## Games of Twenty-One Combinations ${ }^{1}$

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## Dice games of 'pay-or-take'

Dice games of 'pay-or-take' form an important section of what Thierry Depaulis has called Loteries du salon. ${ }^{2}$ They are games of pure chance, in which the excitement is to see at each turn how many stakes to pay to or take from the winner's pool, according to the throw of the dice. ${ }^{3}$ They differ from the usual kind of board game, in that there is no movement of tokens across the game sheet. In fact, the players do not have distinctive markers of any kind, just a quantity of uniform stakes, which may be coins, counters or - in children's games - something of little value such as nuts, sweets or small biscuits. The game sheet just serves as a repository of stakes and/or as an instruction sheet listing what to pay or take for each throw. In some games, this depends only on the total of points on the dice. In other games, it is the combinations of points on the individual dice that are significant.

Some versions use two dice and some three. Of the two-dice games, by far the most important is the Game of Seven, which appears across the centuries in many countries under different names, including the notorious, antisemitic Game of the Jew. In all these, the action depends only on the total of the points of the throw, ranging from 2 to 12. In many versions, throws totalling 7 are unfavourable, each time losing a stake to the accumulating pool: hence the name of the game.

Of games using three dice, the most important is the Game of the Owl. ${ }^{4}$ In this, the combinations of points on the individual dice are significant, rather than the total. All the various possible combinations of points on the three dice are displayed on the game sheet, usually in diagrammatic form showing the faces of the dice with their spots.

This paper is concerned with a class of pay-or-take games whose mechanism is similar to that of the Game of the Owl but where only two dice are used. By contrast with the class of games using explicit combinations of three dice, where the Game of the Owl strongly predominates, in this corresponding two-dice class there is a great variety of games. Indeed, only a few games established themselves sufficiently to appear in editions by several producers over an extended period. It may be for this reason that these games have been somewhat neglected, so that as a class they even lack a name, whereas the two-dice games that depend on a count of total points have usually been given the generic name of Glückshaus, even though this name is based on a modern mash-up. ${ }^{5}$ It is suggested that

[^0]'Games of Twenty-one Combinations' may be an appropriate designation for pay-or-take games that depend upon the explicit combinations of two dice.

## The $\mathbf{2 1}$ combinations of throws of two dice

In analysing the combinations of throws with two dice, we distinguish between doublets, where two dice show the same point; and singlets, where the points on the two dice are different. In these games, the order in which the dice fall does not matter, e.g. 3-4 and 4-3 are equivalent. This gives 21 possible outcomes:

- The six doublets: 1-1 etc
- Fifteen singlets: 1-2, 1-3, 1-4, 1-5, 1-6, 2-3,2-4, 2-5, 2-6, 3-4, 3-5, 3-6, 4-5, 4-6, 5-6

We know that any particular throw of two dice has a probability of $1 / 36$. However, since a given singlet can be achieved in two ways, its probability is $2 / 36$. By contrast, a doublet such as 3 and 3 can be achieved in only one way, with probability $1 / 36$. So, considering all combinations, the probability of singlets is $30 / 36$ and of doublets $6 / 36$, giving a total probability of $1-a$ useful check that we have counted correctly.

The mechanism of a game of pay-or-take according to these 21 combinations is so simple that it may be regarded as almost intuitive, given a pair of dice. Certainly, it is entirely susceptible to parallel invention, such that it is not useful to seek an individual precursorgame. Indeed, the much more complicated set of combinations on three dice was fully enumerated as early as the tenth century; ${ }^{6}$ an enigmatic game board showing some combinations of two dice dates from about 1500; ${ }^{7}$ and a sophisticated game based on combinations was published in the earliest era of printed board games, towards the end of the sixteenth century. ${ }^{8}$ It is therefore not possible to trace a chronological line of development. Instead, the treatment here, by no means exhaustive, describes examples of the various types.

## Sources

There is no comprehensive bibliography of these games. References are scattered through the literature and no exhibition catalogue has focussed on them. The Giochidelloca website, although it is mainly concerned with race games, has good images of about 200 examples of pay-or-take games of all classes, retrievable by selecting the search term 'giochi con dadi' [games with dice] in the 'typologia' menu. ${ }^{9}$ Of these, in the class under present consideration there are 11 Dutch games, 6 Italian, 4 German and 1 French. References in this article to these images are indicated by the game code, e.g. \#1234.

[^1]Examples in Netherlands museums are listed comprehensively in the Buijnsters' book, though not all are illustrated and even then rules, if not legible on the sheet, are lacking. ${ }^{10}$ The Rijksmuseum provides excellent on-line images of many of these games, free for any use. ${ }^{11}$ The Atlas van Stolk Museum in Rotterdam is also useful. ${ }^{12}$ For German games, the best starting point is the catalogue of games in the Bavarian National Museum by Georg Himmelheber, which has a chapter on Glücksspiele [Games of chance] with useful classifications. ${ }^{13}$ A few examples of French and Italian games are found in the general literature on board games. No English examples appear to be known.

## Games for fun

The simplest games using the mechanism of 21 combinations consist of a sheet illustrating all of them, each illustration having an instruction as to how much to pay to or take from the winner's pool. Figure 1 shows a Dutch example, the Nieuw Arlequins en Kasteleins Spel [New Harlequin's and Innkeeper's Game]. ${ }^{14}$


Figure 1. Nieuw Arlequins en Kasteleins Spel, about 1829. Courtesy of the Rijksmuseum.

[^2]Apart from the instructions at the bottom, the print is divided into three rows of three fields, each with its own pay or take instruction. The fields in the upper two rows each show three dice combinations. The 15 singlets fill the compartments in the top row and the two border compartments of the second row. The three doublets formed by odd numbers are placed in the centre field of this row, and the remaining three doublets (of even numbers) each have their own field decorated with an illustration in the bottom row. The singlet throws illustrated in the top row have the instructions: 'set one [stake in the pool]', 'set two' and 'set three', while those in the second row have 'set four' and 'set five' respectively. All the doublet throws give a positive return to the player: the three odd doublets (in the centre of the second row) allow the player to 'take three', double 4 takes four, double 2 takes seven, while (as is often the case in these games) double 6 wins the 'pot' [whole pool]. This is evidently a game for children: the suggested stakes are Centen, Dubbeltjes, Peppernooten [cents, ten-cent coins or little biscuits] etc. And if the same player wins twice in succession, he is a vrij buiter [rascal] and must run three times round the table, with each player giving him a slap.

A French example of equally simple kind is the Jeu de l'État-major Français [Game of the French Military General Staff, \#0118]. ${ }^{15}$ Here, the 21 combinations are arranged on an oval band, each being associated with a military figure in uniform that has no playing function. Double six, Napoleon III, takes the pool, though in the later edition shown in Figure 2, the winning image is the Lieutenant-General. ${ }^{16}$


Figure 2. Jeu de l'État-major Français, Épinal: Pellerin, about 1880. Adrian Seville collection.

[^3]Unlike in the Dutch example above, the other throws are not neatly grouped into positive outcomes for doublets and negative outcomes for singlets. But again the game is for children, suggested stakes 'soit d'images ou de petit soldats, soit de fruits ou tout autre enjeu' [being either images or toy soldiers, or sweets or any other stake]. A similar layout was used for Het Dubbel-Zes Spel [the Double-six game, \#1929] published in Amsterdam by Koster Brothers as a bright chromolithograph in about 1880: the images are of children in various costumes.

German games of the mid-nineteenth century include the Turnier Spiel [Jousting Game] published by Robrahn of Magdeburg; a similar game is the Turnier oder Ritter Spiel [Jousting or Knight Game] by Paterno of Vienna. In both, the central scene of knights at the joust represents the winning throw of double six, while the remaining 20 combinations are in a surrounding rectangular band, each showing some knightly accoutrement. ${ }^{17}$

Despite the simplicity of mechanism, mistakes could be made: a two dice pay-or-take game, Die Jahreszeiten [The seasons, Nuremberg: Christian Trummer ca. 1820], shows 24 combinations, of which three are duplicates, with inconsistencies as to the amounts to pay or take. ${ }^{18}$


Figure 3. Stryk weg en geef wat, Amsterdam: Erven de Weduwe Jacobus van Egmont, after 1761. Adrian Seville collection.

[^4]Figure 3 shows Stryk weg en geef wat [Take some and give some, \#1607], a slightly more elaborate game for children that was sufficiently popular in the Netherlands to appear in several editions. ${ }^{19}$ The suggested stakes again include small biscuits. Double six takes the pool; double five takes one in two stakes from the pool, and so on down to double one, which takes one in six, with other throws paying to the pool as indicated. Each of the 21 combinations is associated with an animal illustration and, in conversation during the game, children had to take the name of the animal corresponding to their first throw, paying a penalty for any mistake. The throw of 2-1 is associated with the cuckoo and any player throwing that must cry 'koekkoek' [cuckoo] three times.

Bridging the gap between games for children and those for adults is the Nieuw-nederlandsch schutter-spel, ${ }^{20}$ [Game of the Civic Guard], in which the various soldiers of the guard are represented with their dice combinations. Some throws require amusing actions. For example, whoever throws 2-3 becomes the Fire Picket and must shout 'Fire!', whereupon each player in turn asks, 'Where's the fire?' to which the Fire Picket replies sarcastically, 'Where is the fire?' And when the game is won by the throw of double 6, the whole company is to sing a song: the example Wien Neerlands bloed is suggested. ${ }^{21}$ A less elaborate version is De nieuwe Schuttery, een Gezelschaps Spel. It condenses the combinations onto just 15 fields. ${ }^{22}$

## Games by Mitelli

The stampe populari of Giuseppe Maria Mitelli (1634-1718), a well-known engraver from Bologna, include several dozen games of the pay-or-take kind. ${ }^{23}$ Of these, four are in the class under discussion. All have a satirical cast and were distinctly games for adults.

The Gioco Novo ditutte le Forme de Nasi [New game of all shapes of nose, \#0741] is of this kind, with the 21 combinations laid out in three rows of seven noses, some quite revolting. Double six is the 'powerful' nose, surmounted by a crown, and wins. In the Gioco della Fortuna e di Disgratia [Game of Fortune and Misfortune, \#0768] there are 21 ovals, each representing a different person and his or her fortune or misfortune, and marked with the corresponding throw. An extra oval, not so marked and doubtless of scatological intent,

[^5]shows a man saying Facendo i fatti miei sono fortunato [I'm lucky doing my own business]. In the centre, Fortune rides her wheel, marked lo giro [I go round]. She faces towards the favourable throws on the left, which are all the throws reaching a sum of 8 or higher, plus the combination of 6-1. ${ }^{24}$ II Gioco del Aquila [the Game of the Eagle, \#0746] celebrates the allied victories over the Turks up to $1690 .{ }^{25}$ Chains lead from the Imperial Eagle to images of twelve defeated commanders, each marked with a different throw; the Sultan sits below, bound in chains. From the Eagle's wings hang eight medallions representing the victorious allies. The Eagle itself shows the winning throw of double six. The allies are marked with the doublets 2 to 5 and the four highest singlets ( $6-5,6-4,6-3,6-2$ ); they all tell the player to take one stake. On a roll of one of the lower singlets, players have to pay one stake, and the double 1 is the worst outcome (pay 3).

All three of the above games use the same pay-or-take mechanism, albeit with differences between the individual outcomes. By contrast, the Gioco Novo del Turco del Todesco e del Venetiano [New game of the Turk, the German and the Venetian, \#0739] distributes the 21 combinations between the quarrelsome protagonists, shown gambling with cards at a table. The German and the Venetian each have five combinations, allowing the player throwing one of these to draw one quattrino ${ }^{26}$ from the pool; the Turk has the remaining eleven, requiring payment of one to the pool. All the doublets are divided between the German and the Venetian, and the four singlets divided between them are the same that are advantageous in the Gioco del Aquila described above (6-5 down to 6-2). Of the 36 combinations in total, the German and Venetian together only cover 14, whereas the Turk has 22 , so that the odds are heavily in favour of a losing throw.

Later dice games from Italy are mostly versions of the Game of Seven, like the Gioco della Barca, though a pay-or-take game with the 21 combinations artistically laid out on different kinds of fruit is known from around 1900. ${ }^{27}$

## Games where not all 21 combinations are illustrated

In some games, though combinations of dice are shown, the complete set of 21 combinations is not displayed. In these, the missing combinations are dealt with in the rules. Figure 4 shows the Stationen Spiel auf der Reise dieses Lebens in Bildern [Game of the Stations of Life in pictures, \#2410] published by Johan Trautner [d. 1746] in Nuremberg early in the eighteenth century. ${ }^{28}$

[^6]

Figure 4. Stationen Spiel auf der Reise dieses Lebens in Bildern, Nuremberg: Johan Trautner, before 1742. Trustees of the British Museum.

Here, the doublets successively represent the 'stations of life': childhood, youth, married life, old age (symbolised as Mütterchen [old woman] attended by Death), illness, and double six - the churchyard. These throws allow drawing the corresponding number of stakes from the pool. The remaining nine scenes correspond to singlet throws, and require specified payments to the pool. Six throws are unaccounted for and these operate as blank turns, except that the throw of 3-4 means that the player has fallen asleep on the journey and may not throw again until another throws the same. A player throwing double 6 is buried in the churchyard and out of the game. The last player surviving wins this gloomy game.

Altogether more cheerful is the Lustiges Braut und Bräutigams oder Verheÿrathungs Spiel [Cheerful bride and groom or marriage game] ${ }^{29}$ in which nine men and nine women 'with extraordinary grotesque physiognomies ${ }^{30}$ appear in two concentric rings. A central circle

[^7]shows the marriage of 'a very beautiful man and young woman', and here the stakes are placed. Nine combinations are shown as pairs of dice in the outer ring: the six doublets plus 4-5 1-6 and 3-2. All these win the number of stakes equal to the sum of points on the dice. Other throws require corresponding payments to the pool.

In the game of Het Metalen Kruis ${ }^{31}$ the 11 favourable combinations are displayed as dice pairs on or within a banner surrounding a medal. Rules below in letterpress state how many stakes to draw from the pool in each case. The remaining 10 combinations are not displayed but the rules state the individual amounts to be paid to the pool.

An example of a children's game where some combinations are not displayed is the Nieuw Robinson Crusoe Spel [New Robinson Crusoe Game]. ${ }^{32}$ The 18 displayed combinations are associated with scenes in the story. The remaining three are: 1-1 - 'death', when the player must sit out until another makes that throw; 5-5 - the first to throw this becomes 'Robinson' and must be so addressed, also collecting from a player who later makes this throw; and, completing the 21 combinations, the winning throw of 6-6. In an early example of selfpromotion, the publisher offers a book with 26 illustrations 'at a civilised price' to fill out the story.


Figure 5. Neustes Musikspiel, Stuttgart: C H Burk, about 1850. Adrian Seville collection

[^8]A game with more complicated rules is the Neustes Musikspiel [Newest Music Game, Figure 5] published in Stuttgart by C H Burk about 1850. ${ }^{33}$ Here, eleven combinations - all the doublets plus 1-2, 1-6, 2-3, 3-6, and 5-6-are displayed as pairs of dice in a circle, each decorated with a musician playing a different instrument. Players each put an agreed number of stakes into the centre to create a winner's pool. Throws of combinations not displayed have no effect and the turn passes. Throwing a combination displayed on the board requires placing as many stakes on that combination as the sum of points of the throw, unless it already has stakes on it, in which case the player takes them - as in the Game of Seven. By exception, the double-one combination acts as an accumulator, as does the seven in the Game of Seven, and any player throwing it must add two stakes there. The rules emphasise that the exact combination shown on the game sheet must be thrown if the throw is to count, thus distinguishing the game clearly from the Game of Seven, in which only the total of points on the two dice is significant. A thoughtful rule says that, unless there are stakes on the double one combination, the throw of double six, which normally wins all the stakes on the game, becomes a penalty throw, requiring payment of 12 stakes to the double six combination, 2 to the double one combination, and one to the pool. This means that an early win becomes much less likely and so deals with a serious weakness of the simple game of 21 combinations, where it is quite possible that a win can occur even before later players have had their first throw. ${ }^{34}$

This game may be of assistance in constructing rules for what is evidently the oldest extant example of a game board showing combinations of two dice. The board [Figure 6] ${ }^{35}$ is double-sided, one side being a layout for the Game of Seven, where the calligraphy of the numbers suggests an early date, around $1500 .{ }^{36}$

[^9]

Figure 6. Double-sided wooden board, about 1500. Bavarian National Museum, Munich.
It is described by Georg Himmelheber, ${ }^{37}$ who suggests that the side with the combinations of die faces served as a board for some variation of the Game of the Owl, a suggestion that would be consistent with a set of rules similar to those of the Musikspiel, in which the combinations not shown on the board are treated as blanks. A further similarity is suggested by the illustration of a chalice in the central combination of both sides of the board. In the Game of Seven version, that may well denote the accumulator combination and it seems likely that it has the same significance on the other side. The combination shown there is double four, a combination repeated on the left of the board. Richter suggests that this may be a mistake by the maker of the board and that may indeed be so: if the central combination were 4-3 the totals on all the combinations would replicate precisely the numbers on the other face of the board, ten being represented as ' + ', a rotated form of the Roman numeral X .

## Games on adult themes

In the Netherlands, these games were sometimes used for political themes. Het Nederlandsch vermaakelyk Gedenkblad [The amusing Netherlands Memorial Game-sheet, \#1620, Figure 7$]^{38}$ by 'Pietro Aratino Secundo'39 appeared in 1786, during a period of political instability in the Dutch Republic known as the Patriottentijd [Time of the Patriots] between approximately 1780 and 1787.

[^10]

Figure 7. Nederlandsch vermaakelyk Gedenkblad, signed 'Pietro Aretino Secundo'. Courtesy of the Rijksmuseum.

The 'Patriots' were a faction who opposed the rule of the stadtholder, William V, Prince of Orange, whose supporters were the 'Orangists' and against whom the game agitates. The 21 combinations are displayed in concentric rings, 14 in the outer, 6 in the inner, with the remaining combination in the centre. ${ }^{40}$ Each combination is associated with a main character or symbol from the contemporary disputes, for example: 'the Destructive Hand' of William V, the rabble-rousing Kaat Mossel, ${ }^{41}$ and the 'oldfashioned' Patriot, cruelly represented as an ape. 'III-disposed England' is contrasted unfavourably with 'beneficent Holland' and 'generous France'. Another anti-Orange game was Het vaderlandsch werp-spel [The (dice) throwing Game of the Fatherland, \#0800] invented by J Voorman, ${ }^{42}$ also displaying 21 explicit combinations on double dice.

A less-inflammatory game was the Patent Spel [Patent Game, \#1687], referencing the abolition of the guild system in the Netherlands in 1805, when it was replaced by a system of licences ['patents'] that were required in order to practise a trade or profession. ${ }^{43}$ The example by H Moolenijzer is typical: the 21 combinations are displayed in two concentric rings. ${ }^{44}$ Eight of these are marked 'Patent' and one such must be thrown, and the

[^11]corresponding fee paid to the pool, before participating in the pay-or-take game represented by the other combinations.

A different adult theme was exemplified by Ïsabeé - Nieuw-Amsterdamsche Koddige Deuntjes-Spel [Isabee - New Amsterdam comical game of tunes, Figure 8]. ${ }^{45}$ Ïsabeé herself a vigorous young woman - is portrayed in the centre, with the winning double six throw. She holds a flag while smoking her pipe and toasts everyone with a glass. A popular tune bears her name. ${ }^{46}$ Other tunes of the day are represented around her in a circle of 20 combinations.


Figure 8. Ïsabeé - Nieuw-Amsterdamsche Koddige Deuntjes-Spel, Amsterdam: G J d'Ancona, 1840-1850. Courtesy of the Rijksmuseum

The game was also used for advertising in the Netherlands, for example, when the Apeldoorn firm of De Haas and Brero published the Edelweiss-Robijnspel in about 1925 to promote their soap products. ${ }^{47}$ All 21 combinations were depicted but extra spaces were provided to keep count of double-six throws, with the game ending only with a player's second such throw.

[^12]
## Games with complex rules

The great majority of games exhibiting explicit two-dice combinations use versions of the simple pay-or-take rules exemplified above. An exception is the Blokkade [Blockade, Figure 9] game ${ }^{48}$ based on Napoleon's exile to Elba in 1814.


Figure 9. Blokkade, Amsterdam: Kraijenbrink, 1814. Courtesy of the Rijksmuseum.
One player takes the part of Napoleon, for which there is a separate pool, and pays an agreed sum to the general pool for the privilege. ${ }^{49}$ The other players each take a ship, paying accordingly. The five circles above the ship represent artillery shells and must be dressed with half cent pieces while the shields around Napoleon representing his arms are dressed with cents. Complex rules determine the outcome of the fight and the various payments made to the pools after each throw. Napoleon's throws can remove shells from the ships: when a ship has lost all its shells, it is out of the game. He needs to disable three ships to win. Conversely, the other players hope to beat Napoleon by disabling all his shields. Despite the complexity of the rules, it remains within the class of Games of 21 Combinations since the play remains completely determined by the combinations on the two dice.

[^13]

Figure 10. Novo et Piacevol Gioco del Giardin d'Amore, Rome: Giovanni Antonio de Paoli, 15891599. Trustees of the British Museum.

By contrast, the Novo et Piacevol Gioco del Giardin d'Amore ${ }^{50}$ [The new and enjoyable game of the garden of love, \#1105, Figure 10] looks very much like a Game of the Goose, though with an oval track rather than a spiral. This impression is reinforced by the final sentence in the none-too-clear rules, which says, in translation: 'For the remainder, please refer to what is observed in the game of the Goose as mentioned above and to the judgment of the players'. In fact, it is a pay-or-take game with unusual features, not a race game like Goose. One feature is that each player has a distinctive token moving on the board, which is not just a repository for stakes. A second feature, borrowed from the Well and Prison spaces of Goose, is that there are two spaces, marked Spedale [workhouse] and La Pazzia [madness], where turns are missed until rescue by another player. These spaces are denoted by pairs of blank dice. Apart from these spaces, the outer ring contains spaces illustrated with virtues and vices, displaying all the familiar 21 combinations, except for double six, which appears above the central arch decoration. The players throw in turn, each moving their token initially to the space indicated by the dice combination, obeying the pay-or-take instruction there and finally obeying any instruction to move to another space. The initial space and the

[^14]destination space are linked thematically: for example, Lordezza [Grossness or Dirtiness, depicted as a pig] is directed to Legiadria [Refinement of appearance, depicted as a graceful stag]. The spaces Poverta [Poverty] and Ingratitudine [Ingratitude] redirect the player to the Spedale [workhouse] to await relief by another, while Gelosia [Jealousy] redirects to La Pazzia [Madness], until someone arriving at Prudentia [Prudence] effects release. Doublets get another throw and throwing double 6 twice in succession wins the game. Double 1 restarts the game, dividing the pool equally between all players, which must have been rather dull. Paradoxically, although this game looks quite different from the usual Game of 21 Combinations, its mode of play is essentially the same, apart from the arrangements for missing turns and the allegorical redirections.

## Discussion

Games of 21 combinations were probably not used for serious gambling. The occurrence of double 6, ending the game with a win unless special rules are introduced, is too frequent. By contrast, to win the Game of the Owl requires a triple 6, with a probability of 1 in 216 throws, so that excitement can build over a long session. The shorter timescale does however make these games more suitable for children, especially if some fun can be introduced as in the animal impersonations of Stryk weg geef wat, the only game in this class to enjoy lasting popularity. This can be viewed in a wider context, that of role-playing in games of chance generally. ${ }^{51}$

Despite the occasional German, Italian, Austrian or French invention, the elaboration of different versions of the Game of 21 Combinations is overwhelmingly a Dutch phenomenon. For example, there is no counterpart elsewhere to the group of games from the Patriot era. Indeed, one may question whether these were intended for play or simply as conversation pieces - a question that could be asked about the many Dutch advertising versions of the Game of the Goose. By comparison, promotional forms of the Game of 21 combinations are rare, suggesting that it did not benefit from the universal recognition of Goose that made spiral race games so attractive as vehicles for advertising. It also has to be admitted that, in any contest to find an interesting game, Games of 21 Combinations would not be among the winners.

[^15]
[^0]:    1 This is the English version of the paper published as: 'Jeux à Vingt-et-une Combinaisons'. Le Vieux Papier, fasc. 444 (Avril 2022), pp. 49-57.
    2 Thierry Depaulis, 'Jeux de hasard sur papier : les "loteries" de salon', Le Vieux Papier, fasc. 303, janvier 1987, p. 183-195 et fasc. 304, avril 1987, p. 225-233, puis tiré-à-part Jeux de hasard sur papier, Paris, Le Vieux Papier, 1987.
    3 Games similarly involving only paying to or taking from a pool, but using a marked spinning top (dreidel) instead of dice, are usually called 'put-or-take' games.
    4 Adrian Seville, 'Le Jeu de la chouette', Le Vieux Papier, 2021, pp. 440-451 and 492-499.
    5 For a full account of these games, see: Jonas Richter, 'The Game of Seven: Glückshaus and Related Dice Games', Board Game Studies Journal, vol.13, no.1, 2019, pp.67-97. The name "Glückshaus" was created in the

[^1]:    1960s by Erwin Glonnegger who combined the Game of Seven with a 16th century staking board for a card game (most likely a Turmspiel board). The board showed a tower, which probably inspired Glonnegger to coin the new term "Glückshaus".
    6 Seville, 2021, op.cit., p. 442.
    7 See Figure 6 below.
    8 See Figure 10 below,
    9 The website www.giochidelloca.it developed by Luigi Ciompi and Adrian Seville provides free downloadable images for research but not commercial use.

[^2]:    10 P J Buijnsters and L Buijnsters-Smets. Papertoys - Speelprenten en papieren speelgoed in Nederland (16401920). Zwolle: Waanders, 2005.

    11 https://www.rijksmuseum.nl/en
    2 www.atlasvanstolk.nl referenced as AvS.
    13 Georg Himmelheber, Spiele - Gesellschaftsspiele aus einen Jahrtausend. Munich and Berlin: Deutscher Kunstverlag, 1972,
    14 Rijksmuseum RP-P-OB-88.077, about 1829.

[^3]:    ${ }^{15}$ On the Jeu de l'État-major français, see François Richard, in Michèle Crépin (éd.), 'Les "samedis du François Coppée': réunion du 25 juin 2011, Le Vieux Papier, fasc. 403, janvier 2012, p. 426-427 and pl. VIII.
    16 Épinal: issued by Pinot et Sagaire about 1860. The later edition is by Pellerin, about 1880.

[^4]:    17 Reproduced in: Heiner Vogel, Bilderbogen und Würfelspiele. Leipzig: Ed. Leipzig, 1981, p. 164-165.
    18 Himmelheber. Op. cit., cat. no. 357.

[^5]:    19 The earliest [Rijksmuseum RP-P-OB-77.389] appears to be that by the successors of the widow Jacobus van Egmont: the Amsterdam address given was active from 1761. The central scene showing people playing the game is signed H Numan [Hendrik Numan, 1736-1788]. Ten other editions are listed in Buijnsters, pp. 279-281. Several of these use a different, coarser block, signed with the monogram WH, probably a copy of the Numan version. Use of this block continued to the middle of the nineteenth century.
    20 A version digitised with rules on Google Books may pre-date the several editions given in Buijnsters op. cit. p. 276, see:
    https://books.google.co.uk/books/about/Nieuw_nederlandsch_schutter_spel.html?id=5VJTj876sxwC\&redir_e sc=y
    ${ }^{21}$ This song, written in 1816, was used for a while as the national anthem and serves as a terminus post quem for the game.
    22 Cf. Maurits de Meyer: Populäre Druckgraphik Europas - Niederlande. München: Callwey 1970, p. 164, no. 144.

    23 Good quality reproductions are published in Sandro Angelini, I 33 Giochi di Mitelli. Bergamo: Grafica Gutenberg, 1976.

[^6]:    24 On a German adaption, see Regina Kaltenbrunner: ‘Daß Glück- und Unglüks-Spihl', in Homo Ludens 3 (1993), pp.143-154.

    25 The Great Turkish War was a series of conflicts from 1683 between the Ottoman Empire and the Holy League consisting of the Holy Roman Empire, Poland-Lithuania, Venice, Russia, and Habsburg Hungary. ${ }^{26}$ The usual stake specified in Mitelli games: a coin worth four denari - the coins of least value in the Bolognese monetary system.
    27 Giuoco delle Frutta, Milan: Marca Mondo/Marca Stella/Marca Aquila, \#0275.
    28 British Museum 1893, 0331.78

[^7]:    29 Nuremberg: Johann Raab, 1850-1875. British Museum 1893, 1015. 6
    30 The German text on the game has: von ausserordentlichen Grotesquen Physiognomien.

[^8]:    31 Rotterdam: T J Wijnhoven-Hendriksen 1831. \#1686, Rijksmuseum RP-P-1984-392, Buijnsters p.258. The Metal Cross was a Dutch bronze medal awarded to soldiers and sailors participating in the Ten Days Campaign of 1830-1831.
    32 Dordrecht: J[oseph] Zender, between 1827 and 1847. \#1234. Buijnsters op. cit. p. 274.

[^9]:    33 \#2393. R C Bell, The Board Game Book. London: Marshall Cavendish, 1979, pp. 138-139, illustrates a different edition and gives rules translated into English.
    34 The same problem is addressed differently in the Edelweiss-Robijnspel discussed below. See also the Ned. Panopticum Spel [Netherlands waxwork game, Amsterdam: Gebr. Koster, ca.1885, \#0833, AvS 7771, Buinsters op. cit. p. 259].
    35 Bavarian National Museum, Munich, R 94.
    ${ }^{36}$ Jonas Richter, op, cit, pp. 67-97. He acknowledges Christine Wulf and Jörg Lampe (Göttingen, Akademie der Wissenschaften) and Franz-Albrecht Bornschlegel (Munich, Ludwig Maximilian University, Center for Epigraphical Research and Documentation) for this dating.

[^10]:    37 Himmelheber, op. cit., p. 146.
    38 Rijksmuseum RP-P-OB-77.560, AvS 4669.
    39 A nom-de-plume referencing Pietro Aretino (1492-1556), the 'scourge of princes'.

[^11]:    40 Buijnsters op. cit. pp. 160-161 overlooks the central combination, which gives another throw.
    41 Catharina Mulder (1723-1798), also known as Kaat Mossel [mussel], was a fishmonger who organised the Orangist riots in Rotterdam in 1784.
    42 Amsterdam: J Verlem, 1786. Rijksmuseum RP-P-OB-201.572
    ${ }^{43}$ This regulation was introduced in France by a decree of the Constituent Assembly from the $2^{\text {nd }}$ and $17^{\text {th }}$ of March 1791 which abolished guilds and created a simple tax on labour income. This is the so-called décret or loi d'Allarde that established free access to trades and industries. The Dutch republic, which had become a satellite of France in 1795, could only follow the French example. (We thank Thierry Depaulis for this information.)
    44 Amsterdam, ca. 1820. AvS 243

[^12]:    45 Amsterdam: G J d'Ancona, 1840-1850. Rijksmuseum RP-P-OB-200.002. George d'Ancona was well known as a political pamphleteer.
    ${ }^{46}$ Gezangboek voor grappenmakers: 100 versjes op populaire wijzen, voor alle feesten. Rotterdam: Gebr. Poot, 1885, Vol.1.
    47 Fred Horn Collection - Flemish Games Archives, KHBO, Brugge. \#1912

[^13]:    48 Amsterdam: Kraijenbrink, 1814. \#1630. Rijksmuseum RP-P-OB-87.163 and (rules) RP-P-OB-87.163A
    49 Other Dutch games feature paying for the privilege of a separate pool, for example the Mallemolenspel [Carousel Game] published by Wahrendorf, Amsterdam: about 1889. See: Adrian Seville, Vintage Board Games. Milan: White Star, 2019, p. 138-139. Separate pools are also known from the German games Pachten and the more successful Glocke und Hammer [Bell and Hammer], both games using 'blind dice' (Schimmelwürfel) marked only on a single side, cf. Seville, 2021, op.cit, p. 493.

[^14]:    50 By Giovanni Antonio de Paoli. Rome: 1589-1599. British Museum 1869,0410.2467.+

[^15]:    51 Adrian Seville, 'The Sociable game of the Goose', Board Games Studies Colloquium XI, Lisbon, 2008.

