

GERMAN NAMES FOR MERELS¹

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Abstract: Merels (also called Nine Men's Morris) comprises a family of traditional board games with ancient roots. Between medieval and modern times, merels saw an interesting onomasiological shift: Several European languages took up a new name for the game. This new name is sometimes claimed to have originated in German, but the details surrounding this naming practice are still unclear. There are mainly two German groups of names for this game, the older names based on the number 9 (*Neunstein, Neunten Stein, Neunermal* etc.) and the younger based on the German word for "mill" (*Mühle, Mühlspiel, Mühleziehen* etc.). Relying on philological evidence (partly pulled from lexicographical data) this paper outlines the evolution of German terms for merels, focusing on the naming practices from the 15th to 17th century. Possible motivations of the name *Mühle* are discussed.

Keywords: Merels, Nine Men's Morris, Game Terms, German, Onomasiology, Board Game Names, Ludonyms

Historical overview and naming traditions

Merels is a traditional game or family of games for two players that's widespread around the world. It encompasses games played on a smaller board with 3 pieces per player, and on a larger board with 9 pieces per player, as well as other variants. In each case the objective is to align three pieces of one's own colour which led to it being described as a 'three in a row' game. Among the variations a common point of reference is the

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version played on a board with three concentric squares linked through perpendicular lines, with each player using nine pieces (figure 1).

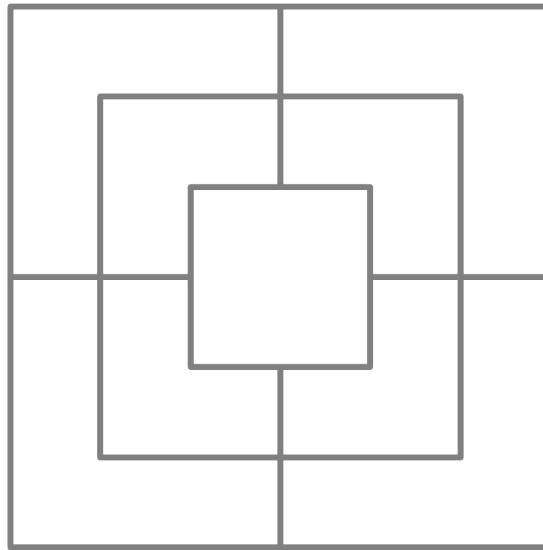


Figure 1: Large merels board, nine men's morris

The early history and spreading of this game is still under debate (e.g. Wu & Sebillaud 2020). There are two main difficulties: In addition to being used as a game board, the concentric squares with connecting lines also carry symbolic meaning (and in some cases might serve an ornamental function). Distinguishing between the symbolic threefold enclosure (*triple enceinte*, *triplice cinta*) and the ludic merels board is often problematic (Berger 2004, Uberti 2012, Wollenik 1990). The second difficulty we have to face is the question of dating. The age of many of the designs carved into stone can be costly or even impossible to evaluate.

For decades the drawing of a merels board on the roof slabs of a temple at Kurna (the mortuary temple of Seti/Sethos I in the Theban necropolis at Kurna/Qurna, Egypt) has been cited as proof that the game was already known in the 14th century BC. However the drawing is part of a graffiti ensemble and defies precise dating. At least some of the graffiti are more likely from Coptic or Islamic times (Berger 2004: 15, Schädler 2021: 79-81).

In the first decade of the Christian era, the Roman poet Ovid mentions a three-in-a-row game twice (*Ars Amatoria* III, 365-366 ; *Tristia* II, 481-

482), most likely referring to the small merels played with 3 pieces for each player (Calvo/Schädler 2009: 298f.). From the early centuries of the Christian era several merels patterns survive, although their interpretation as game boards is sometimes problematic (Hanel 1997 ; Bardiès-Fronty & Dunn-Vaturi 2012: 64f. ; Schädler 2018a).

A widespread misconception about merels in antiquity is the hypothetical existence of a round merels game. The circle with eight spokes is, of course, a common symbol found in many places, and may have been used for other games. (Roueché 2012). But there is no evidence for any connection with the merels family of games (Behling 2014, Heimann 2014, Schädler 2018b).

We do not know for certain how the merels game was transmitted to medieval Europe. Was it a continuous tradition dating back to Roman times, slowly spreading beyond the limits of the former empire ? Were there other transmission routes, e.g. from the East ? What we do know is that early in the second millenium, merels was wide-spread and well known. There is no comprehensive summary of the material evidence from medieval times for merels. For a brief selection of medieval merels boards from various regions, Hall (2011), Hellmich (2014: 32-34), and Moberly & Moberly (2019: 711-717) may serve as starting points.

King Alfonso's *Book of Games* (finished 1283 or 1284) provides the rules for the large merels game with 9 pieces per player (including a version with dice, too) as well as the small game with 3 pieces each (Calvo & Schädler 2009: 291-306). Merels also was included in the compendia called *Bonus Socius* and *Civis Bononiae*. These are compilations of "problems" for chess, trictrac and merels: Game situations presented with a statement, e.g. that one side should win the game in a specific number of moves. These problems were used both for betting and for teaching the game (Schädler 2011; Caflisch 2018: 255-261).

Historically, several European languages know more than a single name for the game. Across languages the terms often appear to be either cognates or loanwords. Schädler (Calvo & Schädler 2009: 301f.) points out two naming traditions, one based on the root **marr-*, the other on words meaning 'mill'. The root **marr-* (meaning 'stone') is not attested itself, but can be deduced from its derivatives in several Romanic languages (FEW 6,1, 368-373). From this root words meaning 'token, jeton' developed, so it was natural to use these words for gaming pieces that were plain, e.g. flat and

round (as opposed to the different chess figures, for instance). Medieval Latin *merellus* may represent this family of gaming terms in Western Europe, particularly in Romanic languages (e.g. Catalan *marro*, French (*jeu de*) *marelles/merelles*², Italian *smerelli*, English *merels* and similar variants; see Murray 1978: 38). “Playing with *merelli*” and equivalent phrases would, of course, not immediately refer to a single, specific game. In early modern sources we find evidence that names based on this root denominate different games played with plain gaming pieces, namely merels and draughts (van der Stoep 1997: 152-164). It’s plausible that this could have been the case in earlier centuries, too. Despite the progress in understanding the *merellus*-based terms in various languages, this naming tradition still needs more research (e.g. Pinon 1972: 310-332; Michaelsen 1998, Moberly & Moberly 2019: 717-718).

Since merel-based names do not feature in German game terminology, this paper will mostly be concerned with the mill-based naming tradition as well as a third tradition. A mill is a mechanism creating a steady movement, mostly used for grinding grains. Many languages know game terms and names meaning or stemming from words for this device (e.g. Dutch *molenspel*, Danish *mølle*; Icelandic *mylna*; Swedish *Kvarnspel*; Czech *mlyn*; Russian *melnitsa/ melnichny*; Hungarian *malom*; Finnish *mylly*). This naming tradition is younger than the former, and has partly replaced the terms based on *merellus* (e.g. French *jeu du moulin*; Italian *mulino*; Spanish *juego del molino* each came in use despite older merel-based terms). It is also prevalent in German: In Austria (ÖWB 2001: 399)³ and Germany (Duden 1999: 6,2651) the game is today primarily known as *Mühle* or *Mühlespiel*. Parlett (2018: 116) assumes that the German *Mühle* is the origin of this naming tradition, while Murray (1978: 39) states more broadly that this naming tradition comes from “the Germanic languages” and was adopted in other European language groups. Compared to the *merellus*-based naming tradition, the etymology and motivation of the mill-based names is less clear and will be explored in this study.

In Alemannic dialects, mainly in Switzerland, the game is often called *Nünistein*, *Neunstein* (= “nine stones/gaming pieces”), *Neunemahl* and similar names based on the number 9 (Schweizerisches Idiotikon 11,864f. s.v.

² French *marelle* later took on the meaning of hopscotch.

³ “Mühlespiel... veraltet auch Mühlfahren”. Dictionary references are given by headword or by (volume and) page number. In many cases, online versions are linked.

Nünistein; Schwäbisches Wörterbuch: 4, 2015 s.v. Neunemal; Wörterbuch der elsässischen Mundarten 2, 600a-600b s.v. Nünelstein and 2, 600b s.v. Rütelstein). The Sanskrit game name *Navakankari* is structurally equivalent (Dharmendra 2010). English *Nine Men's Morris* is also referring to the number of gaming pieces. These number-based names form a third tradition next to the *merellus* group and the mill-based names. In German, only number-based and mill-based names are attested for merels. Compare English names for the game: With *Nine Men's Morris*, *merels*, and *mills* all three naming traditions for this game are documented in the Oxford English Dictionary (OED: s.v. *merels* n., *mill* n.1, *morris* n.2).

Both the names related to *merellus* (jeton, flat gaming piece) and the number-based names are semantically straightforward, explicitly referring to things in the game. The mill-based names are figurative in comparison, and how they are motivated remains unexplained. Another example for a figurative name for merels would be *jeu du charret* (game of the cart/chariot), used in the French part of Switzerland.

The word *Mühle* is not only a German name for this game, but in this game it is also the term for three pieces of the same color in a straight line. On a small, 3×3 field, three in a row is the winning condition. On the larger board for nine pieces for each player, aligning three of your pieces – often called “closing a mill” – allows you to remove an opponent's piece from the board. Gaming pieces that are part of a mill are secure and cannot be removed by the other player.

A formation of four pieces of the same color arranged around a central, empty point is called a cross mill (*Kreuzmühle*, figure 2). Any of the four pieces can be used to close the mill, and even if the opponent manages to take away one of the pieces, the mill cannot be stopped. (Rosenberger/Weltmühlespiel Dachverband 2009).

Especially advantageous is the situation when five pieces are sitting in position in such a way that you can move a piece back and forth to form three in a row with each move: “opening” one mill, i.e. moving one piece out of the line, immediately closes another mill (figure 3). An English expression for this is *running mill*. This situation is known as *Zwickmühle* in German (“pinching mill”), in early modern times also *Fickmühle* (see below), later sometimes also as *Doppelmühle*⁴ or *Klappmühle* (e.g. Georgens/ von

⁴ Cf. also Hyde (1694:204) who refers to *Dupel-Mulen* as German name of the large merels game.

Gayette-Georgens 1882: 444f.) or *Zugmühle* (Zedler 22,164f. s.v. Mühle ziehen).

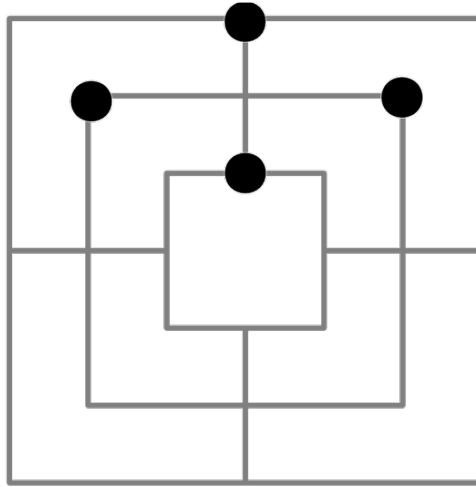


Figure 2: Four pieces in a ‘cross mill’ position (Kreuzmühle)

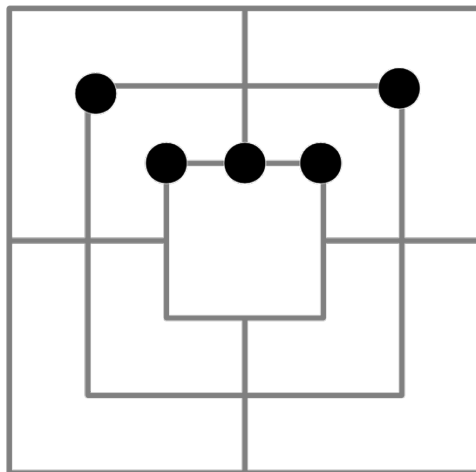


Figure 3: Five pieces in a ‘running mill’ position (Zwickmühle)

Names based on the number of pieces

Nine pieces: niunder stein, Neunstein

The oldest German reference to merels that I know appears in a translation of the *Pèlerinage de la vie humaine* by the Cistercian monk Guillaume de Deguileville. This work tells of a spiritual journey on which the pilgrim meets various personified concepts. During the encounter with Lady Idleness (OFr. *Huiseuse*, MHG *Müezicheit*) a few games are mentioned. The Old French original, written around 1330, includes *de merelier* (Stürzinger 1893: 211, v. 6762). In a German manuscript from the early 15th century this is translated as *den nunden stein*, the ninth ‘stone’ or gaming piece (Bömer 1915: 149, v. 6739). This is, in fact, a shortened verbal phrase that is given in full just a few decades later in a prose translation of the same text: *den nünden stein zcyhen* = moving the ninth piece (Darmstadt, UB, Hs. 201, fol. 83v, from ca. 1460).⁵

French *merellier* might have been a word for various games with plain gaming pieces, including three-in-a-row games, but the German translators chose the game with nine pieces for each player – this may indicate that merels with nine pieces was the most popular *merellier* game, at least from the point of view of the translators.

Verbal phrases for playing games (even in elliptic shape, shortened as above) are a common feature in historical German, and at least in some cases they appear to be older than proper names that are purely nominal. E.g. the phrase “den nünden stein (zcyhen)” led to the compound *Neundenstein*:

Merck eben uf dis war gedicht,
Wie oft ein luoder wirt gericht
Die Eynfaltigen zuo leichen
Durch verborgen wort und zeichen
Bringen die Stoerck zuo wegen viel
Mit geteiltem und anderm spiel
Uff karten/ Würffeln/ Neündenstein

⁵ Another translation does not reference this particular game at all (cf. Meijboom 1926, the relevant passage is vv. 6766-6770).

Auch ander fadt/ sein ytz gemein (Köbel 1520: scan #6 of the unpaginated print)

In a Latin-German dictionary published in 1540, *neundenstein* is mentioned next to *bret*, (here most likely referring to the tric trac board):

Calculus, scrupus/ ein steyn im bret/ oder im neundensteyn.
Novem scrupis certare. im neundensteyn spielen. (Alberus 1540: [408] s.v. Spil).

Another 15th century instance of the number-based naming in German uses the compound *Neunstein*. The source is a contract from 1432 about the responsibilities of a ‘Platzmeister’, the person who supervised gaming on the town square. It includes a short list of games. The quote by von Langen (1821: 148) is misleading, which is why I’m quoting from the digitization of the original: “uf dem brett, in dem brett, mit Nünstain, mit zwölfstain, mit hölltzlin ziehen, oder wamit man den pfenning gewinnen und verlieren kan”.⁶

These German expressions (*den neunten stein* etc.) have parallels in Latin and Old Spanish: In the pseudo-Ovidian poem *De Vetula* from the early 13th century, a passage describes a few games, differentiating them by pointing out the number of gaming pieces each player uses: twice six (= twelve) or nine pieces. The description allows us to identify the two games as draughts or alquerque on the one hand, and merels on the other.

... ludos, ubi parva lapillos
nunc bis sex, nunc vero novem capit una tabella.
Ac ubi sunt bis sex, capit ex hostilibus illum,
ultra quem salit alteruter, nec ibi deciozem
exigitur iactus; ubi vero novem, bene ludunt
cum deciis et eis sine quando volunt, capit autem
unum quem mavult ex hostibus iste vel ille,
quandocumque potest tres continuare suorum.
(Klopsch 1967: 217, lib. 1, vv. 639-646)

⁶ Hauptstaatsarchiv Stuttgart, B 203 U 308. Permalink: <http://www.landesarchiv-bw.de/plink/?f=1-2615054-1> (I added punctuation to my transcription. This text, again, is a fine example of the verbal expressions instead of nominal names.)

Translated, the poem speaks of “...games in which a small board takes either twice six (i.e. twelve) or nine small stones. And (in the game) where there are twice six, an opponent’s piece is taken over which you jump, and you don’t need the throw of dice. But (in the game) with nine, you play as well with dice or without them, as you like, but you take any of your opponent’s pieces if you manage to align three of your own.”

In the famous *Book of Games* (finished in 1283 or 1284) which was commissioned by the Castilian king Alfonso X., called “the Wise”, in the chapter on “alquerque games” we see the same naming practice at work. The game we still call alquerque today, the ancestor of checkers/draughts, is called *alquerque de doze*, the “alquerque of twelve” (figure 4). Merels games on the large board (with three concentric squares) are called *alquerque de nueve*, “of nine”, with variants with and without dice. The small merels game on a single square with eight radial lines (figure 5) is *alquerque de tres*, with three pieces (Calvo & Schädler 2009: 297-306).

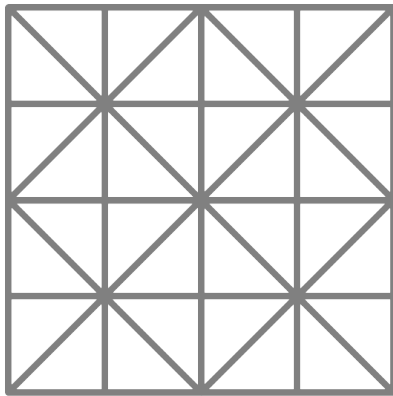


Figure 5: Alquerque de doze board

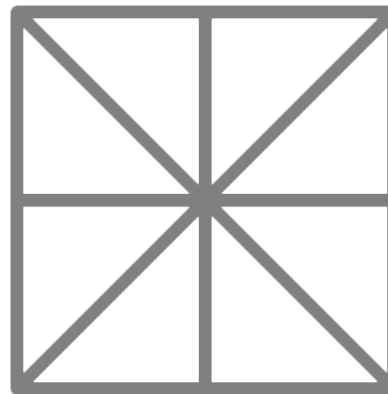


Figure 5: Small merels board, three men's morris

So, both in Alfonso’s book and in the Latin poem *De Vetula* games are referenced by the number of gaming pieces used by each player, just as in the German terms *den neunten Stein (ziehen)*, *Neuntenstein*, *Neunstein*.

The expression *neunten stein* is part of the enormous list of games, riddles, songs, and dances in Johann Fischart’s *Affentheurlich Naupengeheurliche Geschichtklitterung* (1575, expanded in 1582 und 1590). The *Geschichtklitterung* is a translation and adaption of Rabelais’ *Gargantua* (1534), and it enlarges

Rabelais' list of 217 games to more than 600 entries. As a poetic and encyclopaedic excess it parodies and subverts the contemporary collections of knowledge (Bulang 2013). Because of this, individual entries in the list can be difficult to interpret. In his study on this list of games, Heinrich Rausch equates *neunten stein* with a few other game names – in part correctly, but for some (*Aus und Ein*, *Jungfrauenspiel*) without sufficient evidence (Rausch 1908: LII f., no. Fi 460). Other relevant entries from Fischart's list will be mentioned further down.

Through the centuries there are many German names for merels based on the number 9, especially in Swiss German, more than can be discussed here. The most common are combinations of the number 9 with “-stein” (stone, gaming piece) or with “-mal” (marking, probably referring to the drawing or game board on which you play with nine pieces): *Nüni*-, *Nüntli-stein*/-*g'stein*, *Nüntel*-, *Nüdelstein*, *Nünsteren-Spil*, *Nüster*, *Neune(r)mahl*, *Nüni-mal(-spiel)*, *Nünispiel* (Schweizerisches Idiotikon s.v.).

Other numbers of pieces

The merels version played with nine pieces for each player is widespread, but other version using fewer or more pieces exist (Parlett 2018: 116-120 ; Murray 1978: 40-48). Here is a brief list of German merels names based on other numbers. (For the Middle Dutch term *Neghensticken* and related game names based on other numbers see van der Stoep 1997: 150-152.)

Three pieces

The small merels game with three gaming pieces on each player's side (Alfonso's *alquerque de tres*) is also mentioned in German texts. An early reference is by Hans Sachs from ca. 1550: “*Dicdac und das spil mit drey stainen*” (von Keller & Goetze 1894: 521, v. 17). Another is by Philipp Hainhofer, dated 1629: “*ain MühlerSpil mit 3 Stainen (...), fast auf des Wolf Jagens Art*” (Doering 1901: 179), that is: *a mill game with three pieces, almost like the wolf hunting*.

While I believe the game name *WolfJagen* has not been covered in game research, it most likely refers to the hunting or asymmetric blockade game known as *hare and hounds* or the *French military game* (figure 6). Younger German names for this game are *Wolfsspiel* and *Wolf und Schafe*. Its game board is similar to the board for the small merels game (Michaelsen 2013).

According to the *Schwäbisches Wörterbuch*, a version of the smaller merels with three pieces existed which was played on a triangular board, at least in the 19th or early 20th century. It was called *Gansdreck* (*Schwäbisches Wörterbuch*: 3,52).

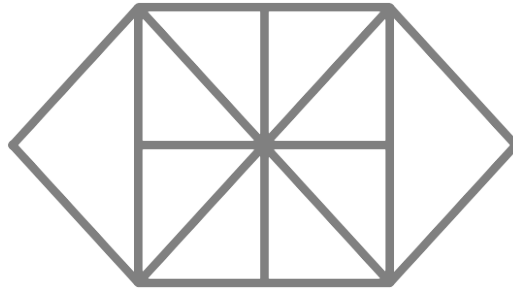


Figure 6: Hare and hounds/Wolf & Schafe

Five pieces

Fischart's list of games, mentioned above, includes the entry *Fünfften stein* (Rausch 1908: LV, no. Fi 453).

Merels with five pieces is played on a board with only two concentric squares (figure 7). Players need fewer pieces for this game, of course. There's a parallel in English: The Oxford English Dictionary also mentions merels games with five pieces (OED: s.v. merels n., and morris n.2). On the same

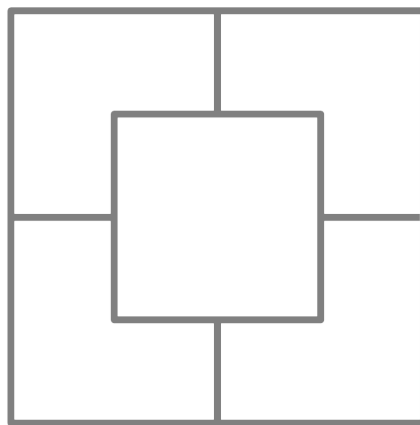


Figure 7: Merels board with two concentric squares (five/six men's morris)

board you could also play with six pieces (Murray 1978: 42f.) but there is no German equivalent for six men's morris documented.

Twelve Pieces

Murray (1978: 43) also points out a merels version with 12 pieces. It is, however, unclear how old such versions are. (Late) medieval and early modern mentions of games with 12 pieces are more likely references to alquerque/draughts. We have already seen the Latin poem *De Vetula* and Alfonso's *Book of Games* referring to games played with 12 pieces, namely alquerque. A German 16th century example for *der zwölfte Stein* as name of alquerque is in Freig's annotations to the colloquies by Juan Luis Vives (Vives/Freig 1586: 35). Schottel (1663: 1450) also equates *zwölftstein* with "damen". The unambiguous examples from Vives/Freig and Schottel make it likely that the entry *Den zwölfften stein* in Fischart's list (Rausch 1908: LVI, no. Fi 574) and equivalent headwords in 16th century dictionaries (Frisius and Maaler in DWB s.v. Zwölf(t)stein) also refer to alquerque/draughts.

18 pieces: Achtezehner

In 1617 Philip Hainhofer, who incorporated various games into his art cabinets for European nobility⁷, described a merels board in the Pomeranian art cabinet with three synonyms: "*neunemahl, achtezehener oder mühlespil*" (Lessing/Brüning 1905: 44). The first term is based on the number 9, the last term will be dealt with in the next section. The second term is number-based, too, and the number eighteen of course is the total of gaming pieces, twice nine. It is, to my knowledge, the only instance of an expression with the number 18 for merels.

Mühle

German Mühle(spiel) as name of the game

The German word *Mühle* primarily means a device for grinding grains, usually a building including such a mechanism, for instance a watermill. Based on Latin *mola/molina*, the German loanword is attested from the 10th century onwards in several shapes (EWA 6,599ff. s.v. *mulin*, *mulî*). Parlett (2018: 116) states that German *Mühle* is the origin of this European tradition

⁷For an excellent study of games in Hainhofer's œuvre see Sundin 2020.

of mill-based names. Further down I will discuss explanations how mill-based game terms might have been motivated in German.

Mühle or *Mühle(n)spiel* was already in use as name for the merels game (alongside the older name *Neunstein*) early in the 17th century.⁸ We've just seen the quotation from Hainhofer, 1617: *neunemahl, achtzehener oder mühlespil* (Lessing & Brüning 1905: 44). Other German texts from the 17th century onward use *Mühle* as a term for the game. For instance, in a treatise on the education of young lords a chapter title reads “Von Schacht-, Bret- und Mühlenspielen” (Löhneysen 1622: 34). The chapter is disappointingly short and contains nothing about merels, unfortunately. And in 1632 poet Paul Fleming writes on the occasion of a friend's birthday:

“Gleichfals mangelts nicht an Spielen.
Vor uns steht das Interim
da die Peilke, hier sind Mühlen”
(Fleming, Auf Eines seiner besten Freunde Geburtstag, lines
319-321; in Lappenberg 1865: 344).⁹

Can we find older ‘mill’ references for merels games to arrive at a better understanding how this naming tradition came about, and where it might have originated ?

Dutch molenspel in the late 15th century

There are intriguing Dutch occurrences of *molenspel* and similar words from the end of the 15th century, but their meaning is not immediately obvious. The *Middelnederlandsche Wordenboek* (MNW) quotes from a single source, the *Gemma vocabulorum*, printed in Antwerpen in 1494 by Martin: “een molenspel, molucrum” (Gemma vocabulorum 1494: 125r, as cited in MNW s.v. molenspel). Based on more recent literature, the MNW interprets this as the mill game = merels. Under the following entry *molenspille*, however, we find a quote from a different page of the same source text: “een molenspille, trilla, quo molendinum vertitur” (Gemma Vocabulorum 1494: 213r, as cited in MNW s.v. molenspille).

⁸Also, *Mühle* was occasionally used for children's toy windmills (FWB s.v. mühle, see the Peil, Rollenhagen citation; for toy windmills in general see Willemsen 2008; Hill 1998: 59f.). I do not think there is any connection between the toy windmills and the boardgame.

⁹*Interim* = troumadame, *Peilke* = a shuffleboard game.

Another vocabulary with a similar title, the *Gemmula vocabulorum* printed in 1486 by Gerard Leeu in Antwerpen, has the entry: “molutrum [sic] een molen spil of een buyck heftinghe/ illud in quo mola vertitur/ vel tumor ventris” (*Gemmula vocabulorum* 1486: x6r). That is “[the thing] on which the mill turns, or a swelling of the belly”. Note that the Latin headword is only minimally different from the one in the 1494 *molenspel* quotation from the MNW, but the explanation is partly the same as in the *molenspille* quotation. We find the same Dutch/Latin explanation under the headword *molucrum* in yet another vocabulary printed in 1497 (*Gemma vocabulorum* 1497: v3r). The wording is also given in another 15th century vocabulary where the headword is given as *molocrum* or *molitrum* (Ex Quo: 4,1663 = no. M515), and it also appears in Du Cange (t. 5, col. 450b, s.v. molucrum).

All this suggests that *molenspel* in the *Gemma vocabulorum* from 1494 is just a different spelling of *molenspil* or *-spille*, and that these dictionary entries all refer to the spindle/shaft/axis on which a (part of the) mill turns, or a swelling of the belly, but not the merels game.

Castles and Mills

There are indications that the mill-based naming tradition in German, French, and Dutch started with ‘mill’ or related words as expressions for three pieces in a row – either a simple row or a more complex formation like the *running mill*/ *Zwickmühle* described above. The meaning would later have shifted or expanded to become a name for the game as a whole. This section shows examples taken from bilingual phrasebooks, dialogues, and dictionaries.

A French-German phrase-book from 1627 by Daniel Martin (1627: 204) lists the entries:

Iouer aux merelles, den neunndenstein spielen. die spän ziehen.
un mereau, ein stein in demselben spiel. un moulin allant &
venant, ein fickmühle/ oder zwickmühle.

First of all, we encounter a new verbal expression for playing merels: “*die spän ziehen*” = moving wooden chips. This phrase also occurs in a Silesian manuscript, although maybe with a different meaning: “er vnd Swarcz Hensel habin dem knaben das gelt angewonnen mit dem spene czihen”

(Schoppe 1926: 141, quoting from ms. J 116, 56b).¹⁰ Schoppe wonders whether this refers to the drawing of lots, a question we cannot decide here.

Martin's phrase-book also indicates that the name *Mühle(spiel)* was apparently not prominent enough yet for Martin to list it (if he knew it at all). But we also see the French *moulin allant et venant*, a mill that is 'coming and going', and two German equivalents: *Fickmühle* or *Zwickmühle*. In modern German *Zwickmühle* still is the term for that situation in which a player can form a row of three in every turn by moving a single piece back and forth between two rows. The French *allant et venant* seems to describe the same. So the "mill" terms in Martin's phrasebook refer to a position in the game, while the game itself is called *merelles* or *neundtenstein/die spän ziehen*.

The combination of the number-based name for the game with the mill-based expression for three-in-a-row also can be found in a (Neo-)Latin text by Jacobus Zovitus (Jacoppen Pietersen, born 1512), a Flemish humanist and teacher. Zovitus is primarily known for three plays in Latin, some of them published while he was headmaster of the Latin school in Breda around 1540 (Bolte 1900 ; Juten 1911). He also composed several dialogues or colloquies, the *Quotidiani Sermonis Formulae*.¹¹ We do not know when they were written or first published, although it makes most sense to link them to his activity at a school. A Latin-Dutch edition from 1570 is the oldest surviving source. In it, Zovitus' *Quotidiani Sermonis Formulae* are published in conjunction with the *Puerilium Colloquiorum Formulae* by Sebaldus Heyden, a very successful collection of dialogues created in 1526 (Bopp & Rosenberger 2021; Riecke 1995). The title page mentions that Zovitus' text has been much improved compared to how it was published previously, but apart from that we have no details about the text's history before 1570.

Intended for use in Latin schools, these dialogues show simple scenes to which schoolboys of the 16th century could relate (Bömer 1897/1899). Each part of the dialogue is given both in Latin and the vernacular to help

¹⁰I was unable to determine what archival document exactly Schoppe quotes from, and how it is dated (Schoppe 1924; 1926). Schoppe groups "J 116" among the "Malefizbücher" (lists of offences and their punishments) from Breslau/ Wrocław, but uses the term possibly in a wider sense than Frauenstädt (1903), who gives a different signature and mentions various similar criminal records from Wrocław. The quoted manuscript has since probably moved from the previous Stadtarchiv Wrocław to today's Archiwum Państwowe.

¹¹Alongside this title the printings from 1570 and 1610 also use *Colloquia* on the title page. I am indebted to Thierry Depaulis for pointing me to this source. Only later I became aware that Michaelsen (1998) mentions it, too.

the children learn Latin. Several of Zovitus' dialogues are about playing games. Dialogus XIII shows two boys (called Erasmus and Gaspar) playing merels. The game carries a number-based name in this source: *lusus novem scruporum* in Latin, *neghenstecken* in Dutch. During the course of the game Gaspar says to Erasmus:

Raptorium castrum habebis. Ghy sult een meulen hebben. (Zovitus 1570: 69)

The line of three pieces that allows to capture an opponent's piece is called a mill (*meulen*) in the Dutch version, and a castle or fort of robbers (*raptorium castrum*) in Latin. A few lines later Gaspar says:

En duplex, & quidem iugatum mihi castrum est. Ick heb een rosmuelen. (ibid.)

He has formed a double or joined (*duplex, iugatum*) "castle". The Dutch term for this is *rosmuelen*, a horse-mill (MNW s.v. rosmolen). Shortly afterward Gaspar manages to form a second *rosmuelen*. Even though Erasmus, being reduced to three pieces, may now move them freely (flying/hopping to any vacant position), he stands no chance against those two double advantages. Zovitus does not provide enough details to determine with certainty whether this refers to a cross mill or a running mill. A Latin synonym is given when the two *rosmuelen* are mentioned: *duo emissarii rapones*, two robbers who are emissaries or running errands (Zovitus 1570: 69). Based on this expression I am inclined to interpret the *rosmuelen* as a *running mill*/*Zwickmühle* in which a piece switches between two rows, like someone carrying messages back and forth between two places.

The horse-mill/ emissaries in Zovitus' text are reminiscent of a Danish term: The word *rendehest* (literally 'running horse', figuratively a messenger or newsmonger etc.) is used both for the running mill position as well as for the gaming piece switching between the two rows in a running mill (Michaelsen 1998). It has a parallel in the Icelandic *rennihestur*, although the exact meaning of this gaming term is debated (Fiske 1905: 139f.).¹²

In a slightly younger, Latin-French printing of Zovitus' *Formulae* the French name of the game is *jeu de marelles* (*marelle* or *mereau* is the word for the gaming pieces, see Martin's phrasebook above). The single row of three

¹²My thanks go to Peter Michaelsen for extensive input on this regard (personal communication, primarily on 6th Dec 2021 and 11th & 13th Jan 2022).

(*raptorium castrum*) is called *un molin*, and the double mills are called *moulins ouvrans & fermans* (Zovitius 1576: 71f.). That last expression (an opening and closing mill) confirms the interpretation of *rosmuelen* as a *running mill*/*Zwickmühle*. It is parallel to the *moulin allant & venant* (a coming and going mill) that we have seen in Martin's phrasebook above.

Thanks to some editions of a dictionary by Cornelius Kiliaan (ca. 1528/1530–1607) we can see when *molenspel* as name for the game received its own entry. Kiliaan's first *Dictionarium Teutonico-Latinum* (1574) did not have entries for *marellen*, *marelspele* or *molen-/muelenspel*.¹³ The second, enlarged edition (1588) included entries for *marellen* and *marel-spel*. *Marellen* is a verb, its meaning described in Latin: "Ludere calculis discoloribus duodenis; vel etiam novenis, quod negen stecken vocant." (Kiliaan 1588: 335 s.v. *marellen*) The noun *marel-spel* is explained similarly and linked to Italian and French cognate game names: "Ludus duodecim, vel novem scruporum; italis marella; gal. ieu de merelles; vulgo madrellus & madrella dicitur." (ibid. s.v. *marel-spel*) According to this, the words referred to both *merels* (played with nine pieces of each color) and *draughts* (with twelve pieces each). There is still no reference to the game under *molen* and its composite words. (*Meulen* and *muelen* both redirect to *molen*.) The third edition, expanded again and published under the adapted title *Etymologicum Teutonicae linguae, sive Dictionarium Teutonico-Latinum*, retains the headwords *marellen* and *marel-spel*, adding an etymology to the latter and embellishing it with a quotation from Ovid (Kiliaan 1599: 306). It also adds an entry *molen-spel* that redirects to *marel-spel* (ibid.: 322).¹⁴ The second and third edition also feature an entry for *neghen-stecken*, explaining it as "Ludere novem scrupis, ludere calculis novenis" (Kiliaan 1588: 365; ibid. 1599: 335) and equating it with *morellen* (sic – this has its own headword, redirecting to *marellen*). This definition notably narrows the meaning to playing *merels*, omitting *draughts*, despite giving *morellen/marellen* as an equivalent. None of the editions mention that *molen* (or a variant spelling like *meulen*, *muelen*) can refer to a row of three pieces in the game, although Zovitius' *Formulae* show that this was the case. *Molenspel* as a name of the game probably was not prominent enough to be included in the 1588 edition along with the other game terms, but merited inclusion in 1599. It's possible that the inclusion

¹³ Alphabetically, the headwords would go on pages 127 and 135 (Kiliaan 1574).

¹⁴ There's also an entry for *molenspille*, explaining the word as "fusus molaе, vulgo trilla" (ibid.).

in 1599 did not reflect recent changes in word usage, but simply happened because the dictionary was expanded with each edition to cover more words.

What can we learn from Zovitius' merels dialogue, Kiliaan's dictionaries, and Martin's phrasebook? They show us that "mill" expressions were used for three pieces in a row before they were employed as name for the game. This also occurred in some Danish dialects, in which "i rad" ("in a row") or "rendehest" (the piece moving back and forth in a *Zwickmühle*, and the *Zwickmühle* itself) each took on a second, broader meaning of the game as a whole (Michaelsen 1998: 19, 20f., 23). Zovitius' *Formulae* also show that the Latin term for a row of three is not based on the concept "mill", but instead is *castrum*, which suggests an independent origin.

Fickmühle and Zwickmühle

The words *Fickmühle* and *Zwickmühle* are well attested from the late 15th century onward (DWB, s.v. fickmül and zwickmühle). They never seem to have meant a literal grinding mechanism of any kind – their earliest attestations from the late 15th century already show the metaphorical meaning of an advantageous situation, of two beneficial options between which one can choose. Both entries in the DWB point to each other. The entry for Fickmühle/fickmül, published in 1862, is comparatively short. It first explains the meaning as the game merels and then mentions a phrase showing the metaphorical use: "*eine fickmül haben*, spe duplici uti, vom hin und her schieben, ficken der steine" (DWB, s.v. fickmül).¹⁵ The entry for Zwickmühle, published in 1951, is much more extensive, in line with changes the DWB underwent through the decades.¹⁶

What does the first part of the compound *Fickmühle* stand for? The verb *ficken* (related to English "fuck") meant a rubbing or sliding back and forth movement, for instance for cleaning or polishing something. The word is attested from medieval times; it took on the sexual meaning in the 16th century at the latest, but the sense of 'rubbing' continued to be used for a

¹⁵ The Latin phrase (*spe duplici uti*, benefiting from a twofold hope) is the same as in Henisch's dictionary (1616:1093), from which it was probably copied: "Fickmühle: zwo Fickmühle haben/ zwyfache hoffnung haben/ spe duplici uti."

¹⁶ I checked additional attestations of these words both from other dictionaries and via Google Books searches to confirm the lexical histories outlined here. My thanks go to the Göttingen office of the FWB for letting me check their slip boxes (work on the FWB is still under way and the parts including *Fickmühle* and *Zwickmühle* are not yet finished).

few more centuries (²DWB, s.v. ficken). The verb *ficken* is used to explain the term *Fickmühle* in a description of the realm “Lusoria” in the mythical Schlaraffenland (Cockaigne, a land of plenty) by Schnebelin (1694: 181f.).¹⁷ *Fickmühle* thus can be translated as a “back and forth mill”.

Zwickmühle on the other hand means “pinching mill” if we connect it with the verb *zwicken*. However, the etymology is not entirely certain. Lexicographers like Adelung in the late 18th century have speculated whether the first part might be related to “zwei”, so that it would be a “twofold/ double mill” (Adelung, s.v. *Zwickmühle*). But the oldest occurrences show the <k> sound at the end of “zwick-” which is difficult to explain if we want to derive it from “zwei” directly (cf. the vague attempt in DWB s.v. *zwickmühle*). The verb “zwicken” is etymologically related to “zwei”, though: pinching happens with points coming from two sides.

Here are some early examples showing how the two words were used: In a text about what to observe in the hour of your death, the preacher Johann Geiler von Kayserberg in 1497 advises how to reply to any doubts about the Christian beliefs that the devil may whisper to you: You should answer that you believe the same things that the Christian church believes. And when the devil asks what the church believes, you should respond that it believes the same things that you believe. This switching back and forth between recursive answers is called a *fickmüle* by Geiler: “laß dich ab diser antwurt und fickmüle nit tryben/ er frag was er welle” (Geiler 1497, ch. Xxiii; ≙ ed. Bauer 1989: 1,1,109).

In a letter dated 11th of June 1472 Albrecht III Achilles, Elector of Brandenburg writes to his emissaries, commenting that the Hungarian king assumes that some Bavarian and Saxonian princes hope for a *zwickmul* (a choice between two or more advantageous options) in the upcoming multilateral meetings in Freiburg and Zerbst: “der beheimisch konig [...] leszt sich beduncken, die jungen herrn [zu Sachsen] und auch die Beyrischen hetten gerne ein zwickmul.” (Priebatsch 1894: 404)

Compare this with a similarly political use of the word by Martin Luther in 1545, who criticises the ambivalent papal stance towards France and England: “sie wollen die zwey Heubter uneins behalten, und eine zwickmuelen haben, damit sie sich jtz zu diesem, jtz zu Jenem, darnach der wind gehet, halten muegen” (Luther, WA: Schriften 54,232,12).

¹⁷ See Reitingen (2004) for more information about this interesting text by Schnebelin, originally published anonymously.

Zwickmühle also exhibits another metaphorical meaning, a situation with no way of avoiding a bad outcome. It can be explained by the perspective of the player who has no way to avoid losing a piece because their opponent has formed a running mill. Luther employs it as he describes the plan of the Pharisees to expose Jesus by asking him whether it is lawful to give tribute/pay taxes to Caesar (Matthew 22, 15-22). Whatever his answer (they assume), he will get in trouble either with the Jews or with the Romans: “Jn dise Zwickmuele, dachten sie, wolten sie jn stecken, er sagete ja oder nein, das er solte gefangen und das leben verfallen sein ”(Luther WA: Schriften 52,530,4). This meaning (‘a difficult situation with no way to avoid a bad outcome’) is the dominant metaphorical sense of *Zwickmühle* in today’s German (next to the literal sense of the running mill in the merels game).¹⁸

These and further attestations of *Zwick-* and *Fickmühle* (DWB s.v.) exemplify the metaphorical use. It is easiest to explain if we assume that the words were already established as terms for the ‘running mill’ position in merels, and the metaphor derived from this. The DWB entry for *Zwickmühle* in fact suggests this conjecture (DWB, s.v. *zwickmühle*), even though the metaphorical use is attested about a century before the oldest surviving references to gameplay.

The earliest evidence I could find for *Fickmül* as a gaming term is from Fischart’s list of games in 1575. Due to the nature of the list it is difficult to say whether *Fickmül* here is already used as name of the merels game, or whether it was included as a gaming term with the narrower meaning of the row of three. Rausch understands the term as the name of the merels game (Rausch 1908: LII, no. Fi 16). We also have to consider the word’s potential ease to evoke a sexual connotation, something Fischart may have deliberately played with.¹⁹

¹⁸ Interestingly, *Fickmühle* does not display the same semantic range and historical change as *Zwickmühle*. Looking at about 20 quotations of *Fickmühle* up until ca. 1700, none attests the unfavourable metaphorical sense. Likewise, several modern dialectal dictionaries with an entry for the word may list the positive meaning of ‘two favourable options’, but not the sense of the ‘unavoidable disadvantage’.

¹⁹ Fischart’s list also includes *der Palirmül* (ibid., no. Fi 35) which Rausch equates with *Fickmül* and *Neuntenstein*. The literal meaning of the word is ‘polishing mill’. The verb *ficken* (rubbing back and forth) is semantically close to *paliren* (FWB s.v. *polieren*). To my knowledge *Palirmül* is not otherwise attested as relating to games. The list also contains another mill-based term, *im Mülchen*, which Rausch explains as toy windmills (1908: 37f., no. Fi 325). The preposition “im” seems unusual when referring to a toy like this, and would

The earliest reference I know for *Zwickmühle* as a gaming term is the 1627 phrase book by Daniel Martin, quoted above.

Despite the lack of early evidence for the ludic sense of *Fickmühle/Zwickmühle* it is still plausible to explain the metaphorical use as derived from it. We would be hard pressed to find a different motivation for this usage. Therefore I am inclined to assume that by the 1470s at the latest *Fick-/Zwickmühle* were established well enough as terms for a double advantage in the merels game to apply the words figuratively to situations outside of games.

Semantic motivation of mill-based terms for merels

If we accept the ludic sense as the older meaning of the words the question then is how these compounds and their meanings came to be. Put more broadly, how are mill-based terms for the merels game or for positions therein motivated? Several explanations for the naming traditions based on *mill* words have been proposed. They did not always distinguish between the mill-based terms for three-in-row and the names for the game as a whole.

It's easy to speculate that the term *Mühle* was used because the players try to grind each other down (e.g. Landolt 2018). But how compelling is that explanation? Is merels the only game where players grind each other down? Other procedures like plucking feathers from a bird or chopping off at a tree trunk provide images that are at least as apt as the grinding mill. In Zovitus' dialogue the Latin text uses the image of a castle of robbers for the row of three. The figurative use of the mill, when applied to the game, does not focus on the grinding down of the opponent – instead, the texts speak of mills that are 'opening and closing', or 'coming and going'. The German compounds *Fick-* and *Zwickmühle* point to moving back and forth and to pinching, respectively – semantically closer to grinding, yet different, which is why we should not restrict ourselves to the 'grinding down' image as explanation for the mill-based merels terms.

Similarly inconclusive is the speculation by Musser-Golladay (2007: 614): "The mill names such as German's *Mühle*, French *moulin* and Swedish *qvarn* refer to each player's goal, the row of three pieces because it resembles the arm of a windmill. In Italian, the game is called *filetto* for

be more common in a reference to a game board. Could this be a name for the small merels = three men's morris?

similar reasons.” The supposed resemblance is negligible. Also, the mill-based terms for merels are tied to mills in general, but never to windmills specifically.²⁰

I have mentioned *alquerque* before. The word was also used for a part of the oil mill (Calvo & Schädler 2009: 301). However, this usage is first attested in the late 18th century (Diccionario Histórico s.v. *alquerque* 2). That places it about 500 years after Alfonso, and still some 200-300 years after the German mill-based names are first documented, which is why I think this meaning of *alquerque* can not explain the tradition of mill-based names.

Hyde (1694:203f.) mentions that the game board somewhat resembles the grooved lines on a mill stone, but judges that this does not yield a satisfactory origin for the German name.²¹ Instead, he supposes the German might be corrupted from the French word *milieu* denoting the center of the board. Given the textual evidence discussed so far, both of Hyde’s etymologies are unsatisfactory.

Berger (2003 ; 2004:16) implies a connection between *Mühle* and the Middle High German *mîle* (*Meile*, Engl. “mile”), at the same time claiming the word is derived from Latin *miles* ‘soldier’. There are only rare occurrences of this Middle High German word as game term, and ultimately we know little about it (Richter 2020a, 2020b). Helmut Birkhan (2018: 112f.) suggests a folk etymology of the game term *Mühle*. His hypothesis involves *mîle* on the one hand, and on the other the comparison of moving merels pieces with moving the board that determines the amount of water running through a water mill. To me this seems to be a far-fetched speculation, handwaving the linguistic details, and resting on the claim that the Middle High German term has anything to do with merels – for which there is no indication (Richter 2021).

In central France, near the village Lassay-sur-Croisne (dep. Loir-et-Cher) stands the Château du Moulin. It was built at the end of the 15th-century for Philippe du Moulin (d. 1506). Its walls are built from orange and black bricks, which in two places are arranged to show designs resembling a large and a small merels board (for nine and for three pieces), respectively

²⁰ An exception might be the Icelandic *vængjamylna* (‘wing(ed) mill’), a synonym for *krossmylna*, the cross mill position (Fiske 1905: 140f.). However, I found no evidence that *vængjamylna* is a term for a wind mill, which would be a *vindmylla*.

²¹ Hyde’s “Germanicum nomen” etc. probably refers to both Dutch and German.

(Uberti 2012:100f.). One might speculate that the nobleman was so enamored by the game that he had it depicted on the castle walls – and that the game afterwards even was called *jeu du moulin* after him. Or maybe the game already carried this name, and the designs on the walls were a visual pun. But the diagram of the threefold enclosure is a common symbol in medieval buildings, although not usually so large as on the brick walls of the Château du Moulin (Mehl 2013: 178). Also, the French translation of Zovitius’ colloquies as well as Martin’s phrasebook show that “moulin” first was used as a term for the row of three pieces while the game was still called *jeu de marelles/ jouer aux merelles*. This makes the interpretation of the wall designs as merels boards less likely.

None of these approaches convincingly elucidate the mill-based merels terms.

New considerations

If we accept that the metaphorical use of *Fick-/Zwickmühle* is preceded by the use of these words as terms for the ‘running mill’ position in the merels game, the next question then is: Are these compounds derived from *Mühle* meaning a simple row of three in the merels game, or is *Mühle* in the sense of a row of three derived from *Fick-/Zwickmühle*? In what historical order did these terms develop? Assuming that the compounds and the root word did not receive the game-related sense at exactly the same time, there are two possible scenarios:

A: *Mühle* (row of 3) → *Fick-/Zwickmühle* (running mill)

B: (*Fick-/Zwick-*)*mühle* (running mill) → *Mühle* (row of 3)

In medieval times central Europe relied on watermills for various mechanical tasks. Their economic importance, impressive mechanical features driven by inanimate natural energy, and the fact that they often were located outside of settlements may all have contributed to give mills a special place in the cultural imagination. For instance folklore associates mills with supernatural powers (Neumann 1999). I see two possible connections with the mill-based merel terms, one for each of the two historical sequences given above.

On the one hand, mills enjoyed a privileged legal status: Like churches, they could serve as sanctuary. Persons seeking refuge in a mill were under

special protection from their pursuers. Also, theft committed in a mill was considered of the same severity as stealing from a church (Lück 2016). These privileges may have been the reason for calling a row of three in the merels game a *Mühle*, since gaming pieces belonging to such a formation could not be captured by the opponent. Arguing this way, naming the row of three a ‘church’ would have made just as much sense, of course. We can speculate that the church’s sanctity as well as its critical or at best ambivalent position regarding gaming made the mill a better, less problematic namesake candidate than the church. The legal status of mills as sanctuary could explain the semantic shift of *Mühle* (the grinding device) to mean the protected row of three pieces in merels, supporting the hypothetical development A.²²

On the other hand, textual evidence suggests that the powerful, unceasing movement of a mill (i.e. of its water wheel or mill stone) was so impressive and well-known that it lend itself for various comparative or figurative uses in language. Consider the Arthurian epic *Diu Crône* (the crown) by Heinrich von dem Türlin, composed in Middle High German around 1230. About half of the text is only preserved in a much younger manuscript from 1479 which adapts the text in various ways. In this younger version there is a description of a rotating wall around a magical castle. Powered by some wondrous means the wall keeps ever spinning “*reht als ein müle, die da melt*” (just like a mill that is grinding) (Ebenbauer & Kragl 2005: 22, verse 12965). The mill serves as comparison to illustrate the remarkable movement of the castle wall. The TPMA (8,256-261 s.v. *Mühle*) provides further examples showing how widespread the notion of the powerful turning mill – and, conversely, the uselessness of a mill standing still – was across several countries.

In early modern German, this connotation condensed into a specific usage. The FWB paraphrases this sense as “einer Mühle vergleichener bzw. als ‚Mühle‘ metaphorisierter Mechanismus, der Gewinn abwirft (...) oder gegen dessen Gewalt man machtlos ist” (a mechanism that is profitable or against the force of which one is powerless) (FWB s.v. *müle*, sense 2). This use could easily be applied to the ‘running mill’ in merels: It is a position that allows for a continuous ‘profit’ (taking an opponent’s piece with every move), and which is very difficult for the opponent to break out of. Adding

²² The Latin term *castrum* used by Zovitiis might stem from a similar semantic motivation (a place of special protection or defenses).

Fick- to the word clarifies that this mechanism is driven by a back-and-forth movement, adding *Zwick-* emphasizes that one player finds themselves in a pinch. Both compounds make sense describing what mechanism is at play here. Once established as terms for the ‘running mill’ position, both the metaphorical uses discussed earlier and the expression *Mühle* for a simple row of three can be derived from these more specialized terms. This explanation can support the historical development sketched in hypothesis B.

Without further evidence, I see no way of settling the matter of the etymology of the mill-based names for merels. Neither of the two hypotheses seems more plausible than the other to me. To obfuscate matters, the two explanations are not mutually exclusive: The cultural and linguistic backgrounds which I sketched out can both have exerted their influence which helped give rise to the new uses.

Both scenarios rely on the premise that the metaphorical use of *Fick-* and *Zwickmühle* is derived from an older meaning relating to the merels game, as argued further above. Suppose we would reject this premise: That would leave us without an explanation how the mill-based terminology came about, and on top of that we would need to explain the metaphorical use of *Fick-* and *Zwickmühle* differently. This is why I see the broad strokes outlined here as a convincing, even if we cannot ascertain all the details.

Conclusion

In German, the old expressions *den neunten stein ziehen* and *Neunstein* denoted the game of merels. They were joined and partly replaced by terms based on *Mühle* – a process that took place before 1600, and that is documented in other European languages, too, although the historical relations of this development are not well researched yet. Evidence suggests that the new, mill-based terms first signified a position in the game – a row of three, or a more complex position like the ‘running mill’ – before becoming the name of the game itself. Assuming that German might be the language in which this naming tradition first evolved, this paper looked at the linguistic record and argued that the metaphorical (non-ludic) use of *Fickmühle* and *Zwickmühle* from the late 15th century onward implies a previous ludic sense of these words, although it is not attested in the surviving sources. Two possible motivations for this development were presented.

What is missing from this hypothesis? As the focus is on the German record, I could be overlooking details from other languages. Maybe there are alternative explanations rooted in other languages that are just as plausible or even more convincing than the arguments presented here: It's entirely possible that this naming practice might have been imported into German from a different language. That would need to have happened at least before Fischart's list of games in 1575, and it would probably necessitate a different explanation of the metaphorical use of *Fickmühle* and *Zwickmühle* which is attested long before Fischart, depending on when and how the import of the ludonym is construed to have happened.

Another question that remains is why a mill-based term would be imported from another language at all (regardless of whether German would be the giving or the receiving language). We can assume that the merels game was already known to the language communities involved, and there does not seem to be any notable innovation in the gameplay which could have been imported together with a new name. It seems possible that if a language did not have a strong, specific term for an important part of gameplay, e.g. the row of three pieces, adopting such a term from a different language would be a good option. Maybe players might have been happy to pick up a term that meant a row of three pieces, or a term for the *Zwickmühle* position. The imported term would have to serve a meaningful purpose (i.e. it needs to refer to something that is relevant for the speakers). These could be reasons that made it attractive to borrow from another language and introduce a new term, even without any change in the game itself. Of course, from this follows the question how elements of gameplay were referred to before the convenient terms were imported.

What can we learn about the practices at the intersections of games and communication? Detailed studies on game names and naming traditions are a necessary foundation both for research on the history of games and for a better understanding of human interaction with and through games.

References

- Adelung = Adelung, J. C. (1793-1801). *Grammatisch-Kritisches Wörterbuch der Hochdeutschen Mundart*. Breitkopf. Digitalisierte Fassung im Wörterbuchnetz des Trier Center for Digital Humanities, Version 01/21. Retrieved from <https://www.woerterbuchnetz.de/Adelung>
- Alberus, E. (1540). *Novum Dictionarii Genus, In Quo Ultimis seu terminalibus Germanicarum vocum syllabis observatis, Latina vocabula, cum suis quæque synonymis, additis loquendi etiam figuris ac modis, protinus sese offerunt*. Frankfurt/Main: Egenolff. Retrieved from <https://nbn-resolving.org/urn:nbn:de:urmel-0bc8d67e-732d-44ea-ba9a-a2e31cfe415c4>
- Bardiès-Fronty, I; Dunn-Vaturi, A-E (eds.). (2012). *Art du Jeu – Jeu dans l'Art de Babylone à l'Occident Médiéval*. Paris: Editions de la Réunion des musées nationaux.
- Behling, C-M. (2014). Der sog. Rundmühle auf der Spur – Zug um Zug zur Neudeutung römischer Radmuster. In: Elisabeth Trinkl (ed.): *Akten des 14. Österreichischen Archäologentages am Institut für Archäologie der Universität Graz vom 19. bis 21. April 2012*. Wien: Phoibos, pp. 63-70. Retrieved from https://www.academia.edu/6322949/Der_sog_Rundm%C3%BChle_auf_der_Spur_Zug_um_Zug_zur_Neudeutung_r%C3%B6mischer_Radmuster
- Berger, F. (2003). Die Herkunft des Wortes "Mühle" im Mühlespiel. *Almogaren* XXXIV, 161-162. Retrieved from <https://mdc.ulpgc.es/cdm/ref/collection/almog/id/454>
- Berger, F. (2004). From Circle and Square to the Image of the World: A Possible Interpretation for Some Petroglyphs of Merels Boards. In: *Rock Art Research* 21,1, pp. 11-25. Retrieved from <http://www.ifrao.com/auranet-library/>
- Birkhan, H. (2018). *Spielendes Mittelalter*. Böhlau Verlag.

- Bolte, J. (1900). "Zovitius, Jakob" in: *Allgemeine Deutsche Biographie* 45, S. 440-441 [Online-Version]. Retrieved from <https://www.deutsche-biographie.de/sfz86793.html>
- Bömer, A. (1897/1899): *Die lateinischen Schülergespräche der Humanisten. Auszüge mit Einleitungen, Anmerkungen und Namen- und Sachregister*. P. 1 (1897), P. 2 (1899) Harrwitz. Retrieved from <https://scripta.bbf.dipf.de/viewer/resolver?urn=urn:nbn:de:0111-bbf-spo-10313881> or <https://archive.org/details/dielateinischens00bmuoft>
- Bömer, A. (Ed.). (1915). *Die Pilgerfahrt des träumenden Mönchs. Aus der Berleburger Handschrift*. [Deutsche Texte des Mittelalters 25]. Weidmann. Retrieved from <https://archive.org/details/DiePilgerfahrtBomer>
- Bopp, D; Rosenberger, S. (2021). Sebald Heydens Formulae Puerilium Colloquiorum. Zur Verbreitung und räumlichen Varianz eines Gesprächsbuchs aus der Reformationszeit. In: *Jahrbuch für Germanistische Sprachgeschichte* 12, pp. 251-268. Retrieved from <https://doi.org/10.1515/jbgsg-2021-0014>
- Bulang, T. (2013). Die andere Enzyklopädie – Johann Fischarts Geschichtklitterung. In: *Arcadia* 48(2), pp. 262–281. Retrieved from <https://doi.org/10.11588/heidok.00027544>
- Caflisch, S. (2018). *Spielend lernen. Spiel und Spielen in der mittelalterlichen Bildung*. Ostfildern: Jan Thorbecke Verlag.
- Calvo, R. & Schädler, U. (2009). *Alfons X. « der Weise ». Das Buch der Spiele*. Übers. u. komm. von Ulrich Schädler u. Ricardo Calvo. [Ludographie 1]. Lit Verlag.
- Dharmendra, R. (2010). *How to play Navakankari*. (Kreedaa Kaushalya. Traditional Indian Board Games.) Retrieved from <http://kreedaaakaushalya.blogspot.com/2010/05/how-to-play-navakankari.html>

Diccionario Histórico = *Diccionario Histórico de la Lengua Española*. Real Academia Española (1960-1996). Retrieved from <https://apps.rae.es/dh.html>

Doering, O. (Ed.). (1901). *Des Augsburger Patriciers Philipp Hainhofer Reisen nach Innsbruck und Dresden* [Quellenschriften für Kunstgeschichte und Kunsttechnik des Mittelalters und der Neuzeit, N.F. Bd. 10]. Graeser 1901. Retrieved from <https://archive.org/details/desaugsburgerpat00hain/page/178/mode/2up>

Du Cange = du Cange, Charles du Fresne et al. (1883-1887), *Glossarium mediae et infimae latinitatis*, éd. augm., Niort: L. Favre. 10 vols. Retrieved from <http://ducange.enc.sorbonne.fr/>

Duden = Wissenschaftlicher Rat der Dudenredaktion (eds.) (1999): *Duden. Das große Wörterbuch der deutschen Sprache in zehn Bänden*. 3., völlig neu bearb. u. erw. Aufl. Dudenverlag.

DWB = *Deutsches Wörterbuch von Jacob Grimm und Wilhelm Grimm*, digitalisierte Fassung im Wörterbuchnetz des Trier Center for Digital Humanities, Version 01/21. Retrieved from <https://www.woerterbuchnetz.de/DWB>

²DWB = *Deutsches Wörterbuch von Jacob Grimm und Wilhelm Grimm / Neubearbeitung (A-F)*, digitalisierte Fassung im Wörterbuchnetz des Trier Center for Digital Humanities, Version 01/21. Retrieved from <https://www.woerterbuchnetz.de/DWB2>

Ebenbauer, A.; Kragl, F. (eds.) 2005. *Heinrich von dem Türlin, Die Krone (Verse 12282 – 30042)*. *Nach der Handschrift Cod. Pal. germ. 374 der Universitätsbibliothek Heidelberg* nach Vorarbeiten von Fritz Peter Knapp und Klaus Zatloukal hg. von Alfred Ebenbauer und Florian Kragl (Altdeutsche Textbibliothek 118), Tübingen.

EWA = *Etymologisches Wörterbuch des Althochdeutschen*. Von Albert L. Lloyd und Rosemarie Lühr [...]. Göttingen: Vandenhoeck & Ruprecht 1988-ff.

Ex Quo = *Vocabularius Ex quo. Überlieferungsgeschichtliche Ausgabe*. Gemeinsam mit Klaus Grubmüller hg. von Bernhard Schnell, Hans-Jürgen Stahl, Erltraud Auer und Reinhard Pawis. 6 vols. Tübingen: 1988-2001.

FEW = *Französisches etymologisches Wörterbuch. Eine Darstellung des galloromanischen Sprachschatzes*. Walther von Wartburg et al., var. loc. 1922-2003. Retrieved from <http://www.atilf.fr/FEW/>

Fiske, W. (1905). *Chess in Iceland and Icelandic Literature. With Historical Notes on Other Table-Games*. Florence: Florentine Typographical Society. Retrieved from <https://archive.org/details/chessinicelandin00fiskuoft>

Frauenstädt, P. (1903). Drei Malefizbücher. *Zeitschrift für die gesamte Strafrechtswissenschaft* 23, pp. 269-288. Retrieved from <https://doi.org/10.1515/zstw.1903.23.1.269>

FWB = *Frühneuhochdeutsches Wörterbuch*. Hg. von Robert R. Anderson, Ulrich Goebel und Oskar Reichmann, Bd. 1ff., Berlin/New York 1989ff. Online version retrieved from <https://fwb-online.de/>

Geiler von Kaysersberg, J. (1497). *Ein ABC, wie man sich schicken soll zu einem köstlichen, seligen Tod*. Speyer: Conrad Hist. [GW 10580]. Retrieved from <http://dl.ub.uni-freiburg.de/diglit/kaysersberg1497>
Also in: Gerhard Bauer(ed.). 1989. *Johannes Geiler von Kaysersberg, Sämtliche Werke*. Erster Teil: Die deutschen Schriften. Erste Abteilung: Die zu Geilers Lebzeiten erschienenen Schriften. Band 1, pp. 97-110.

Gemma Vocabulorum (1497) = *Gemma vocabulorum propria nomina clarorum hominum, populorum, urbium, provinciarum, montium ac fluviorum magis insignium* ex Joh. Tortellio. Deventer: Richardus Pafraet 1497. Retrieved from <https://archive.org/details/ned-kbn-all-00002005-001>, also available at <https://books.google.de/books?id=1uXStOetAaEC>

Gemmula vocabulorum (1486) = *Gemmula vocabulorum cum addito, diligenter revisa et emmendata*. Antwerpen: Gerard Leeu. 1486 . Retrieved from <https://digital.bodleian.ox.ac.uk/objects/c6ff60344-edd5-49d4-8252-d5ddf5551b09/>

- Georgens, J.D./ von Gayette-Georgens, J. M. (1882). *Illustriertes allgemeines Familien-Spielbuch: Vorführung aller bekannteren Unterhaltungsweisen für alle Kreise [...]*. Leipzig/ Spamer. Retrieved from <https://books.google.de/books?id=7TsEAAAAYAAJ>
- Hall, M. A. (2011). Playtime Everyday: The Material Culture of Medieval Gaming. In: Cowan, Edward J./ Henderson, Lizanne (eds.): *A History of Everyday Life in Medieval Scotland, 1000 to 1600*. Edinburgh: Edinburgh University Press, pp. 145-168.
- Hanel, N. (1997). Sonderkeramik in der Militärziegelei? Zu einer Tabula Lusoria mit Mühlespiel und Legionsstempel. *Kölner Jahrbuch* 30, pp. 317-320. Retrieved from https://www.academia.edu/9592180/Sonderkeramik_in_der_Milit%C3%A4rziegelei_Zu_einer_tabula_lusoria_mit_M%C3%BChlespiel_und_Legionsstempel_K%C3%B6lner_Jahrbuch_30_1997_317_320
- Heimann, F. (2014): The loop within circular three men's morris, with an introduction by Ulrich Schädler. *Board Game Studies Journal* 8, pp. 51-61. Retrieved from <http://bgsj.ludus-opuscula.org/Home/ArticleDetails/99>
- Hellmich, R. (2014): *Mittelalterliche Brettspiele unter Berücksichtigung einer anthropomorphen Spielfigur aus der Wüstung Lindelach, Kreis Schweinfurt*. Bamberg: opus (bachelor thesis). Retrieved from <https://fis.uni-bamberg.de/handle/uniba/20827>
- Henisch, G. (1616). *Teutsche Sprach und Weiszheit. Thesaurus linguae et sapientiae germanicae (etc.)*. Augsburg: David Franck Retrieved from <https://books.google.de/books?id=BsRMAAAAcAAJ>
- Hills, J. (1998): *Das Kinderspielbild von Pieter Bruegel d.Ä. (1560). Eine volkskundliche Untersuchung*. 2. Aufl. Österreichisches Museum für Volkskunde. [First published 1957.]
- Hyde, T. (1694). *Historia nerdiludii, hoc est dicere, trunculorum*. Oxford: Sheldonian Theater. Retrieved from <https://books.google.de/books?id=FIFcAAAAcAAJ>

- Juten, G.C.A. (1911). Zovitius, Jacobus. In: P.J. Blok, P.C. Molhuysen (eds.). *Nieuw Nederlandsch biografisch woordenboek*. Deel 1. Leiden. Retrieved from https://www.dbnl.org/tekst/molh003nieu01_01/molh003nieu01_01_2308.php
- von Keller, A. & E. Goetze (eds.). (1894): *Hans Sachs*. Herausgegeben von A. v. Keller u. E. Goetze. Bd. 22 hg. von E. Goetze. Tübingen: Bibliothek des Litterarischen Vereins Stuttgart. Retrieved from <https://archive.org/details/hanssachs01sachgoog/>
- Kiliaan, C. (1574). *Dictionarium Teutonico-Latinum, praecipuas Linguae Teutonicae dictiones Latine interpretatas, seduloque cum Germanicis et Gallicis collatas, breviter complectens*. Antwerp: Stelsius/Plantin. [Reprint 1975. Mit einer Einführung von F. Claes. Hildesheim: Olms]
- Kiliaan, C. (1588). *Dictionarium Teutonico-Latinum, praecipuas Teutonicae linguae dictiones Latine interpretatas complectens*. Editio altera, priore auctior & correctior. Antwerp: Plantin.
<https://books.google.de/books/ucm?id=BXs8AAAAcAAJ>
- Kiliaan, C. (1599). *Etymologicum Teutonicae linguae, sive Dictionarium Teutonico-Latinum, praecipuas Teutonicae linguae dictiones et phrases Latine interpretatas, & cum aliis nonnullis linguis obiter collatas complectens*. Antwerp: Plantin.
Retrieved from
<https://books.google.de/books/ucm?vid=UCM5317946745>
- Klopsch, P. (Ed.). (1967). *Pseudo-Ovidius, De Vetula. Untersuchungen und Text*. Leiden: Brill. [Mittellateinische Studien und Texte 2].
- Köbel, J. (1520). *Eyn Neüwe Gedicht Wie die Lantbescheisser Zwyecker Orenbeysser [...] Betrygen*. Oppenheim: Köbel. Retrieved from <http://resolver.staatsbibliothek-berlin.de/SBB0000DB6800000000>
- Landolt, C. (2018). Figgi und Müli haa. [*Schweizerisches Idiotikon: Wortgeschichten*]. <https://idiotikon.ch/wortgeschichten/figgi-und-mueli-haa>

- Langen, Carl von. (1821). *Beiträge zur Geschichte der Stadt Rotweil am Neckar*. Rot[t]weil: Herder. Retrieved from <https://books.google.de/books?id=qm0AAAAAcAAJ>
- Lappenberg, J. M. (ed.) (1865). *Paul Flemings deutsche Gedichte*. 2 vols. Stuttgart: Bibliothek des Litterarischen Vereins.
- Lessing, J.; Brüning A. (1905): *Der Pommersche Kunstschränk*. Wasmuth. Retrieved from <https://kpbc.umk.pl/dlibra/docmetadata?id=46072>
- Löhneysen, G. E. (1622). *Aulico-politica, darin gehandelt wird 1. Von Erziehung ... junger Herrn. 2. Vom Ampt der Fürsten und Bestellung derselben, Rächt ... 3. Von Bestellung der Concilien, die ein Fürst in seinen Lande haben mus (etc.)*. Remlingen. Retrieved from <http://resolver.sub.uni-goettingen.de/purl?PPN668783141>
- Lück, H. (2016). Mühle, Mühlenrecht. In: *Handwörterbuch zur deutschen Rechtsgeschichte*, 2., völlig überarb. und erw. Auflage hrsg. von Albrecht Cordes/ Wolfgang Stammer/ Heiner Lück. Bd. 3, Sp. 1656-1662.
- Luther, WA = *D. Martin Luthers Werke* [Weimarer Ausgabe]. 127 vols. 1883-2009. (Quotes refer to volume, page, line.)
- Meijboom, A. (Ed.) (1926). *Die Pilgerfahrt des träumenden Mönchs. Nach der Kölner Handschrift*. [Rheinische Beiträge und Hülsbücher zur germanischen Philologie und Volkskunde 10]. Bonn: Schroeder.
- Martin, D. (1627). *Colloques François et Allemands*. Strasbourg: Zetzner. Retrieved from <https://books.google.de/books?id=3ANEAAAAcAAJ>
- Mehl, J.-M. (2013). Les Jeux de Dés et de Tables et les Ordres Religieux. In: Jörg Sonntag (ed.). *Religiosus Ludens. Das Spiel als kulturelles Phänomen in mittelalterlichen Klöstern und Orden*. Berlin/Boston: de Gruyter, pp. 171-185.
- Michaelsen, P. (1998). Somme trak også tavl - om et gammelt tidsfordriv og dets navne. In: *Ord & Sag* 18. (Århus Univ.). 11-44. Retrieved from <https://jysk.au.dk/publikationer/indhold1-25/#c18>

- Michaelsen, P. (2013). Haretavl – Hare and Hounds as a board game. In: Matthias Teichert (ed.): *Sport Und Spiel Bei den Germanen: Nordeuropa von der Römischen Kaiserzeit Bis Zum Mittelalter*. De Gruyter, pp. 197-216. [Republished in *Germanische Altertumskunde Online*.]
- Moberly, K.; Moberly, B. (2019). Nine Men's Medievalisms: Conquests of the Longbow, Nine Men's Morris, and the Impossibilities of a Half-Forgotten Game's Ludic Past. In Albrecht Classen (Editor): *Pleasure and Leisure in the Middle Ages and Early Modern Age: Cultural-Historical Perspectives on Toys, Games, and Entertainment*. Berlin, Boston: De Gruyter, pp. 695–734. <https://doi.org/10.1515/9783110623079-022>
- MNW = *Middelnederlandsch Woordenboek*, by Eelco Verwijs and Jakob Verdam. 's-Gravenhage 1885 – 1941. Online in the Geïntegreerde Taal-Bank. Retrieved from <https://ivdnt.org/woordenboeken/middelnederlandsch-woordenboek/>
- Murray, H. J. R. (1978). *A History of Board Games other than Chess*. Hacker Art Books. [First publ. 1952 by Oxford Univ.: Clarendon Press.]
- Musser-Golladay, S. (2007). *Los libros de acedrex dados e tablas: Historical, Artistic and Metaphysical Dimensions of Alfonso X's Book of Games*. Dissertation. University of Arizona. Retrieved from <http://jnsilva.ludicum.org/HJT2k9/AlfonsoX.pdf>
- Neumann, S. (1999). 'Mühle, Mühlstein, Müller'. In: *Enzyklopädie des Märchens. Handwörterbuch zur historischen und vergleichenden Erzählforschung*. Hrsg. von Rolf Wilhelm Brednich. Berlin: de Gruyter. Vol. 9, pp. 974-984.
- OED = *Oxford English Dictionary Online*. Oxford University Press. Retrieved from <https://www.oed.com/>
- ÖWB = *Österreichisches Wörterbuch*. Mit den neuen amtlichen Regeln. 39. Aufl., Neubearb. Hrsg. im Auftr. des Bundesministeriums für Bildung, Wissenschaft und Kultur. Wien: ÖBV, Pädag. Verl. [u.a.] 2001.

- Parlett, D. (2018): *Parlett's History of Board Games*. Echo Point Books & Media.
- Pinon, R. (1972). Le jeu de la marelle assise en Wallonie. *Enquêtes du Musée de la Vie Wallonne*, tome XI, 45e année, no. 129-132, jan-dec 1968 (published 1972), pp. 277-332.
- Priebatsch, F. (ed.) (1894). *Politische Correspondenz des Kurfürsten Albrecht Achilles. Erster Band: 1470-1474*. Leipzig: S. Hirzel.
- Rausch, H. A. (1908). *Das Spielverzeichnis im 25. Kapitel von Fischarts "Geschichtklitterung" (Gargantua)*. Dissertation. Heitz.
- Reitinger, F. (2004): Die wunder-seltzame Land-Charten Utopiae. Ein Hauptwerk barocker Lachkultur. In: Reitinger, F. (ed.): *Johann Andreas Schnebelins Erklärung der wunder-seltzamen Land-Charten Utopiae aus dem Jahr 1694*. Rockstuhl, pp. 275-336.
- Richter, J. (2020a). *Belege für die mittelhochdeutsche Spielbezeichnung „mîle“*. Retrieved from <https://gespiele.hypotheses.org/463>
- Richter, J. (2020b). *Erklärungsansätze für mhd. „mîle“ (1): Afrz. „mine“?* Retrieved from <https://gespiele.hypotheses.org/910>
- Richter, J. (2021). *Erklärungsansätze für mhd. „mîle“ (2): Nhd. Mühle?* Retrieved from <https://gespiele.hypotheses.org/715>
- Riecke, J. (1995). Sebald Heydens Formulae puerilium colloquiorum. Zur Geschichte eines lateinisch-deutschen Gesprächsbüchleins aus dem 16. Jahrhundert. *Zeitschrift für deutsche Philologie* 114, pp. 99-109.
- Rosenberger, R. / Weltmühlespiel-Dachverband. (2009). Definitionen. <http://www.muehlespiel.eu/index.php/muehlespiel/57-definitionen>

- Schädler, U. (2011). Une grande poignée d'argent soit acquise ou perdue“: Schach-, Backgammon- und Mühle-Probleme als Wettaufgaben im Mittelalter. In: Eberlein, Johann Konrad (ed.): *Spiel – Kunst – Glück. Die Wette als Leitlinie der Entscheidung*. Münster: Lit Verlag, pp. 65-121. Retrieved from https://www.researchgate.net/publication/311741928_Une_grande_poignee_d'argent_soit_acquise_ou_perdue_Schach-_Backgammon-_und_Muhleprobleme_als_Wettaufgaben_im_Mittelalter
- Schädler, U. (2018a). Game boards and counters from Amluk-dara. In *Journal of Asian Civilizations* 41, 1: 173-176. Retrieved from <http://iris.unive.it/retrieve/handle/10278/3722734/186360/>
- Schädler, U. (2018b). Encore sur la «marelle ronde»: cent ans après Carl Blümlein, *Kentron* 34, pp. 87-98. Retrieved from <http://journals.openedition.org/kentron/2666>; DOI: 10.4000/kentron.2666.
- Schädler, U. (2021). Some Misconceptions About Ancient Roman Games. *Board Game Studies Journal* 15(1):79-97. Retrieved from <http://dx.doi.org/10.2478/bgs-2021-0004>
- [Schnebelin, J. A.] (n.d. [1694]): *Erklärung der wunder-seltzamen Land-Charten Utopiæ, so da ist das neu-entdeckte Schlaraffen-Land*. Retrieved from <https://books.google.de/books?id=JoVaAAAaAAJ>
- Schoppe, G. (1924). Volkskunde in schlesischen Archivalien. *Mitteilungen der schlesischen Gesellschaft für Volkskunde* 25, pp. 79-88. Retrieved from <https://www.sbc.org.pl/dlibra/publication/316745/edition/299374/content>
- Schoppe, G. (1926). Volkskunde in schlesischen Archivalien II. *Mitteilungen der schlesischen Gesellschaft für Volkskunde* 27, pp. 139-151. Retrieved from <https://www.sbc.org.pl/dlibra/publication/329382/edition/311304/content>
- Schottel, J. G. (1663): *Ausführliche Arbeit von der deutschen Hauptsprache*. Zilliger. Retrieved from <https://books.google.de/books?id=Hm-5sWL0LeEC>

- Schwäbisches Wörterbuch = *Schwäbisches Wörterbuch*. Auf Grund der von Adalbert v. Keller begonnenen Sammlung und mit Unterstützung des Württembergischen Staates bearbeitet von Hermann Fischer. Zu Ende geführt von Wilhelm Pfeiderer. Bände I–VI.2 Tübingen 1901–1936.
- Schweizerisches Idiotikon = *Schweizerisches Idiotikon. Wörterbuch der schweizerdeutschen Sprache*. Begonnen von Friedrich Staub und Ludwig Tobler. Basel: Schwabe (1881-ff). Retrieved from <https://www.idiotikon.ch/>
- Stoep, Arie van der. (1997). *Over de herkomst van het woord damspel. Een probleem uit de geschiedenis van bordspel en bordspelterminologie*. Dissertation Univ. Leiden.
- Stürzinger, J. J. (Ed.). (1893). *Le pelerinage de vie humaine de Guillaume de Deguileville*. London: Nichols & Sons. Retrieved from <https://archive.org/details/LePelerinageDeVieHumaineSturz>
- Sundin, G. (2020). *A Matter of Amusement. The Material Culture of Philipp Hainhofer's Games in Early Modern Princely Collections*. Uppsala. [Acta Universitatis Upsaliensis. Figura Nova Series 37].
- TPMA = *Thesaurus proverbiorum medii aevi. Lexikon der Sprichwörter des romanisch-germanischen Mittelalters*. Begründet von Samuel Singer. Hrsg. vom Kuratorium Singer der Schweizerischen Akademie der Geistes- und Sozialwissenschaften. Berlin: de Gruyter. 1995-2002.
- Uberti, M. (2012). *The Merels Board Enigma with the worldwide census of merels board*. Self-published.
- Vives, J. L.; Freig, J. T. (1585). *Colloquia, sive exercitatio latinae linguae. Joan. Thomae Freigii notis, ex praestantissimis quibusque autoribus desumptis, illustrata*. Norimbergae: Gerlachianus. Retrieved from https://books.google.de/books?id=I_I7AAAACAAJ
- Willemsen, A. (2008). The age of play. Children's toys and the medieval life cycle. In: *Ludica* 13-14 (2007-2008), pp. 169-182.

Wörterbuch der elsässischen Mundarten = *Wörterbuch der elsässischen Mundarten*, digitalisierte Fassung im Wörterbuchnetz des Trier Center for Digital Humanities, Version 01/21, abgerufen am 17.10.2021. Retrieved from <https://www.woerterbuchnetz.de/ElsWB>

Wu, S.; Sebillaud, P. (2020). Research on the merels game in medieval China. *Asian Archaeology* 4, pp. 41-52. <https://doi.org/10.1007/s41826-020-00037-z>

Zedler = Zedler, Johann Heinrich (ed.) (1732-1754). *Grosses vollständiges Universal-Lexicon Aller Wissenschaften und Künste*. Halle/Leipzig: Zedler et al. Retrieved from <https://www.zedler-lexikon.de>

Zovitius, J. (1570). Iacobi Zovitii Quotidiani Sermonis Quaedam Formulae. In: *Sebaldi Heyden Puerilium Colloquiorum Formulæ. Adagiorum Centuriæ IIII. In Germanicam linguam translate. Iacobi Zovitii Colloquia, Multo Quam Antehac Emendatius Edita*. Antwerp: Silvius 1570, pp. 45-77. Retrieved from <http://resolver.sub.uni-goettingen.de/purl?PPN1755481403>

Zovitius, J. (1576). Iacobi Zovitii Quotidiani Sermonis Formulae. In: *Sebaldi Heyden Puerilium Colloquiorum Formulæ. Adagiorum Centuriæ IIII. in Gallicam linguam translate. J. Zovitii quotidiani sermonis formulæ*. Antwerp: A. Tilenus Brechtanus. [Printing privilege dated 1574.], pp. 48-79. Retrieved from <https://books.google.de/books?id=VdJlAAAAcAAJ>