CHANGING TRACKS: Some Games of Circulation

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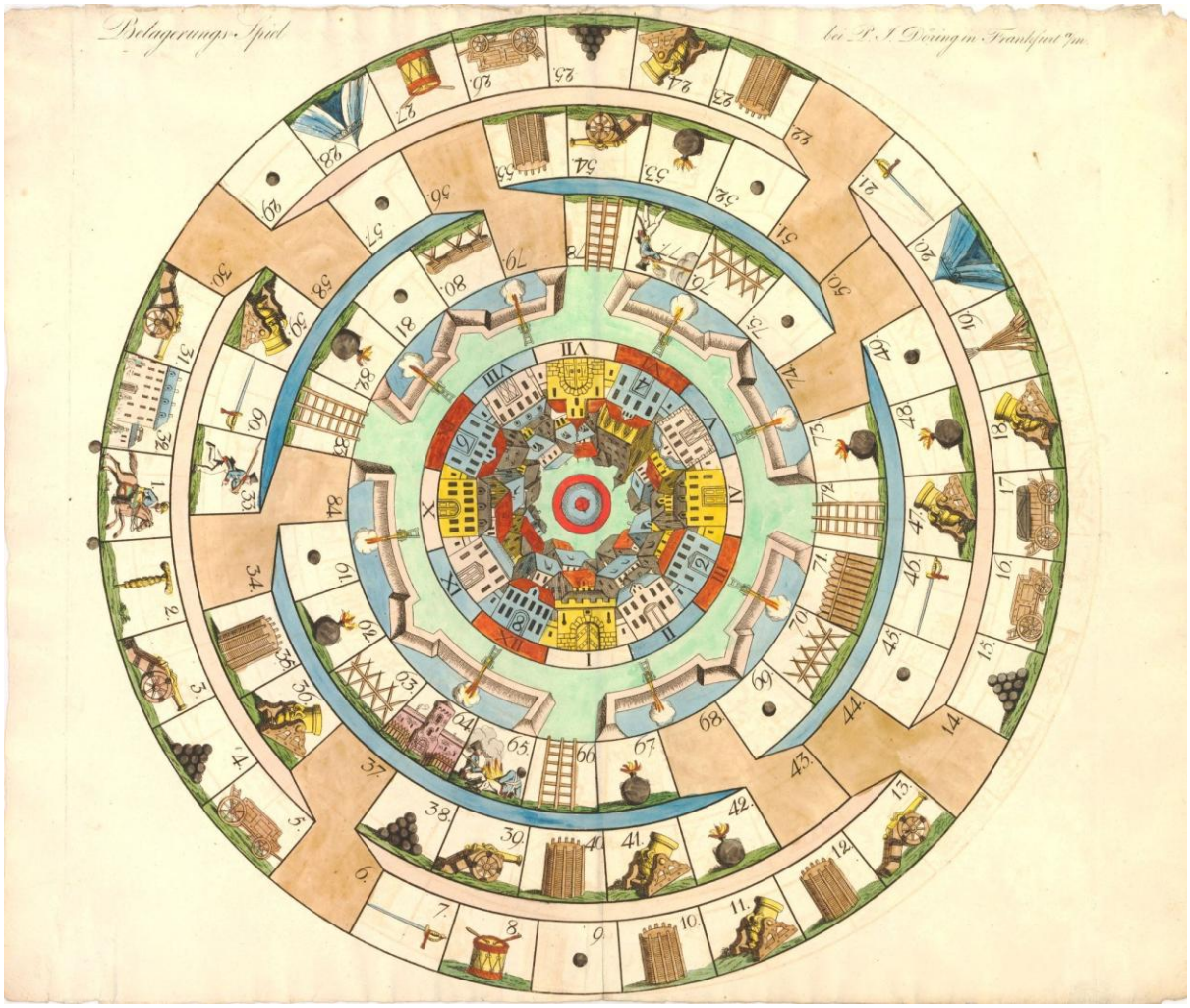


Fig. 1 – *Belagerungsspiel,* P. J. Döring, Frankfurt am Main, about 1794 (British Museum 1893,0331.86)

This article introduces a class of roll-and-move board games that has not previously been identified. In these games, here named *Games of Circulation,* the playing field consists of three or more concentric unicursal tracks, each forming a continuous loop without crossing the others. These tracks - usually circular or oval - are divided into cells or otherwise marked with points where the players' tokens may land. Each player's token enters on a specified track and moves along it from cell to cell according to the throw of dice or an equivalent spinner. The token remains on this track until it lands on a designated cell, requiring it to move onto a different track, either nearer to or further from the centre as the rules require. This continues, with tokens moving in turn, until a specified goal is reached, this often being the centre space. Depending on the rules of the game, this may represent a win, whereupon the game stops, or a loss, in which case the token is removed and the game continues until only one token remains on the board, representing the winner. In some variant forms, the winning requirements may be different.

These games of circulation are to be distinguished from games that are visually similar but where the movement of tokens is radial, or where the transition between one circular track and the next is automatic, so being topologically equivalent to a continuous unicursal path like that of the familiar jeu de l'oie. Also not considered here are a handful of games in which tokens circulate on only one or two tracks: these have particular sets of rules, which do not include track-changing.

The circulation mechanism has been used for games with various entertaining themes. There are a few four-track examples from Germany and Austria early in the 19th century, though these are by different publishers, with no evidence of linking. Later in the century, McLoughlin Brothers of New York used the mechanism in their games for children with some consistency. It was also adopted in the first half of the twentieth century by the English publishers Roberts Bothers of Gloucester for several of their games. Of course, such a simple mechanism is eminently susceptible to parallel invention, and later use of it does not of itself imply copying from an earlier form.

German and Austrian inventions

Early in the nineteenth century, three different publishers, in Frankfurt am Main, Berlin and Vienna, each brought out a single example of a game using the four-track circulation mechanism. These appear to be the earliest examples of its use.

The *Belagerungsspiel* of P J Döring

Of these games, the earliest appears to be the *Belagerungsspiel* [Game of the Siege, fig.1][1], in which the encirclement of a city provides an apt theme. This was published by P. J. Döring in Frankfurt am Main. It is not dated but an advertisement appears in 1794[2]:

> At P. J. Döring's on Döngesgasse has just been published and is available: *The Siege Game*; a completely new, very entertaining social game, on a large folio sheet with a printed explanation 24 francs, illuminated 48 francs. In this game all the objects that belong to a siege are used, in the middle is the fortress that the players try to conquer, but they all fail if they are taken prisoner or sent to the hospital. But whoever is lucky enough to get into the fortress receives a contribution and is out of all danger. The game has so much to make it enjoyable that it would take up too much space here to show it all.

It is an interesting adaptation of the *jeu de l'oie*, from which it borrows several rules. The object is to penetrate the fortified city pictured in the centre and to plunder its wealth. Each player puts four stakes into the pool. Two dice are used. Landing on a cannon (but not on a mortar) doubles the throw, as in the goose spaces of the jeu de l'oie. Another borrowed rule applies to the hospital (space 23) and the prison (space 64): stay until relieved by another player, or pay 2 stakes. Anyone landing on an enemy outpost (spaces 65 and 77) is 'dead' but, as in the jeu de l'oie, may start again, on payment of four stakes. Encountering an enemy cannon ball requires payment of a stake to the pool. Landing on a trench (coloured

[1] This name is also used for a popular adaptation of *Renard et les poules,* but there is no connection.
[2] *Franckfurter Frag- und Anzeigungs-Nachrichten*, No. 44, 27 May 1794.

light brown in the example shown) allows transition inwards to the next circle; otherwise, the tokens continue to circulate. From the third circle, scaling ladders allow entry to the city, where the buildings are numbered from 1 to 12. Once inside the city, the player is safe from any penalties and receives the number of stakes marked on the buildings for the throws of 3, 6, 9 and 12.

A charming rule is that, if anyone gets to a tent, the players take a break until that person has told an interesting anecdote from the history of the war, being rewarded by the referee with a small refreshment of fruit or a drink. It is not specified which war is to be featured but France had declared war on Austria and Prussia in the spring of 1792: a series of victories by the new French armies ended with defeat at Neerwinden in the spring of 1793, so the rule may refer to that campaign. The game ends when the pool is exhausted through paying out on the plundered buildings – a chilling reminder of the likely fate of a successfully-besieged city.

Eighteen months later, Döring included the game in a list of Christmas or New Year's gifts as 'the most popular *Belagerungsspiel*' but reduced the price to 18 francs, or 36 francs coloured.[3]

Sonne, Mond und Sterne

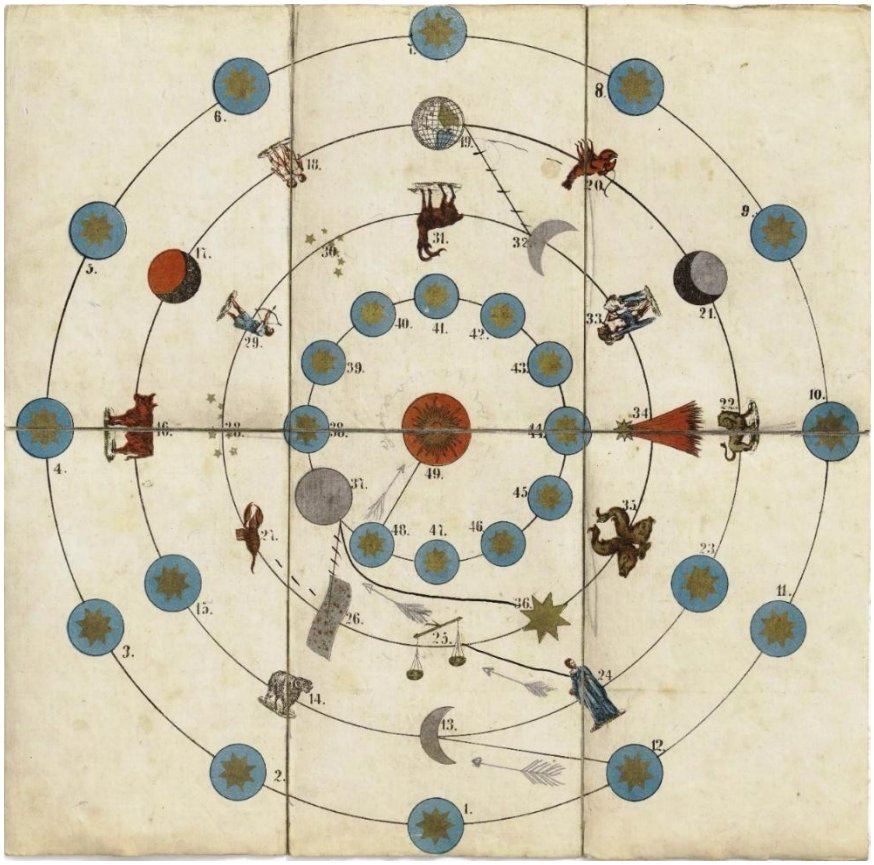


Fig. 2 - *Sonne, Mond und Sterne* [Sun, Moon and Stars], Henri Sauvage, Berlin, about 1825 (Wien Museum 69341)

[3] *Franckfurter Frag- und Anzeigungs-Nachrichten,* No. 106, 22 December 1795.

Consideration of the solar system, with the planets in their orbits, suggests that an astronomical game of circulation might be apt. The earliest game of this kind is *Sonne, Mond und Sterne*[4] [Sun, Moon and Stars, fig. 2], published in Berlin by Henri Sauvage (Verlag der Plahn'schen Buchhandlung) in about 1825.[5] The curious distribution of stars, planets, zodiac signs and moons around the sun makes no pretension to astronomical reality. The numbered track of 49 spaces occupies four concentric circles, the outermost containing the fixed stars, the next two the signs of the zodiac, and the innermost containing the planets. The rules make clear that this is a game of circulation, though by prior agreement the circulation rule can be ignored, to give a quicker game. The transitions between circles are indicated by arrows and to follow them it is necessary to throw the exact number that will take the token to the arrow point (space 13 or later 25 and 37), failing which the token will continue to circulate. The game continues in the above manner until a player reaches the full moon, No. 37 and moves only one space further with each throw.

There are numerous entertaining special rules, including an apocalyptic instruction for space 34:

> *Comet*. If you hit this one, the world will end for you. You may continue playing, but must give back what you have already won to everyone, because what use is money, when the world ends?

There is also a 'back to square one' rule, even more onerous than the 'start again' rule for the death space in the jeu de l'oie:

> Space 20 - *Cancer*: Anyone who is unlucky enough to get there must 'crab', i.e. go back as far as the number thrown, and only when he has reached 1 can he start his journey again. To make things easier, however, he is allowed to go straight from 13 to 12, and when he has reached 1, he can go forward as far as the number thrown.

The game ends when a player enters the sun, No. 49.

This game was copied around 1890 by F H Ayres of London and published as *Aphelion* [far from the Sun]. According to the rule leaflet: 'the Earth and Moon have been placed in the zodiac circles to give more amusement and sport'. The leaflet also claims that the game: 'will engrave in the memory an everlasting idea of the Solar and Planetary system' – one hopes that such a strange idea of astronomy as the game presents will in fact fade before too long! After such high claims, the game itself is rather dull, with simple rules to pay or take from the pool. However, if a lady lands at space 24 (The Virgin), she is to receive a counter from each gentleman present, as well as five from the pool. In adapting the game from its German original, much has been lost: it is not even clear from the rules whether this is still a game of circulation.

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[4] A game with this title was published by Bauer & Raspe of Nuremberg in 1823 but this had 15 cards and 5 dice, so is not a comparable forerunner.

[5] Ernst Strouhal, *Die Welt im Spiel*. Wien: Brandstätter, 2016, game 43. Wien Museum 69341. The example reproduced appears to have some lines added in manuscript, which are not explained by the rules.

Der Kampf um die Braut

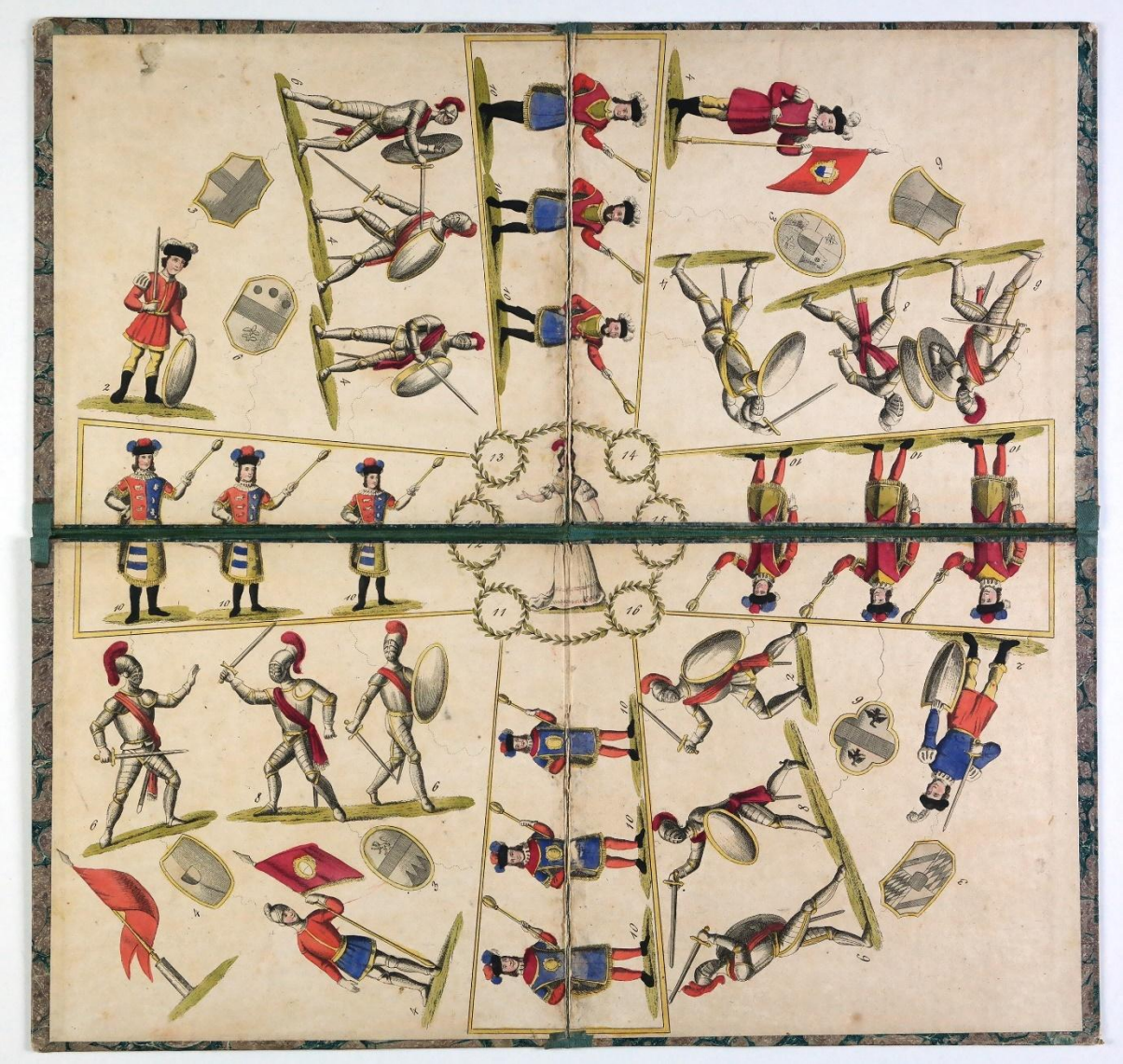


Fig. 3 – *Der Kampf um die Braut* [The Contest for the Bride], J Bermann & Sohn, Wien, about 1820. (Coll. A Seville, Giochidelloca #2646)

The structure of this unusual two-dice game of circulation[6] by J Bermann & Sohn of Vienna[7], is perhaps not immediately evident (fig.3) – but there are in fact three concentric tracks encircling a fourth: from this final track, one player wins the bride by throwing a double. On the three outer tracks, landing on a human figure wins stakes from the pool, while landing on a shield requires payment to it, according to the numbers adjacent to the images concerned. Landing on one of the four herald rows, forming the arms of a cross, affords transfer inwards to the next track.

[6] Published about 1820 according to V A Heck's catalogue 18, Vienna [1925] https://digi.ub.uni-heidelberg.de/diglit/heck1925_18/0060/image,info

[7] Jeremias Bermann (1777-1855) took over his father-in-law's antique business in Vienna in 1815. He worked with his son Joseph, who succeeded to the business in 1847.

Games of Circulation by McLoughlin Brothers

The 'Aunt Louisa' games

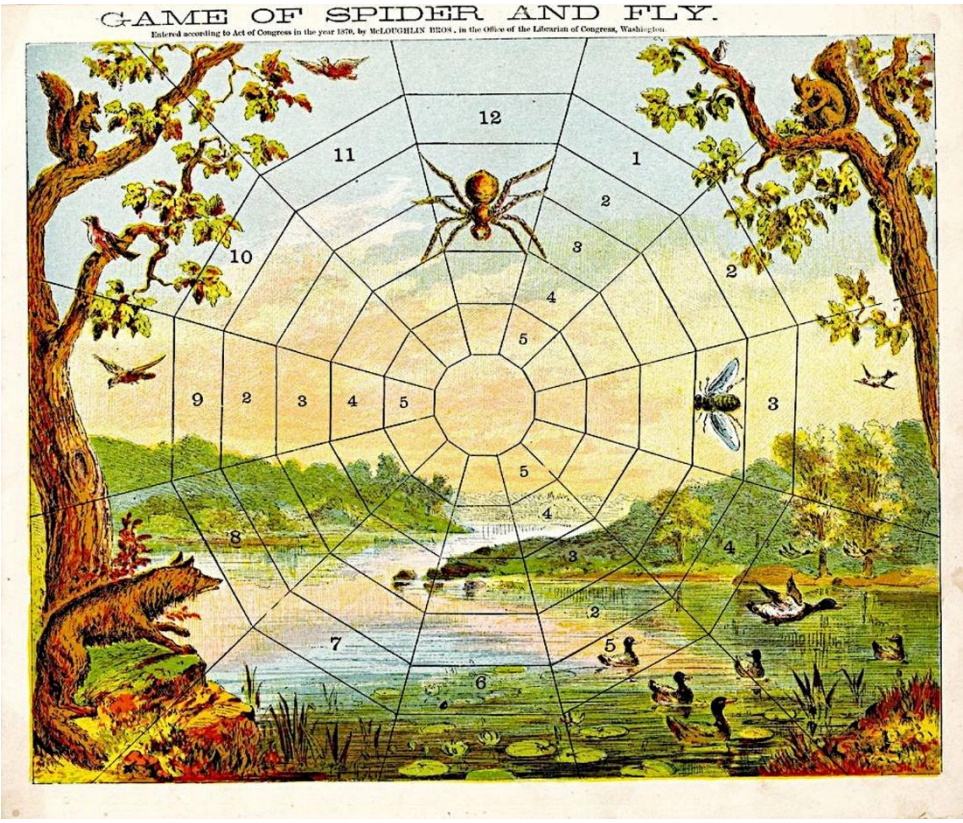


Fig. 4 – *Game of Spider and Fly*, McLoughlin Bros., New York, 1870. (University of Maryland)

McLoughlin Brothers of New York are among the few publishers of games to have used the circulation mechanism with any consistency. Their game of *Spider and Fly* (fig. 4) provides an apt demonstration of it: the flies circulate round the web, being forced inexorably towards the centre, where they are swallowed up. This is one of the six games[8] in *Home Games for Little Girls*, published by McLoughlin in their 'Aunt Louisa's Big Picture Series', and registered for copyright in 1870.[9]

It is a simple game for two players, comprising five tracks. Their tokens (representing the 'flies') enter at space 1 on the outermost track and move clockwise according to the sum of the points on two dice. The designated cells are those in sector number 12, where the spider sits in wait. Landing on one of these requires the token to move one space towards the centre, entering the adjacent track, on which it will move at the next turn. The players move

[8] The full list of games is: *Game of Croquet, Game of Spider and Fly, Game of Pearl Divers, Game of Falconry, Game of Fishing, Naval Engagement.*

[9] The reference to 'Aunt Louisa' has caused some problems for cataloguers of the McLoughlin toy books. This was one of the pen names of the English writer Laura Belinda Charlotte Jewry (married name Laura Valentine, pen names Mrs. S. Valentine and Aunt Louisa; 1814–1899). She was primarily known for her works for children, mostly published in England by Frederick Warne. Some of her work was also published in New York, either by Warne or by Scribner. However, some of her work published in England was pirated by McLoughlin, who used 'Aunt Louisa' in their series titles without implying authorship. There is no evidence that Laura Valentine edited these series, as has sometimes been claimed.

their tokens in turn, getting ever closer to the centre until one token, now moving on the innermost track, lands on a designated cell and moves into the centre space. This means that the token has been caught (even though the spider is not depicted in that space) and the player concerned has lost. Since only one cell in 12 is designated, it is a slow game to finish. However, the throw of double six is also designated as forcing a move inward to the adjacent cell, though this speeds the game only a little.

An improved version of *Spider and Fly* was copyrighted by McLoughlin Brothers of New York in 1898 as *The Spider's Web*, with similar rules to the original. Each of the five tracks again consists of 12 cells, but in this version three cells on each track are designated by the image of a spider, helping to avoid the slow finish of the earlier game.

A companion volume in the series was *Home Games for Little Boys*, also registered for copyright in 1870.[10] It included Rabbit Hunt, another game of circulation, but this time with six tracks, and here the centre offers refuge rather than destruction. The two players represent 'Rabbit' versus 'Hound'. The Rabbit aims to reach safety in the centre space (the 'Warren') before being caught by the Hound. For the Rabbit, two spaces are designated as giving movement inwards to the next track, whereas for the Hound only one is so designated. The Rabbit's advantage is somewhat reduced by allowing the Hound to move in either sense on a given track, whereas the Rabbit must always move clockwise.

Several games from the Aunt Louisa booklets were published as broadsheets for the Dutch market. The *Spel van Spinnekop en de Vlieg* [Game of Spider and Fly] has similar graphics and rules to the McLoughlin original, but the cell numbering is clearer, and the game is not restricted to two players, the winner being the player whose token survives all the others. There is no imprint but the game was listed in an advertisement by S R Rolf in the *Leeuwarder Courant* for 23 October 1879. Rolf also included in his list *Visschers spel, Paarlduikerspel* ['Parelduiker spel' in modern Dutch] and *Spel op de Koord* [Game on the Rope].[11] These are close adaptations of the *Game of Fishing*, the *Game of Pearl Divers* and the *Game of Tight Rope,* all with rules in Dutch.

Other games of circulation by McLoughlin

Another apt theme for circulation games is the *Whirlpool*. In McLoughlin's version[12], published in 1899, there are only three tracks and diversion arrows clearly indicate the cells at which a change of track occurs. Three cells on the inmost track lead to loss of the token in the central whirlpool. Each player has six tokens, but enters only one at a time: the last token to survive wins. McLoughlin also published *The Air Ship Game* (1904)[13]. This had no fewer than eight tracks, marked only with undifferentiated points and diversion arrows: the

[10] The six games included were *Game of Quoits, Game of Bear Hunt, Game of Duck Shooting, Game of Rabbit Hunt, Game of Leap Frog, and Game of Tight Rope.*

[11] All four of these games are digitised in the Rijksmuseum, with object numbers RP-P-OB-207.390 RP-P-OB-207.389 RP-P-OB-207.392 and RP-P-OB-207.391 respectively.

[12] The Strong Museum, object number 107.3303

[13] The Strong Museum, object number 107.3319

goal was to reach the balloon pictured in the centre. The box lid shows a biplane rather than a dirigible.

Games by Roberts Brothers of Gloucester, England

In the first half of the following century, Roberts Brothers of Gloucester were a leading publisher of games.[14] At first, they published anonymously, showing just 'British Manufacture', though 'Made in England' was added after about 1914. Later they added 'Glevum Series' [from the Roman name for Gloucester], changing the company name to 'The Glevum Games Co.' A trade mark for 'Glevum Series' was registered in the early 1930s and later changed to 'Glevum Games'. The factory was taken over for the Second World War and afterwards trade never recovered: the business was sold to the Chad Valley company in 1954 and closed in 1956. Several of their games made good use of the circulation mechanism.

Gordon – Kitchener or the Conquest of the Soudan

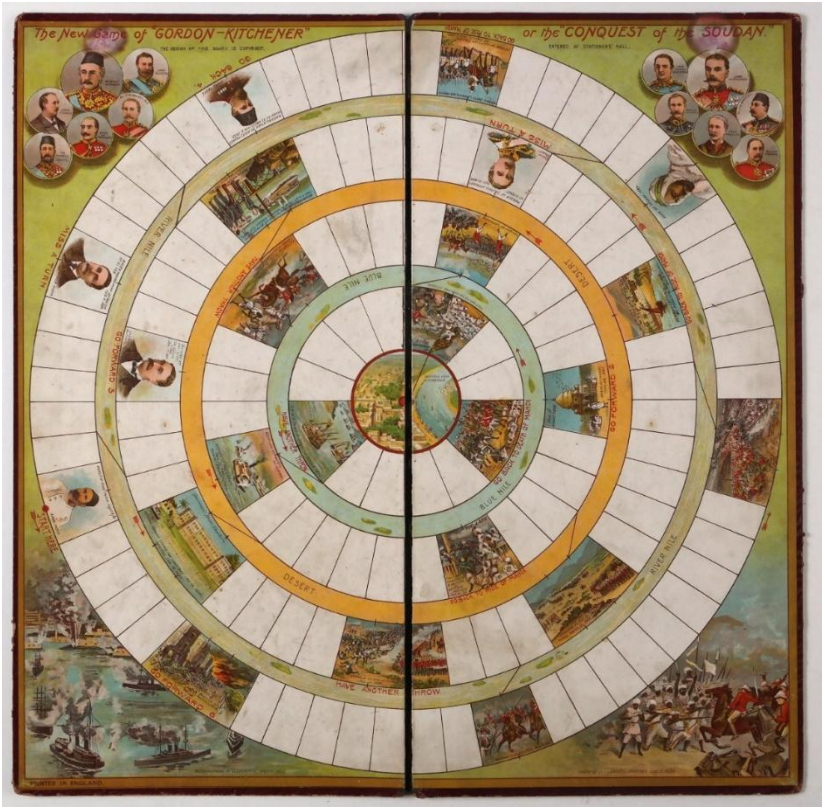


Fig. 5 - Gordon – Kitchener, or the Conquest of the Soudan, [Roberts Brothers, Gloucester, 1899] (Coll. A Seville, Giochidelloca #2910)

The Roberts' first game of circulation was entitled *Gordon – Kitchener, or the Conquest of the Soudan* [sic] (Fig. 5). The game uses four concentric tracks, the tokens being placed on the lines separating the cells. Certain cells contain either a view or a portrait of one of the 'great and distinguished men that have been in the fore-front of the various Campaigns, from the

[14] A comprehensive history of the firm is given in Malcolm J. Watkins, *Games Makers to the Empire – Roberts Brothers of Gloucester 1890-1957,* and *Games-Makers 2 the Empire,* Gloucestershire: Heritage Matters, 2013 and 2020. His help in preparing this article is gratefully acknowledged.

lamented General Gordon[15] to Lord Kitchener[16]'. All these cells are marked by either one or two short lines, keeping the uniform spacing of lines along the tracks. A token landing on one of these short lines must follow the instructions written in the cell concerned. The tracks are separated by three circular bands that represent the Nile, Desert, and the Blue Nile. These are crossed by diagonal lines, which act like the designated cells in the games discussed above. The final track includes 'Victory at Omdurman'[17] leading to the winning space, Khartoum. There is no imprint but a copyright registration in the National Archive gives the date of publication as 2 May 1899 and the publisher as Roberts Bros. of Gloucester.

A game with similar structure was listed in Roberts' Glevum catalogue for 1938: *Exploring, or the Search for the Lost City.* Again, there were four concentric tracks, separated by coloured bands representing obstacles to be crossed: first a river, then a desert and finally a range of mountains, after which the lost city could be reached in the centre of the board. The graphics show a stereotypical Africa, the explorers being white men wearing pith helmets and carrying rifles, in contrast to the Native Africans employed as bearers.

A Trip to Mars



Fig. 6 – A Trip to Mars, [Roberts Brothers, Gloucester, soon after 1902]

Roberts Brothers listed versions of their game *A Trip to Mars*[18] in their Glevum catalogues from 1934 to 1950.[19] However, a much earlier version is that shown in fig. 6. The starting point (Earth) is to the right of the third orbit from the Sun (rather strangely shown as

[15] Major-General Charles George Gordon CB (1833 – 1885) died fighting in the siege of Khartoum.
[16] Field Marshal Horatio Herbert Kitchener, 1st Earl Kitchener (1850 – 1916).
[17] The Battle of Omdurman was fought during the Anglo-Egyptian conquest of Sudan between a British–Egyptian expeditionary force commanded by the British Commander-in-Chief (sirdar) Major-General Horatio Herbert Kitchener and a Sudanese army of the Mahdist State, led by Abdallahi ibn Muhammad (the Khalifa), The successor to the self-proclaimed Mahdi, Muhammad Ahmad. The battle took place on 2 September 1898, at Kerreri, 11 kilometres north of Omdurman.
[18] Strouhal op. cit., game 42. Giochidelloca 0686
[19] Watkins, op. cit., Vol. I, p. 186.

weeping face in the centre), and tokens circulate anticlockwise on this according to a single die until diverted either outwards to the orbit of Mars or inwards to that of Venus. Unlucky transitions may lead to the innermost orbit, that of Mercury, from which the player may fall into the Sun, and so must retire. The winning space – arrival at Mars – is near the top of the board. This is a well-devised game which would be fun to play and, though fanciful, would instil a clear knowledge of the order of the inner planets.

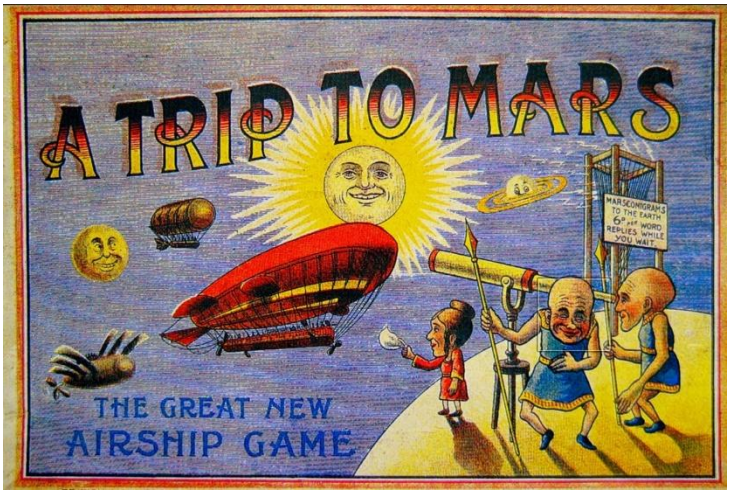


Fig. 7 – A Trip to Mars, [Roberts Brothers, Gloucester, soon after 1902]

The graphics, too, are amusing: the box lid (fig. 7) shows the optimistic use of a 'Mar(s)conigram' to communicate at sixpence per word: this was the going rate for Marconi's pioneering radio-telegram service, equivalent to about 4 euro today.

Round the Dial – a Radio Game

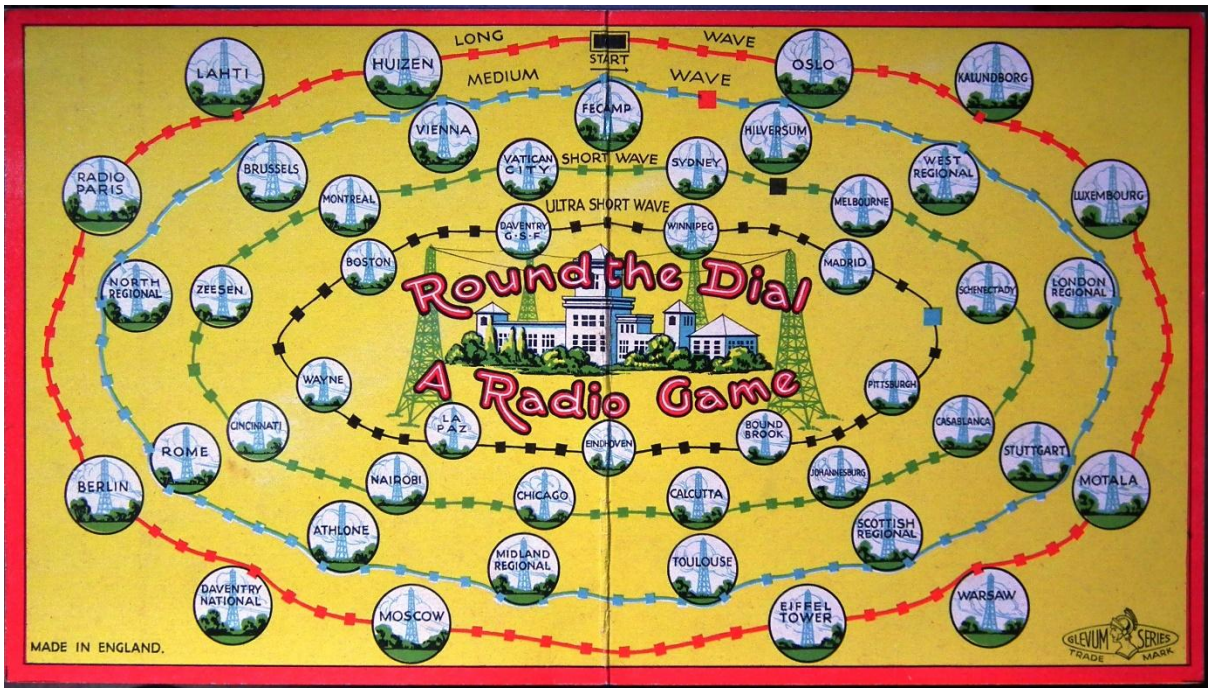


Fig. 8 – *Round the Dial – a Radio Game*, Glevum Games, Gloucester, 1930s (image courtesy of Malcolm J Watkins)

A simple but ingenious development of the four-track mechanism also appeared in the Glevum Series during the 1930s. *Round the Dial* (fig. 8) cleverly reflected the system of tuning for radios before the Second World War. In those, stations were selected by means of a tuning dial that could be switched between wavelength bands: often long, medium, short and ultra-short. In the game, stations are mapped appropriately onto four tracks, corresponding to these bands. As tokens travel round the bands, beginning with the outermost, the goal is to land on three different stations in the same band, whereupon the token transfers to an indicated point in the next band. The game continues until one token, now circulating on the innermost band, wins by visiting three different stations on it.

A puzzling game board by Phillipp Hainhofer

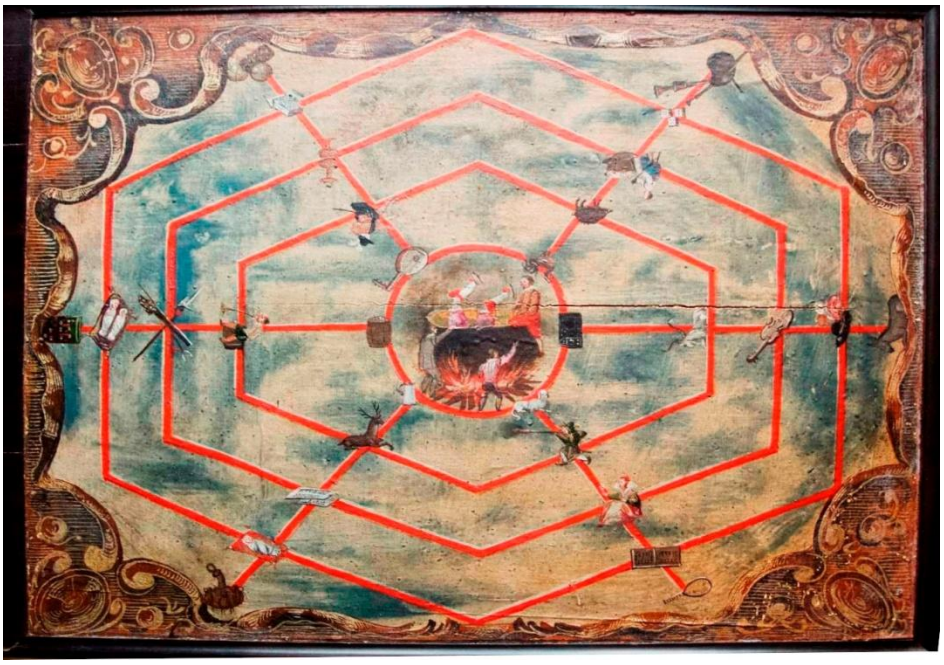


Fig. 9 – Game board from the Gustavus Adolphus cabinet by Philipp Hainhofer

The unique game board shown in fig. 9 is from the celebrated cabinet created by Philipp Hainhofer (1578-1647) in Augsburg and presented by the city as a gift to Gustavus Adolphus of Sweden in 1632.[20] The central image undoubtedly represents Hell, so that the interpretation by Jonas Richter as a board for *Höllfahren* [Conduire en Enfer] is undoubtedly correct. However, it seems possible that the board, while certainly usable for that game - in which movement is only along the radii - could also be used for a game of circulation.

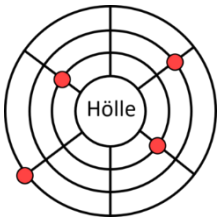


Fig. 10 – schematic diagram of the *Höllfahren* game

[20] The cabinet is now in the Art Collection of Uppsala University.

Höllfahren, otherwise known as the *Unfaithful Neighbour* [21] is an Early Modern game in which tokens move along the radii from the outside towards the centre of a circular layout (fig. 10) as determined by the play of cards. The object is to avoid getting to the representation of Hell in the centre. Tokens are played onto the points where the radii intersect concentric circles - but these have no circulatory function, though of course they are symbolic of the Circles of Hell.

Richter's interpretation of the board has been adopted by Greger Sundin, the leading expert on the Hainhofer cabinets.[22] However, some questions arise. What is the function of the icons that occur along the radii, not found on other boards for the game? Sundin accepts that there is no obvious answer, though they seem to be themed, and so are likely to be more than just decoration. And why are the radii connected by lines forming a hexagon rather than by the symbolic circles found in other boards and depicted in contemporary illustrations of *Höllfahren* being played?

Those lines would seem more suited to indicating paths of circulation round the centre. If indeed this were a game of circulation, the angles of the hexagons, together with their points of intersection with the radii, would provide a total of twelve playing points on each hexagon. The icons at the extreme ends of the radii would be the starting places for tokens and the tokens would circulate on the points of each hexagon until a designated point was reached and transfer inwards took place. An intriguing game could be realised if the designated point for each token were thematically connected to the icon at its starting place. However, attempts to assign themes that would carry through to all the supposed circuits have failed. In the absence of contemporary rules, this remains a speculative puzzle in search of an elegant solution, not eased by the difficulty of identifying some of the icons. But some limited confirmation of the speculation arises from the fact that a roulette spinner shares a supporting plank with the game board (fig. 11). It is numbered from one to twelve and could well be the random indicator for the adjacent game board, used instead of double dice.

The speculation advanced in this section has been discussed in private email communication with both Jonas Richter and Greger Sundin: while not convinced by it, they consider it to be worth airing. Other examples of dual-purpose game boards are certainly to be found in luxury game cabinets.[23]

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[21] Jonas Richter, *Höllfahren: Ein Überblick*
https://www.researchgate.net/publication/359002503_Hollfahren_Ein_Uberblick

[22] Greger Sundin, *A Matter of Amusement: The Material Culture of Philipp Hainhofer's Games in Early Modern Princely Collections,* Uppsala University, 2020, pp. 73-77.

[23] Sundin, op. cit., pp. 106-108.



Fig. 11 – roulette spinner adjacent to the Hainhofer game board

Discussion

Games of circulation are not easy to spot. A concentric arrangement of cells is sometimes seen as an attractive way of presenting a unicursal path, so that games for which the rules are lost present a problem. There are also games such as the German *Vogelspiel*,[24] a dice game played on short radial tracks, the object being for the 'birds' to reach the 'nest' in the centre. These games too are sometimes laid out on concentric rings – but these have no circulatory function.

The present article lays no claim to completeness. Board Game Geek and Giochidelloca sites have been searched but there may well be further examples. American games for children, or the 'penny games' published in England around 1900, might repay investigation; and no French example has come to light, despite a search of Alain Rabusier's comprehensive site[25]. Clearly there are many fewer games of circulation than the thousands of variants of the jeu de l'oie. That is perhaps surprising, since the playing qualities are similar – no fixed number of players, random numbers giving no choice of move, and the possibility of special rules adapted to a theme. Though 'last man standing wins' is not a good prescription for a friendly game, when some players are reduced to bystanders and the finish can seem interminable, that is not a necessary feature: more sociable winning requirements are demonstrated in the various Roberts games. Two factors may account for the predominance of the jeu de l'oie: its long history; and the fact that a single-track game is susceptible to almost any theme, whereas the multi-track format seems to dictate one of a more limited number of appropriate themes.

Adrian Seville

[24] Giochidelloca #1701

[25] www.jeuxanciensdecollection.com