The Double Life of Scrabble Tiles: A Study in Game Resource Deployment

As with chess and card games, Scrabble allots its players a complement of variably-valued pieces. The study sought to learn whether actual Scrabble letter tile usages correlated with their initial game distributions, e.g., whether word constructions deployed the letter “e” to an extent commensurate with its proportion of all tiles. The answer to the question is not evident because in the course of play newly-introduced letters are appended to existing words, and so the same letters are invoked repeatedly in the scoring accretions.

The results, gleaned from transcripts of professional-level tournament matches, uncovered significant disproportions in letter usage relative to their default distributions. The results speak to larger questions about how the availability of game resources map to the occasions of their actual use.

Authography:

Remarks:
Prefers his lecture on Wednesday or Thursday
summary = abstract

Symbolism of iconographies in Alfonso’s book of games

In this trouble time which is the RECONQUISTA, 3 religions very different live together: arabs, jews and catholics. These three currents of thoughts dream only to be in confrontation on hostile grounds with one frontier very distinct between all of the social classes: riches, poverty’s, clergymen, men and women.
For the territorial conquest but especially impose its own religion.

In this contest, Alphonso X the Wise (1221-1284), King of Castilla and Leon provinces, writer of many manuscripts, decide on the writing of a very complete work on the games.

Alphonso X describe textually, with lots of details for his age, chesses games, pips and boards, astronomical boards so, but especially by every iconography representing these games. He is carrier of essential messages filled by symbolism so religious, cultural, civic but especially anti-belligerent.

By all these iconographies, King de Castille and Léon, is anxious to underline that himself, Monarch of a country, wishes to make no difference between these diverse religions and classify.

The games become vector of links between these three peoples and all the social classes.
So instead of a battlefield, Belligerent parties are in confrontation on different boards sides.
They are not any more opponents with risk of death, but partners and accomplices.

The game allows them to solve their problems on neutral ground without risk neither for the one, nor for the other one.

Not only used in the frame deprived of a house, but anywhere, the game became public, approachable to all: riches or poverty’s, to one religion or other.
Also women’s introduction as well as of children, allows to the King to demonstrate that the games can become social within the framework of the courtly love or of the education of the children by their parents.

Authography:
Volunteer in a medieval animation’s company since 10 years, I discovered the medieval games 4 years ago. A friend told me how to play and understand them, not only by the rules, but their evolutions forwards civilisations, and their symbolism, with many references books.
At this time, I read, Mr J. MARIE LHOTE, Mr CAILLOIS, Mr PASTOUREAU, Mr MEHL, Mr CHEVALIER and Mr GHEERBRANT the french writers, and Mr WYKES, Mr FINKEL, Mr SCHAEDLER and Mr PARLETT whom I which to thank, because without them I would not be here.
### Risky Business – a board game for basic economic research

| Jesper Lyng Jensen & Thomas Iversen | Human behaviour
|                                   | Economy
|                                   | Contemporary games

Computer simulations are often used for scientific research and publications. However, such simulations have the clear disadvantage of not accounting for human behaviour.

Human behaviour is often taken into account by using games. Such as in behavioural economics and game theory. However, due to the simplistic nature of these games, the published findings often become difficult to apply to real life.

The use of strategic board games for research is difficult as the simulation part being weaker than that of computer simulations, and the behavioural component is much more difficult to characterise than in a simple experiment. Actually, to the extend of our knowledge, board games have not previously been used as a basic research tool.

But with a game, where the behavioural aspect is reproduced sufficiently simplistic, and the simulation has a high degree of credibility, board games just may provide insights that are superior to simulations or game theory experiments.

Here we present the strategic board game “Risky Business”, the experiments and the findings that have led to the publication “The financial cost of risk is fundamentally underestimated”.

**Authography:**

### The Path of Careers

| Bruce Whitehill | Contemporary games
|                | History

The game of Careers was first self-published in 1955 by its inventor, James Cooke Brown. It was his only game—and it became a classic. Many “classic” games have been around for so long because long after one generation played them, they were bought anew for their children to play. Most of these favorites, like Careers, were “throw-dice-and-move” games based primarily on luck. What did Careers offer that went beyond pure luck? Why has Careers persisted; why is it still so popular? And can children - or adults, for that matter - learn anything from it?

Careers was one of the first games to allow players to set their own individual goal for winning, choosing among money, fame and happiness. A combination of all three, or putting all your emphasis in only one area, would dictate which paths to travel on the gameboard.

Besides being fun to play, Careers serves as an insight into some of our changing interests and values over time, and also points out variations across different cultures. The careers themselves have changed over the years, reflecting shifting vocational interests. Jobs such as “Farming” in the 1950s were gone by the 1970s, replaced by “Ecology” and other vocations in vogue at the time. “Florida Vacation” transformed into a “Hawaiian Holiday”, while early German editions offered a holiday in Mallorca.

Careers has been sold world-wide under such names as Carrière, Carreiras, Carrières, Karriere, Karriär, Il Gioco delle Carriere and Jogo das Profissões; it has been published by at least eleven companies. The number of titles and makers tells us that this has been a game on the right path.

**Authography:**

Bruce Whitehill, known as “The Big Game Hunter”, began researching commercially manufactured games and the companies that made them even before he started collecting games in the early 1980s. Since then, he has written countless articles and two books on games (Games: American Games and Their Makers, 1822-1992 and Americanopoly - America as Seen Through Its Games); he is also a game inventor and he and his wife Sybille translate game rules for several companies; they also translate the major part of the games magazine “spielbox” for its English-language edition. As an American now living in Europe (Germany), Bruce Whitehill is primarily interested in games that have both changed over time and/or developed differently in different countries. See [www.thebiggamehunter.com](http://www.thebiggamehunter.com); email games@thebiggamehunter.com.
The above aspects are discussed, highlighting the need for promoting the board games in curriculum too.

The paper will, of course, look at the games involved (including various forms of merels or mill and alquerque) and will also briefly assess the history of recording such graffiti in the UK.

Examples dealt with include the boards from the English cathedrals of Salisbury, Gloucester, Lincoln and Norwich, various churches in Suffolk, the Welsh monastery at Carmarthen and the Scottish monasteries of Dryburgh, Glenluce and Arbroath.

What might these tell us about the perception of play and is the dearth of such boards from Continental churches real or simply unrecorded?

The above aspects are discussed, highlighting the need for promoting the board games in curriculum too.

Socio-cultural impacts of board games of India

Dr. Prof. Mrs. V. Balambal

Indians are great lovers of games and sports. They had shown interest in indoor and outdoor games. As far as the board games are concerned, they had played games with and without dice. Chess, the most popular game originated in India and is being played all over the world. Most of the board games are played in the rural areas for recreation during rainy season and leisure time in between their work time. Even the illiterate rural people are experts in boards games. Chess or chaturanga was played by the royal and rich people with made boards of ivory and silver and costly game pieces made of precious stones, pearls and gold. But the poorer section used objects which were readily available incurring no cost.

There are references to dice in Indus Valley civilization and early Tamil literature. Archaeological excavations and explorations show the depiction of deities like Siva and Parvathi playing dicegame. Similarly there is reference in literature to Rama and Sita playing. Dice were used with strategy in Mahabharatha. Mogul rulers like Akbar patronized dice game. It is depicted in large structure at Fatepur Sikri near Delhi: The Mysore Maharaja’s contribution to board games is tremendous. The interest shown by Westerners in traditional Board games is amazing. An awareness is created by modernizing board games. Participation in board games conferences enriches one’s knowledge and skill.

Board games are not only for recreation but to preserve our heritage and culture. Players socio-economic status is known from the boards and game pieces they use. Various other uses and values of board games like Pallankuzhi, Tayakattam, Pachisi, Adupuliattam, are also dealt with in this paper.

The above aspects are discussed, highlighting the need for promoting the board games in curriculum too.
Word archaeology: a tool for board game historians

<table>
<thead>
<tr>
<th>Arie van der Stoep</th>
<th>Chess and Draughts</th>
<th>Language study</th>
<th>History</th>
</tr>
</thead>
</table>

We can exploit the language of the past to describe the history of board games. How? The **first task** is to collect all the words for games and for the material. The **second task** is to write the semasiological biography of the collected words. Example: which were the meanings of the game name to play at the exchequer?

**Word: exchequer (to play at the...)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Chess</th>
<th>Draughts</th>
</tr>
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<tbody>
<tr>
<td>1000</td>
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</tbody>
</table>

The **third task** is to write onomasiological tables with names for a game and for the material. Example: which were the names for the game we call chess today?

**Game: chess**

<table>
<thead>
<tr>
<th>Year</th>
<th>Chess</th>
<th>Exchequer</th>
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</thead>
<tbody>
<tr>
<td>1000</td>
<td>1100</td>
<td>1200</td>
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<td>1200</td>
<td>1300</td>
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</table>

A word is the reflection of the reality. A change in the semantic field is the signal for a change in the reality. The language warns the board game historian that he has to put himself to work: in England between 1300 and 1400 there was a change in chess and draughts. Which one?

Authography:
Having studied Dutch language and literature I became interested in the history of draughts. I approached this history by studying the ancient draughts language. But the ancient draughts language appeared to be complicated: words of the draughts language were used by players of chess too. And also by players of morris (merels) and players of tables too. Therefore the study of the history of draughts is the study of the history of chess, morris and tables too.

**Remarks:**
I should like to speak just after Wim van Mourik, our speeches have resemblances
**summary = abstract**

Wheel pattern – symbol or game: that is the question

<table>
<thead>
<tr>
<th>Mag. Claudia-Maria Behling</th>
<th>Archeology</th>
<th>Ancient board games</th>
</tr>
</thead>
</table>

Visitors of ancient sites often notice circles with inscribed diagonals scratched into pavements or monuments. Whereas Ch. Roueché interprets these signs as “place marks” for different events, A. Rieche thinks about a game. She explained it as “Rundmühle”, a circular variant of merels. But gamers would come to the conclusion that Rieche’s game-reconstruction does not make sense. A play would come to an end after some moves which does not make fun. So the question is still left: What are these scratchings?

By presenting these two theories and discussing them with original find spots from Roman cities in Asia Minor an analysis is undertaken and a suggestion for their understanding will be presented.

Authography:
Mag. Claudia-Maria Behling is studying archaeology at Vienna, writing her dissertation about the depictions of children in Late Antiquity and Pre-Christian Time. Owing to her project about Roman paintings in Carnuntum (Lower Austria) and her academic theses, her focus lies on the Late Antique and pre-Christian Era.

[claudia@behling.at](mailto:claudia@behling.at)
Archaeological Approaches to Gaming in Prehistoric Cyprus

This paper addresses the social context of gaming in Bronze Age Cyprus from an anthropological perspective.

Many artifacts have been discovered from various contexts on the island dating to the Bronze Age that appear to be a form of board game. These stone artifacts display recurring patterns of artificial depressions that correspond to the well-studied Egyptian games of senet and mehen.

Since their identification with the Egyptian games in the late 1970s, these artifacts have received little attention by the archaeological community. Because they were being played in a preliterate society, there are no records to determine what the rules of these games may have been.

Therefore, this paper attempts to examine contextual information on the games in order to arrive at an understanding of how they might have been used as instruments of interaction among members of Cypriot society, as well as between Cypriots and Egyptians. These games were also adopted in a similar way by the peoples of southern Canaan, and comparisons between the social context of the Cypriot games and the Canaanite games suggest that the Canaanites primarily played the games to interact with Egyptians, while the Cypriots adopted them more completely into their own society.
The visible presence of draughts and chess in the public area in Flanders from 1350 - 2011

Wim van Mourik

In England about 150 pubs called “Chequers” are known. A Checkerboard as a sign is found more often nowadays than a chessboard. Research was done to see if this also applies to the Flemish-speaking part of Belgium.

There were found to be 41 properties as Chess location and 49 as Draughts location. Additionally, 9 Draughts-breweries and 5 Chess-breweries were located.

The Chess-named properties first appeared in the 14th century and the name was used less frequently from around 1800. The naming of Draughts-locations started in the 16th century and continues until the present-day.

The various old buildings are shown within their respective categories. The rise of the Alquerque game / Draughts from the Middle-ages onwards will be presented with a series of images.

Of the original buildings, only 1 Chess-location remains, whereas there are still about 16 Draughts-locations. The disappearance of the Chess name in the 19th century on buildings of the more prosperous, seems to be caused by the success of Draughts.

Draughts is visibly present in the Flemish Romantic Paintings of the 19th century, a reflection of social life of the times. The question is whether the changes in Flanders led to the same concept of Chequers in England?

Authography:
Wim van Mourik works as a physiotherapist for children in the largest Dutch rehabilitation centre, St.Maartenskliniek at Nijmegen. His grandfather played draughts seriously since 1915, followed by his father and himself. And now his son, fourth generation draughts player is also composer of draughts problems. Both great historical interest and the 'draughts genes' caused his drive to write historical articles about draughts in Dutch magazines. Since 1982 he writes for Het Damspel, periodical of the Koninklijke Nederlandse Dam Bond (= Royal Dutch Draughts Association). He has a broad interest in the history of alquerque, draughts, checkers, chess, backgammon and nine men's morris. A large collection of board material, literature and images forms the basis for publishing activities.
To contact Wim van Mourik:
W.A. van Mourik, St.Jacobslaan 94, 6533BV Nijmegen, The Netherlands, wavanmourik@planet.nl

Remarks: Would like his lecture before the one of Arie Van der Stoep

Fifty years of modern board games (1961-2011) through the games of Alex Randolph

Cosimo Cardellicchio

In the last half century, tenth of thousands of new board games were published, a number of titles that is by far greater than the number of those known during the previous millennia. The first part of these fifty years is surveyed with the aid of the work of the American Alex Randolph (1922-2004), the first professional author of games. In fact, just in 1961, he published his first commercial game, Pan-Käi.

After this publication, he left USA and his well-remunerated job in an advertisement company to become an author of games (only in 1970 a similar decision was taken by the former civil engineer Sidney Sackson).

In 1962, Twixt was published by the 3M company in the Bookshelf series. This game was the success that changed his life. After staying for six years in Japan, in 1972 he moved to Italy and since then he established in Venice. In 1971, Randolph met Erwin Glonnegger and began his fruitful collaboration with Ravensburger.

He authored almost two hundred games, a long list of which were awarded, such as Sagaland, 1982 Game of the Year in Germany.

Authography:
The Introduction and Spread of Gaming into Northwestern Europe as a Marker for the Intercultural Relationship between Romans, Germans and Celts

<table>
<thead>
<tr>
<th>Tatjana K. Heuss</th>
<th>History</th>
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<tbody>
<tr>
<td>Ancient board games</td>
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</table>

My paper is supposed to be the introduction of my ongoing phd research topic on the spread of the idea of gaming on boards and with or without dice into Northwestern Europe in Roman times to an expert audience.

Consense is that with the invading Roman army and traders the idea of gaming came into this area. For the idea to travel from the Roman cultural sphere to that of the respective local population intercultural exchange by communication must have been essential.

My research question is, whether it is possible to determine the degree of adaptation and probable modification of this material by the non-Roman population or even the identification of new functions to this material other than gaming or the invention of new games in order to identify people culturally 'close' or 'distant to' the Roman cultural sphere.

A contextual approach is chosen as well as the collection of data on a broad scale.

Authography:

How Well Do They Play?
An Historical-Critical Analysis of BP’s (British Petroleum) Endorsement of the 1970s Offshore Oil Strike Board Game.

<table>
<thead>
<tr>
<th>Michele R. King</th>
<th>Contemporary games</th>
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<tr>
<td>History</td>
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Board games have been used in myriad ways from educational and entertainment purposes to methods of propaganda. In the early 1970s, British Petroleum (BP) collaborated with Printabox LTD board game manufacturer to create the Offshore Oil Strike board game to promote BP's desire to expand its North Sea drilling, to build support from the community, and to enhance the image of the company.

Although the board game was not popular, the tragedy of the April 20, 2010, Deepwater Horizon rig explosion in the Gulf of Mexico off the coast of Louisiana in the United States some 40 years later has reignited interest in the content and use of this board game.

This paper provides an historical-critical methodological approach to analyze the board game as a symbolic artifact, to synthesize the strategy of using a board game by BP to achieve its goals, and to support the validity of board games as a method of sociological significance. The analysis of the content and context of the board game not only shed light on the inner workings of offshore drilling in general but also the overarching affects of this long-lasting catastrophe. Furthermore, an exploration into BP's current means of quality and image control are examined.

Authography:
Six sided dice from third millennium BC – summary and possible regional differences

<table>
<thead>
<tr>
<th>Rafal Szwelicki</th>
<th>History</th>
<th>Ancient board games</th>
</tr>
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</table>

This would be a short overview of known to me examples of six sided dice. 24 dice from Mesopotamia and Indus Valley, would be presented and compared.

It will be shown that although dice from Mesopotamia and Indus Valley are similar in arrangement of dots on sides of those dice, they have different arrangements of dots on opposite sides, none have modern arrangement and there are regional patterns of this arrangement.

Usefulness of discovery - help in tracking imports and reconstruction of damaged examples (the last shown on die from Tell Chuera).

Authography:

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The Evolution of the Use of Gaming in Socio-Economic Conflict in Ancient Rome

<table>
<thead>
<tr>
<th>Chris Dobbs</th>
<th>History</th>
<th>Ancient board games</th>
<th>Culture</th>
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</thead>
</table>

Throughout human history, board and dice games have served a variety of important functions. In ancient Rome, these games, especially alea and duodecim scriptorium, served as a medium of social exchange and a method of establishing superiority over one’s peers and rivals. However, as gaming came to be popular amongst the majority of the population, it was deemed improper and low-class by the aristocracy. Moreover, it served as a pillar of class warfare; the aristocracy denounced gaming as immoral and plebian, using this as an argument and critique against others in the upper echelon of society. This practice grew in both frequency and intensity as Rome evolved.

This paper explores the fascinating schism that arose through literary, artistic, and material evidence, probing the social commentary about class conflict that can be learned from studying gaming in ancient Rome. It reveals not only a new approach to understanding the culture of ancient Rome, but the evolution of that culture and the changes in the social hierarchy of this ancient society. It also provides a new wealth of information about ancient influences on modern gaming practices and the perception of gaming in the modern world across socio-economic boundaries.

Authography:
**Paying with stones – stone-carved board games in Portugal**

| Edite Alberto & Lídia Fernandes | Archeology |

Dated from Roman times to our days, we can find in Portuguese territory board games carved in stone. We can find them in old churches, defensive walls, water fountains, and in isolated sites.

Given the lack of systematic and detailed studies, the authors have catalogued and registered such board games as well as their contextualization in space and historic reality.

As a result, around two hundred board games have been studied and identified.

This study is part of the R&D project “History of Portuguese Games”, coordinated by professor Jorge Nuno Silva and has contributed with important elements and data for the study of game playing along the times.

In this communication, we present the most significant game boards found in Portugal and intend to present the used methodology, the study hypothesis and the conclusions drawn so far.

**Authography:**

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**History of Games in Portuguese Society: a contribution**

<table>
<thead>
<tr>
<th>Fernanda Frazão</th>
<th>Culture</th>
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<tbody>
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<td></td>
<td>Language study</td>
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We will survey the state of the art of the research about playing cards and its games. We describe the recently published book *A História das Cartas de Jogar em Portugal e da Real Fábrica de Cartas de Lisboa do Século XV até à Actualidade*.

We emphasize the literary sources (poetry, prose, anecdotes) that refer card games, to help dating and contextualizing the social evolution of the games.

**Authography:**
Games In Polish literature XVI-XVIIIth century

Piotr Adamczyk

Archeology
Mythology

Last year I have spoken generally about the history of games (card, dice and board) in Poland till XVIIth century.

This year's topic covers almost the same area of interest and time, but will be only about Polish literature: memories, diaries, prose and poetry (written by nobles, townsmen or vagabonds) and some other sources, such as guild laws or sea ports archives (what was exported or imported).

We might be able to find out what was played by different people: on the king's court or at the university...

Authography:

Back to Square One - a question of origins

David Parlett

History

The Société Linguistique de Paris is alleged to have passed a resolution in 1866 banning all papers on the origins of language as being too speculative to be of any possible scientific value. In this, as in so many respects, games resemble languages. Yet how many of us have not entertained flights of fancy drawing us backwards in this direction? For sure, each major family of games can be traced back to a common ancestor, whether attested or notional. But the oldest attested records and remains date back barely a few thousand years out of the half-million or more in which we might assume humankind to have had the ability and motivation to transform instinctive play into informal and ultimately formal games.

I will seek to review and compare relevant suggestions made by authorities from Culin and Groos to Murray and Avedon, and inquire into what aspects of human mental and cultural development have a bearing on the whole question of how formal games originated.

Authography:

David Parlett has been a freelance games inventor, consultant and researcher for nearly 40 years. His books include the Oxford History of Card Games and the Oxford History of Board Games. He has presented papers at five previous Board Game Studies colloquia, some of which may be found (amongst other games-related writings) on his website at www.davpar.com.
The Incidental Iconography of Early Goose Games

Adrian Seville

The traditional Game of the Goose has been remarkably stable over its 450-year history, both in its underlying rules and in the iconography and placement on the 63-space track of the spaces that have special playing significance.

However, the incidental decoration – relating to the corners and central areas or to the non-special track spaces - is much more varied. Having no significance for the playing characteristics, this ‘incidental iconography’ is apt to be ignored by board game historians except for purposes such as stylistic dating.

This paper attempts to redress this by studying the iconography of the incidental decoration in a restricted class of Goose games, namely those of the particular vertical format that characterises the earliest English games and also characterises some early examples from Italy and the Netherlands.

Many of the images involved in the incidental decoration are closely shared, leaving little doubt that the iconography of the later games is largely copied from the earlier games, rather than being taken from common external sources such as printers’ pattern books. Some surprising conclusions regarding international transfer of these games are offered.

Remarks: prefers his lecture on Friday or Saturday
Toy libraries and schools: board games in class in French-speaking Belgium. Situation and specificities.

Michel Van Langendonckt

The purpose of my lecture would be to formulate hypotheses about the role and place given to games (and especially board games) in the classes of the Belgian French Community (F.C). It is meant to compare the legal framework with the teaching practices.

The study is based on the official texts and programmes and on the different elements of surveys made between 2004 and 2011 by toy-librarians in the F.C. and some Brussels' teachers concerning the objectives, equipment, and coaching of games in class, at school and in toy libraries.

This research was conducted under the care of the LuCIFER*, recently built (2010), fruit of the collaboration between the pedagogical part of the Haute Ecole de Bruxelles (HEB), the Association of the F.C. toy libraries (LUDO) and the Laboratory of Research in mathematics and social sciences of the Université Libre de Bruxelles (ULB-Matsch). This research was also made with the cooperation of the toy library sector of the French-speaking Ministry of Culture of The Brussels Capital Region (COCOF).

The board game motif in Norse mythology

Matthias Teichert

According to the major sources of Scandinavian mythology, the poem Völuspá (“The Seeress’s Prophecy”, c. 1000 AD) and Snorri Sturluson's prose account Gylfaginning (“The Tricking of Gylfi”, c. 1225), Norse cosmology and eschatology involves the playing of a board game by the Æsir, the Nordic gods.

This paper will initially explore the significance of the Tafl-motif, its symbolic meaning and its structural relevance for the composition of the mythological narratives.

In a second step, the information given in the two texts concerning the divine board game will be connected with other written, archaeological and iconographical records of Norse board game heritage, aiming at a comparative analysis of some aspects of the cultural and social dimensions of board-games in medieval Northern Europe.

Finally, some attention will be paid to various Indo-European analogues, such as board games in Celtic sources or the dice game in the ancient Indian Rigveda.
In the early 17th century, when the city of Falun was among the largest cities in Sweden due to its important copper mine, Gisle Jakobsson, a local mining clerk, became the author of a small book which was published in Stockholm in 1613, entitled “Ett litet Tidfördriff/ Der medh man kan fördröye Tidhen” (A small pastime, wherewith one can delay time)".

"A small pastime", is a moral-didactic oracle book intended to be used while playing dice, and is based on the so-called “dobbel”, a game of dice the miners in Falun used to play on New Year’s Day to settle the mining order and to share the ores among them. Reports suggest that this ritual was conducted annually at the Copper mine ever since the Middle Ages. Besides moral advice and various rules for how the miners should conduct their lives, Gisle Jakobsson’s book also includes a short section were the senior miners’ special way of playing the game of “dobbel” is described.

In my paper I will explain the miners’ way of using and playing this special game of dice, its function in relation to Gisle Jakobsson’s book and give an insight to how this game of fortune telling was used in practice.

The structure of games

Michel Boutin

On it’s way...

Authography:

Prefers his lecture on Saturday
**Hard Lines and Frogs and Toads: the games and their context**

Tessa Drysdale

History
Older contemporary games

In 1991 the National Trust bought a Jacobean house in Oxfordshire which had been owned by the same family for nearly 400 years. In Victorian times, Chastleton House was the home of the impecunious Whitmore Jones's. A number of games are associated with Chastleton including Squails, The Game of War, Patience and Croquet.

Also, two particular abstract board games were invented: Mary Whitmore Jones invented Hard Lines (1860) and her brother Walter invented The Chinese Imperial Game of Frogs and Toads (1862). Both games were produced by John Jaques and Son of Hatton Garden, London and enjoyed some commercial success.

The paper will examine these two games and their rules, together with the context in which they came to be invented. We will visit Chastleton House, meet members of the Whitmore Jones family and learn something of the other inventions and writings of those who lived there. We will also examine the connection between the Whitmore Jones family and the firm of John Jaques, and consider how Hard Lines and Frogs and Toads fitted into Jaques’ games portfolio in the third quarter of the nineteenth century.

**Difficult Endgame Analysis**

Fabien Teytaud & Olivier Teytaud

Mathematics
Game solving

Endgame analysis is a crucial component in many games. In chess, computers are far stronger than humans in many endgames [Kryukov, 2006]; a crucial progress is due to Eugene Nalimov's tables [Nalimov et al., 2000]. In Draughts, using alpha-beta and endgames analysis led to the famous draw conclusion [Schaeffer et al., 2007]. In the game of Go, some specialized programs have outperformed humans in the late endgames (little yose). In this paper we are interested in some unsolved cases. In partially observable (PO) game, a player does not have access to all the information (for instance in Poker we do not have access to the cards of the opponents). We will first discuss the complexity in such games for which the endgame analysis is more difficult, for instance the general case of PO leads to 2EXP-completeness [Rintanen, 2003]; more details will be given in the presentation.

Two assumptions are usually made in computer games: the assumption that the opponent has the same strength as us, and the assumption that we can consider a worst case analysis. In this paper we will see that for some games (in particular partially observable games, and games in which computers are stronger than humans in endgames), it is necessary to modify the underlying assumptions.

References

Board to Page to Board: Possible Native American Antecedents of Two Proprietary Board Games

Philip Winkelman

Contemporary games
History

Two early 20th-century board games are examined—Fang den Hut! (Germany, 1927) and The Landlord’s Game (USA, 1904). Both are popularly understood to be related generally to the Pachisi and Goose families respectively, though with no apparent direct progenitors. But neither is actually a race game (as these putative families imply), and running-fight and roll-and-move models, respectively, can be found for them. I hold that both are likely descendents of specific Native American board games transmitted to their inventors not by direct cultural contact, but rather by published ethnographic descriptions. Incidentally Stewart Culin forms the likely link between traditional and proprietary games in both cases.

Fang den Hut!’s extraordinary method of capture is found in only 1 other game before 1927: the Mesoamerican Bul/Boolik/Puluc; and both German and English descriptions were by then in print. If this ancestry is correct Fang den Hut! belongs to a “clade” distinct from the Scandinavian running-fight games, which appear to descend ultimately from Islamic cultures.

Both play and design elements of The Landlord’s Game are traced to the North American Zohn Ahl; this newly-discovered ancestor strengthens its descendent Monopoly’s bona fides as a quintessentially American game — both for good and ill.

Authography:
Phil’s study of the history of board games is a great consolation to him, as he perpetually looses when actually playing them.

A Playing-level measure of Game Depth

Abdallah Saffidine

Mathematics
Game solving

Several definitions of the complexity of games exist. Computational complexity as well as game tree complexity are natural from a computer scientist point of view but might not seem very intuitive to players. Another possibility is to measure the room for progress between a random player and a perfect player in a given game.

This margin can be calculated using Elo rating. When the game is simple enough that a perfect player is computationally feasible, this margin can be calculated exactly, otherwise it can be lower bounded. To be able to compute the margin, we first need a set of players of levels ranging from random to perfect. We thus define artificial players based on alpha-beta and Monte-Carlo Tree Search using various parameters and various evaluation functions. We present experiments on several games including TicTacToe, different sizes for Connect 4, Hex and Y.

Authography:
The game of Go is a famous two-players board game with complete information. It is one of the main challenges in artificial intelligence because even though the rules are simple, the complexity of the game is high. As a result, the best computer programs are still very far from the best humans in terms of level of play. It is possible to give an advantage to one of the player by letting him play one or several moves before starting the game. Those moves are called handicap stones.

The goal of this article is to find a starting position with a provable win and as few handicap stones as possible or “How many handicap stones do I need to win against God?”. We will focus on small boards: 9x9 and we will use Chinese rules. We propose several methods in order to find such positions.

First, we show several intuitive methods based on knowledge about the game. Then, we use a tree exploration algorithm: Proof Number Search, in order to obtain winning positions in an automated way. Finally, we compare the results, the advantages and the drawbacks of each method.

The paper has the objective of investigating the remediation process of the Mancala game from the physical on-site to the virtual environment, taking into consideration the mediation and the immersion levels during its practice.

Therefore, firstly, the work looked for the comprehension of the game as an integral part of the culture and its implications on the study of communication, and searched for a clear and deep understanding of a game of strategy. This type of game is characterized by the search of a course necessary to reach a specific goal. Thus, it demands opportune tactics, which result from the interaction between the players, and corrective tactics, aiming at the change of courses.

As the work refers to the remediation process, it was made necessary to understand the cultural characteristics as well as the communication of the electronic games, so that it could allow the analysis and the comparison of the interaction and immersion processes, either in the physical on-site situation or mediated by the computer. In the same way, it was also made necessary to describe the game, its performance characteristics and its relation and existence in different cultural and historic realities so as to ensure the complexity of the conceptual matters raised and the empirical reality of Mancala.

Finally, an observation based on the ethnographic method was carried out not only in the physical on-site but also in the virtual environment to point out the divergences and similitude in the process of transposition of the game from one environment to another.
On to Square Two – the question of dissemination

Irving Finkel  | History
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There are many large questions that should concern the board game historian which are usually steadfastly ignored for the most understandable reasons.

This paper will offer some remarks on the largely undiscussed issue of how board games, once they do come into being, spread. For spread they certainly do, sometimes across surprising stretches of geography and over great swathes of time.

The underlying mechanisms that facilitate this process might be obvious at first glance, but, as will be argued in this paper, they certainly bear a closer look.

One crucial issue concerns the identification of what is merely similar and what is significantly more than similar; which cases, in other words, indicate that one given sample must have originated another, and which suggest that independent creation is equally possible or more probable?

This talk will be courageous and provocative and will hopefully engender response.

**Authography:**

**Remarks:**
Prefers his talk after David Parlett

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Nine Men's Moris in the Roman Temple of Évora (South of Portugal)

Lídia Fernandes & Jorge Nuno Silva  | Archeology
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We will present a Nine Men's Morris game, which is inscribed vertically in a stone belonging to the foundation of the Roman Temple of Évora (South of Portugal). This monument, still well preserved, has been thoroughly studied. It was built honoring the Emperor in the first half of the 1st century. One of the lateral stones of its podium contains the game mentioned above. Belonging to the Roman era, it must be one of the oldest known exemplares of Nine Men's Morris.

**Authography:**

**Remarks:**
Alquerque in the monastery Santo Domingo at Oaxaca (Mexico)

Ulrich Schädler

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After an earthquake the Dominican monastery and the church of Santo Domingo de Guzman was rebuilt in the 17th century. The monastery housed monks of the Dominican order from 1608 to 1857. In the period of the revolutionary wars the buildings were turned over to military use, serving as barracks from 1866 to 1902. In 1972 it became a regional museum. So a complete restoration was undertaken and completed in 1999. One part of the complex is a cloister two storeys high, structured by impressive pillars and arcades, connected by balustrades, constructed in the 17th century.

On the stone surface of many of these balustrades one finds incised gaming boards of different variants of the Alquerque type. It is difficult to date these games; the people in Oaxaca are of the opinion that it were the soldiers in the 19th century wo played these games and carved them into the slabs. Nowadays it seems that the game is unknown in Oaxaca and the region: I was unable to find anyone who knew it.

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### British Board Games and their makers 1850-1900

Richard Ballam

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The period 1850-1900 saw the transition of British printed board games from being mainly published on printed paper sheets to game boards mainly mounted on folded cardboard.

At the beginning of the period publishers included Betts, Spooner and Ogilvy. Turners and toymen who began to compete with the publishers included Jaques and Ayres.

By 1900 most of the old firms were gone and firms such as Spear, Chad Valley/Johnson Bros, and Roberts/Glevum, Faulkner and Multum In Parvo (MIP) were becoming prolific.

Many board games and their makers prior to 1850 are described in Whitehouse’s work*. Board games produced after 1950 are relatively familiar and easier to research. But information relating to the important period between is becoming harder and harder to find.

Some interesting examples by the principal makers in the period c.1850-c.1900 are shown, and a new checklist is introduced.

### A Timeline of Mathematical Games Theories

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| Alda Carvalho, ISEL and CEMAPRE | History |
| Carlos Santos, ISEC | Mathematics |
| João Pedro Neto, University of Lisbon | |
| Jorge Nuno Silva, University of Lisbon | |

The practice of games is deeply rooted in human behavior and is relevant in other cultural phenomena, like arts and science. It is well known that mathematics has important applications in almost everything, games being no exception.

There isn’t «the» mathematical game theory but some distinct mathematical game theories. We highlight Theory of Games of Chance and Gambling (strongly related to theory of probability), Economical Game Theory (simultaneous decisions), Combinatorial Game Theory (alternated decisions) and Computational Game Theory (AI, time of computation, etc.).

Herein, we intend to refer and organize the significant historical events related to this gamut of theories using a timeline format.

### Authography:

### Remarks: