library in The Hague, after which the 1967 facsimile was made, does not contain this eight page appendix. We consulted the copy of the appendix preserved in the British Library, London (1134.e.38).

Murner himself used the logical card game at the universities of Freiburg and Kraków. Marchand, who himself was quite critical about the work, reports in 1759 that "on se servit avec utilité de ce Livre dans diverses Écoles". Marchand, op. cit. (see note 5), pp. 95–6. One of these schools might have been in Angers, where Petrus Guischet, who published in 1650 his adaptation of Murner’s book, taught philosophy. Furthermore, Guischet tells us that a pleasant art of reasoning (probably Murner’s Logica memorativa) was being used at the University of Paris, by a doctor of theology; see Guischet, op. cit. (see note 10), c. Finally, Herdegen suggested in 1739 that copies of Murner’s work were so rare because it had been cut to pieces to use it as a card game, see Volkmann, op. cit. (see note 8), p. 135.

On Ai – Aii of the modus practicandi.

"Virum laudavimus et in nostrum numerum insigniter promovimus, nec suo labore frustratus viginti quattuor ungaricos florenos mercedis titulo recepti": Murner, op. cit. (see note 8), Nv.

Reflecting on the accusation of using magic, Marchand talks about the "pretended" progress of Murner’s pupils. See Marchand, op. cit. (see note 5), p. 96.


Jean-Pierre Niceron, Mémoires pour servir à l’histoire des hommes illustres dans la république des lettres, Vol. 21, Paris 1733, p. 360: "En effet ce jeu est composé de figures extrêmement bizarres, qui demandent bien de l’attention; et la Logique, telle qu’on l’enseigne maintenant, est plus facile à apprendre, que ne le sont les significations de toutes ces figures". Apart from this passage, Niceron repeats almost verbatim what Menestrier, as cited in Marchand’s Dictionnaire historique, p. 95, had written about Murner in 1704 in his Bibliothèque curieuse et instructive; unfortunately, we have not been able to consult this work ourselves.

Marchand, op. cit. (see note 5), p. 94: "toutes ces Figures-là étant effectivement si peu convenable aux termes de Logique, déjà assez obscurs par eux-mêmes, c’était, ce semble, expliquer l’obscurité par les ténèbres".

Schmidt, op. cit. (see note 1), p. 272.

Liebenau talks about an "unpractical method" and refers to the eighteenth-century criticism by Walch, Liebenau, op. cit. (see note 1), p. 52.


This is true for the unusual number of suits, for the unusual suit signs, for the face cards and even for the central figures on the number cards. Apart from many card games with more than four suits from the Upper-Rhine area, we know one non-educational card game with just as many suits as Murner's. See Detlev Hoffmann, Alteutsche Spielkarten 1500–1650. Katalog der Holzschnittkarten mit deutschen Farben aus dem Deutschen Spielkarten-Museum Leinfelden-Echterdingen und dem Germanischen Nationalmuseum Nürnberg, Nürnberg 1993, cat. nr. 129. Similarly, the unusual signs Murner used to mark each suit were, partly, Upper-Rhine variants of the signs we are familiar with, namely Murner's bells, hearts, acorn, hat and coat of arms. See Marianne Rumpf, "Zur Entwicklung der Spielkartenfarben in der Schweiz, in Deutschland und in Frankreich", in: Schweizerisches Archiv für Volkskunde, Vol. 72 (1976), pp. 1–32, esp. pp. 29–32. The moon suit used was a variant of the French sign carreau/diamonds. See Hellmut Rosenfeld, "Die ältesten Spielkarten und ihre Farbzeichen", in: Archiv für Geschichte des Buchwesens, Vol. 1. (1956), pp. 121–8, esp. p. 123. The remaining signs are mostly animals, which reminds us of several more or less contemporary Upper-Rhine card games in which birds, dogs, deer and so on were used to mark the suits. See F. Koreny, D. Hoffmann and P.F. Kopp, Spielkarten: Ihre Kunst und Geschichte in Mitteleuropa, Vienna 1974, pp. 36–103; and Detlev Hoffman, Die Welt der Spielkarte. Eine Kulturgeschichte, München, 1972, pp. 24–25. Murner uses the following animal signs: lobster, fish, scorpion, grasshopper, bird, cat and snake. Murner's face cards display king and queen on horseback, followed by jack (jamulus) and maid (ancilla). See Hoffmann, Die Welt der Spielkarte. Eine Kulturgeschichte, p. 24. According to Massimiliano Rossi, who wrote the only recent study of Murner's Logica memorativa, even the (central) figures on the numerals may have been inspired by an earlier card game from southwest Germany, depicting several professional activities and known as the Hofämterspiel; see Massimiliano Rossi, "Res logicas ... sensibus ipsis palpandis prebiui": immagini della memoria, didattica e gioco nel Chartiludium logice (Strasburgo 1509) di Thomas Murner", in: Annali della scuola normale superiore di Pisa. Classe di lettere e filosofia, Serie III, Vol. 20 (1990), pp. 831–77, esp. pp. 856–64. It should be noted, however, that the figures in this game are reported to resemble several older and contemporary models, see Koreny et al., see above, p. 56.

Murner was not entirely consistent in the way the number of signs indicated the position of each chapter (which he called passus) in a treatise (tractatus). From the second treatise onwards, the first face card or king has one sign, the queen two and so on, as many as there are chapters in the treatise. However, the first treatise deviates from this general pattern: here, all face cards have only one sign, and the subsequent numerals are numbered downwards from 8 to 5. This might be the reason why Murner wrote at the end of the book that the order of the cards in the first treatise has to be deduced from the order of the "images" (in fact, the face cards). See Murner, op. cit. (see note 1), Niiij. Oddly enough, in the modus ludendi at the beginning of the book the way the cards are numbered in the first treatise is given as the general pattern. In a separately printed Modus practicandi Murner explicitly mentioned and described this lack of uniformity. He there ascribed the introduction of the second way of numbering to a change of plan, "ex consiliij mutatione". See Thomas Murner, Modus practicandi, Strasbourg, s.a., A. Balesdens, who edited the seventeenth-century enhanced edition of the Chartiludium logice, did not correct the inconsistency; according to the "Conclusio operis" he used the Brussels-edition as original text and probably did not know the Modus practicandi.

The signs Murner chose to designate each suit of chapters seem to be only loosely connected with the subject matter of the treatise. Murner himself does not give an explanation for them. Sometimes the connection is obvious or may be deduced from later passages in his book, for
instance when he chooses a bell for his treatise on enunciation, or a coat of arms to mark the treatise on exception. It is already more difficult to see why Murner chose a snake to represent the treatise on descent. Did Murner associate “descent” with the Christian legend of the Fall? In other cases the connection is even more difficult to establish, as is clear from the seventeenth-century edition of the *Chartuludium logice* in which the editor Balesdans tried, not very convincingly, to explain the signs.

25 Murner, *op. cit.* (see note 1), liii: “Neccesse est de fallaciis nobis tractantibus, ut mulierem non obliviscamur, quaram (ut aiunt) fallere est innata proprietas, sed ego cum de eis modestius sentio: dico non esse proprietatem, sed malarum perversitatem; ob id tractatus hic noster mulieribus memorabitur, ut fallaciarum tenacior memoria habeatur”. The first two face cards of this suit display queens on horseback. The very short treatises from number VIII onwards show deviations from the general character of the face cards as well, with all cards, except the one in treatise XII, displaying crowned figures of some sort, though none of them on horseback. These tacit deviations are not related to the representation of the content.

26 Each chapter of his book in fact consists of three parts. First comes the logical text itself, divided into numbered paragraphs. Then follows the visual representation (*applicatio*) of the logical subject-matter, in fact a playing card marked by the sign of the treatise the chapter belongs to, the number of signs indicating its place in the whole of the treatise. Numbers on the card indicate which part of the text is to be associated with which symbol. After the picture follows the last part of each chapter, Murner’s explanation of each symbol, set in different type and again using the paragraph-numbers to indicate what part of the logical text and which part of the playing card the author is referring to. Accordingly, when referring to one of the symbols, we will indicate the number of the treatise (*tractatus*), followed by the number of the chapter (*passus*) (but only if there are more than one), and the number of the paragraph. For instance, the devil is represented in 1/8/2c and 1/5/3.

1/2/4, 1/7/1, 1/7/2, 1/7/3, 1/7/4, 4/2/1, 5/1/6.
27 7/1/3a.
28 5/5/7, 3/8/8b.
30 2/1/2, 2/1/4, 2/1/5a+b, 2/2/2, 2/3/3a, 2/5/2, 5/7/5, 3/1/6a, 3/1/8. Similarly, after being told that one of the properties of a predicate is being at the end of a proposition, its symbol, a tail, no longer seems far-fetched: 1/2/6, 2/1/1, 2/5/1, 3/1/6c, 6/8/8, 6/8/9.
31 1/1/3 etc.
33 3/5/5.
34 3/7/1, 3/8/6a, 5/4/6, 8/1/2.
35 5/3/2, 7/1/3c, 15/2.
36 4/3/2, 4/3/3, 13/2.
37 5/6/7.
38 1/2, 1/8/3, 3/3/2b, 4/1/1, 5/1/4, 5/2/2ad, 6/3/6, 6/4/6, 6/5/8.
39 1/1/6.
40 1/2/3, 1/2/7, 4/1/1, 6/4/6.
41 6/1/6, 6/7/1.
42 6/2/2b.
43 1/8/2c+d.
44 2/4/3, 2/6/3 2/5/5, 3/1/6f, 5/7/8, 5/7/9, 5/7/10.
The symbols which are most difficult to understand have to do with gestures. Murner does not explain his associations in these cases, perhaps because they seemed obvious to him. We may easily see a connection between a tongue stuck out and the logical mistake of uselessly repeating words (nugatio), even if we do not realise that the Latin word for tongue, lingua, also means language or if we are not familiar with the great number of proverbs which associate too much talking with a long tongue (6/1/7). But why does a long nose stand for the logical fallacy of the causa defectus (6/1/2, 6/3/2, 6/7/2)? Another example is the clenched fist, with the thumb between forefinger and middle finger, which to us does not express mocking as it does in Murner's Logica memorativa (6/5/5). But probably these gestures will in the end be explained by sufficient knowledge of contemporary proverbs.

See Margolin, op. cit. (see note 8), p. 73–74n19.

Cf. Carruthers, op. cit. (see note 21), p. 1; Carruthers calls "imagination" the intellectual faculty praised mostly in modern culture.

Montaigne, Essais, 1, 25: "scauvor par cœur n'est pas scauvor", cited by Hajdu, op. cit., p. 132.


Murner deplores, besides the lack of succinctness, the absence of enlivening forms in the Tractatus of Peter of Spain: "Tertium est quod nulla penitus est formarum festivitate conspicuus, ut vel diversarum figurarumymagine desiderata cupiditate nostra delectarentur ingenia, vel saltem festinantior brevitate nostra relevarentur discendi fastidia", Aij. Succinctness and the pleasure of enlivening forms are, according to Murner, necessary to prevent the students from leaving the field of logic untimely, "discipline campus exilire". That, he says, is one of the reasons why "he has presented the logical matter to the senses themselves to grasp it, so that it may be heard with more pleasure and may stick better in the mind", "Tertio...res logicas (quo delectabilius audirentur hererentque tenacius) sensibus ipsi palpandas premueri", thereby referring among other things to the pictures on the playing cards. In their seventeenth-century versions of Murner's Logica memorativa Balesdens and Guischat seem to commend Murner's method not only as an aid to memorising the logical text, but also, because of the translation of highly abstract logical concepts into more concrete, visual pictures, as an aid to understanding: "Thus the first advantage will be this, that even the most abstract concepts are elucidated by visible examples; this way the duller minds will not stick fast, while the more blessed and more precocious talents will immediately make progress", "Primum itaque [sc. usus] hic erit, ut notiones etiam abstractissimae exemplis visibilibus illustretur; sic non haerebant tardiora ingenia, foeliciora et praecociora <statim proficiant>", in Balesdens' Praefatio and Guischat's remark in his Praefatio: "that is why no one, unless one who is obsessed by envy, will be able to find fault with our invention. For we have elucidated even the most hidden things, the things farthest removed from our perception, by means of visible examples and signs that can be perceived, so that the duller minds do not stick fast and the more precocious talents make immediately progress", "unde nisi livor obsideat mentes, non est qui possit nostram vituperare adinventionem; dum res etiam reconditissimas, & a sensu nostro, exemplis visibilibus, & signis sub sensus cadentibus, illustraverimus: ita ut non haereant tardiora ingenia, & praecotiora statim proficiant". The objective of the Logical card game was thus expanded beyond its original intention, which made it vulnerable to criticism concerning its practicability like the one from
the Philosophical Faculty of Strasbourg and many later commentators ("einen logicum daraus zu machen, ist unmöglich"), see note 8 above.

54 This explains why Murner in his prologue refers to the intended users of his *Charitilium* as *listening*. See Murner, *op. cit.* (see note 1), Aiii'; cf. note 53.

55 E.g. Murner's position in the history of logic, or in the history of educational games in general.

56 See Murner, *op. cit.* (see note 1), Aiii'; "With this exercise in the form of pictures, by means of this likeness of images I have made the logical text ... easier to remember ..., in the way our famous Cicero has taught us to excite, or rather stimulate, our memory", "hoc pictasmatis exercitamento, hac imaginum similitudine logicum textum ... ad facilem memorandi viam revocaverim ..., uti Cicero ille noster memoriam docuit excitandum vel verius irritandam". Murner probably refers to *Rhetorica ad Herennium* (II, xvi, 28–xxiv, 40), a treatise that was once regarded as a work by Cicero. In *Honestorum poematum condigna laudatio* Murner defends the use of pictures for the purpose of memorising a text by referring, among others, again to Cicero, and to the *Memorabiles evangelistarum figurae* (Pforzheim 1502); See Murner, *Honestorum poematum condigna laudation*, impudicorum vero miranda castigatio, s.l. (1503), b1'. "There has also come into our hands an edition designed to <memorise> in a pleasant way the text of the gospels, an edition not less delightful because of the pictures created", "Venit etiam ad nostras manus pro iucunda evangelicci textus memoria <editio> non minus imaginum fictione gloriosa".

57 Cf. Carruthers, *op. cit.* (see note 21), ch. 3. It is remarkable that Murner, being a Franciscan, was a typical representative of a mnemotechnical tradition usually associated with Dominican scholars. In contrast, there is little similarity between his unpretentious method, and the all-embracing schemes of his famous fellow Franciscan, Raymundus Lullus.

58 Even the connection between the card game and mnemonics was not new in Murner's time. Murner was the first to use a card game as a mnemonic device; before Murner, however, authors like Jacopo Ragona in 1434 and Bernard Hirschfelder in c. 1470, advised to use the art of memory to remember the course of a game of playing cards. See Jacopo Ragona, "Artificilis memoriae regulae", in: G. Zappacosta, *Studi e ricercche sull'umanesimo italiano* (testi inediti del XV e XVI secolo), Bergamo 1972, pp. 44–5; and on Hirschfelder: Volkmann, *op. cit.* (see note 8), pp. 150–58 and Sabine Heimann-Seelbach, "Memoserietnake der Schedelschen Bibliothek", in: *Ars memorativa. Zur kulturgeschichtlichen Bedeutung der Gedächtniskunst, 1400–1750*, J.J. Berns and W. Neuber (eds), Tübingen 1993, pp. 126–44, esp. pp. 127–29. Murner's mnemonic use of the card game was imitated by others: Matthias Ringmann published in 1509 his *Grammatica figurata*, a grammatical card game. See J. Nepper, "Eine altelssässische Figurengramma-tik", in: *Neue Jahrbücher für das klassische Altertum, Geschichte und deutsche Literatur und für Pedagogik*, Vol. 16 (1905), pp. 236–45; and J.C. Margolin, "Le symbolisme dans la 'Grammatica figurata' de Mathias Ringmann (1509)", in: *Bulletin de l'Association Guillaume Budé*, Vol. XXX (1979), pp. 72–87. And Nicolaus Simon in his *Ludus artificialis oblivionis* (1510) compared the card game with mnemonic places. See Volkmann, *op. cit.* (see note 8), p. 162. The mnemonic work that seems to have influenced the organisation of Murner's images most, was the often reprinted *Memorabiles evangelistarum figurae* (1502) (cf. note 56), that first appeared, with a different title, as a blockbook in c. 1470; see for this interesting work A. Hagelstange, "Die Holzschritte des Rationarium Evangelistarum", in: *Zeitschrift für Bücherfreunde*, Vol. 9 (1905/1906), pp. 1–21; Volkmann, *op. cit.*, pp. 119–23; M. Rossi,


62 Niceron, *op. cit.* (see note 17), Vol. 21, p. 360.