

# BOARD GAME STUDIES COLLOQUIUM XXII



BOOKLET OF ABSTRACTS



Department of Education, G. M. Bertin,  
University Alma Mater of Bologna  
7-10 May 2019

# May 7

Department of Education G.M. Bertin  
via Filippo Re, 6

## Session 1: Culture of play

**09:20-09:40** *Roberto Farné*  
*University Alma Mater of Bologna*

*Playing the city*

The city is not only the physical space, based on social and environmental categories; the city is also a “playful topos”. The squares have been historically in our culture, from the Middle Ages, places of identity and aggregation also connoted by the games, and “street games”; characterized the normal way of playing by children and teenagers until the Sixties of the last century. Then, something happened that deeply changed the play environment. Meanwhile, the city became a pattern, a map performed to play itself in a board game. Referring to a city of the past or the present, the players pretend to run through it, where they buy or sell some parts, hide in its places etc. The city becomes a simulacrum and simulation on the screen of videogames, where projects of a verisimilar or futuristic city comes to life. As utopistic “City of the sun” or scary “asphalt Jungle”, the city is placed at the board game or video game with a multiplicity of forms and actions. In the game there are no “invisible cities”, the game is by its nature ostensive and vivid. But the need to rediscover the real city, to cross it for fun, re-emerges through the urban games: “Come out and play”, I found this graffiti in the wall of a street in a big city. Thus begins a new way of putting the city back in play and the complex relationship between the game and the city constitutes a form of “urban pedagogy”.

**09:40 - 10:00** *Mattia Thibault*  
*Tampere University*

*Urban boardgame: from representation to urban planning*

The relationship between boardgames and urban areas is a complex and multi-layered one. If Yuri Lotman (1990) claims that every game works as a model of some aspect of our reality, it is not rare that boardgames model today’s major anthropic environment: cities. Models have both descriptive and prescriptive properties. On the one hand, then, urban boardgames create representations of cities that adapt them to the game mechanics. In some cases, the multiple ways of crossing a city will be reduced to a single, circular one (as in Monopoly or Hotels); in others, different areas of the city will be assigned different resources (Carcassonne) and so on. On the other hand, urban boardgames can be used in prescriptive ways: for education and to facilitate urban planning. It is the case of architect studios such as

Play the City (Amsterdam) where boardgames are used to experiment with ideas and techniques of urban intervention, or of research labs such as Fields of View (Bangalore) that use them to train and involve stakeholders in decisions regarding their cities. This presentation proposes an overview on the different kinds of relationship between boardgames and cities and outlines the characteristics of boardgames that make them efficient tools for education and planning of urban environments.

**10:00-10:40**    *Questions & Answers*

## Session 2: Play for educational purposes

**11:00-11:20**    *Francesca Berti*  
*University of Tübingen*

*Learning by playing: play practices and cultural transmission in Stewart Culin's writings*

Stewart Culin (1858-1929) devoted his life to the collection of games and toys from various regions of the world. In his writing, the collector and museum curator noted various data, partly detailed, partly anecdotal, besides the game rules. It emerged that often the practice of a game was, for example, related to the succession of the seasons or to particular moments of the year. Play sometimes overlapped with the spaces of ritual and pastime, pervaded ways of gathering together and of handing-down knowledge as well as values within a community. Such play practices typically conveyed an educational action that is not yet linked to a conscious purpose (Bateson), but one that happens through participation, observation and imitation. It is vehiculated and transmitted by the element of repetition of the game. In considering the intersection between games and education, a journey through Culin's writings allows us to reflect on the value of traditional games. It reminds us about the narrative qualities of these games and the possibility to learn about cultures, and the wealth of play experience that requires coordination, concentration, manual skills and socialization. In this sense, "learning by playing", rightly recalls the pragmatic expression of the pedagogue Dewey, "learning by doing": games act as a hook for stories that want to be told. They allow children to make an experience—according to Dewey, the basis of every educational action—in which playing becomes at one with exploring and narrating becomes at one with playing.

**11:20-11:40**    *Vincent Berry*  
*University of Paris XIII*

*The "educational aspect" of board games from a sociological perspective: social stratification of practices, educational discourses and beliefs*

This communication discusses the "educational aspect" of board games, considered here not as an objective property of board games but as a value that is attributed to them. To do this, we rely on a French sociological survey "Cultures et pratiques ludiques en France: le cas des jeux de société". Designed by an interdisciplinary group of researchers and supported by the ELIPSS team, the survey was distributed in 2017 to a randomly selected panel of respondents (n=2582). Divided in four parts, it examined the stratification of board game practices within the French population and the modalities of game activities (partners, frequency, locations, etc.). It also measured the respondents' "play culture", understood as their knowledge of the world of board games: from "Snakes and Ladders" to "Magic", including wargames and role-playing games. Finally, the last part of the survey measured the fondness

of respondents towards board games by focusing on the educational or recreational values they attribute to them. After summarizing the conditions of the survey, this communication will analyze the social distribution of practices, from upper class to working class, but also the different forms of value accorded depending on social background.

**11:40-12:00**     ***Morten Lilleören***

*Independent Researcher*

*European chess gateways: the northern route*

Chess came to Europe through several channels. The northern route has for almost two centuries been disputed among chess historians. I will, through linguistic evidence, show that this route really existed. Chess came directly from Persia to the Nordic area, and spread from there to the British isles, Germany, Poland and Czech areas. Somewhere in the middle of Europe this spread of chess met with the game's spread from the south. The examination will be based on linguistic evidence, through a comparison of the mediaeval chess terms of the languages of northern Europe. Establishing the chess terms of the different languages and comparing them, will give a phylogenetic tree that clearly determines the development. This conclusion will be followed up with tracking some of the terms back to Persian and Indian (Sanskrit) roots. In passing, the chessmen called rooks in the Lewis chessmen sets—which hitherto have been an enigma to board game historians—will also be explained.

**12:00-12:20**     ***Alberto Edite***

*Portuguese Centre for Humanities, FCSH, Universidade NOVA de Lisboa, Portugal*

*History learning through our board games*

Playing with History was a learning project developed in the Lisbon City Museum. During almost ten years museum educative technicians together with History school teachers created a set of activities from board games to aid in the teaching of history. Board games as "Duodecim scripta" and "tabula" were developed as a strategies to aid in the study of the Rome Empire, while "alquerque" or "nine men morris" were used in the study of Medieval society. In this paper we want to present this project, explaining pedagogical results and show some learning strategies developed to reach the educational goals of official Portuguese education programs.

**12:20-12:40**     ***Questions & Answers***

# Session 3: Educational use of Board Games in Higher Education

**14:00 – 14:20** *Ville Kankainen*  
*Tampere University*

*Board game design as learning method*

This paper presents the results of a study in which board game design was used as a method for learning about the processes and structures of biodiversity-offsetting in a university course. The course was organized by a multidisciplinary team of educators where some were experts in biodiversity offsetting and some had expertise in game design. During the course students attended lectures on offsetting and analyzed board games from various perspectives. This knowledge was used in a 10-hour “game jam” to conceptualize a board game prototype that communicates various aspects of biodiversity offsetting. Through literature reviews, analyses of students’ design post-mortems and board-game prototypes, and reflecting our own experiences of running this tentative course, the presentation will show how the design process affected learning and address the possibilities and limitations of using this method. Finally, we will discuss how the multidisciplinary process helps in the development of educator expertise.

**14:20-14:40** *Ville Savoranta*  
*Crisis Management Center Finland*

*Opportunities for serious board games as an expert training tool for international stability mission*

Tabletop exercises are commonplace in the training curricula of international peace and security training institutions, among many other fields, with a focus on developing participants’ coordination and cooperation skills in a simulated and contained environment. Yet due to the effort and time required to plan, customize and implement these kinds of exercises, they are often left out of courses or organized as stand-alone trainings. In worst cases, lacking organization as part of a broader course leads to incoherent implementation and ineffective or even negative learning results. A need for pre-planned, easy to deploy and contained training packages is evident. In recent years, several examples have emerged of serious training games, integrating realistic training themes in the form of a traditional board game. To investigate the development opportunities of this type of training games and to identify potential issues in their utilization, the paper reflects on several play-throughs of an existing training board game by groups of experts in civilian crisis management training. Preliminary findings suggest potential use as an induction training method for the game type, but identify issues with limited thematic content and structured execution. The overall applicability of board games and ludic practices for expert training is discussed.

**14:40-15:00**

***Beate Weyland***

*Libera Università di Bolzano-Bozen*

***Sensory toys to learn. How teachers can create learning objects from in-between Education and Design***

The importance of play for children's well-being has been acknowledged by the UN Convention on the Rights of the Child since 1989. Playing and learning are fundamentally related to each other and research findings are presenting data about schools that are working on developing efficiency in this relationship (Grey 2015, IPA 2013). Modern learning approaches (Gamelli 2001, Edwards, Gandini and Foreman 2014, Rodari 2014) rely also on all five senses by bringing the tangible aspect of the world back in to the learning processes and use the sensory qualities and aesthetics of the objects around us (Sternberg 2009). The paper will present some results of an interdisciplinary research which tries to define theoretical bases, fundamental criteria and practical aspects, through which artefacts for learning can be developed in a dialogue between the sciences of the education and the design sciences. It will also review the examples of such artefacts for learning: learning toys. The interdisciplinary research ([www.eddes.unibz.it](http://www.eddes.unibz.it)) was conducted by the University of Bolzano fitting researchers and students of the Faculty of Education together with researchers and students of the Faculty of Design and Arts with the aim to develop purposes to promote creative learning by designers and educators (Camuffo and Dalla Mura 2016, Weyland 2017).

Such a collaborative intersection of education and design allowed primary school students to develop "sensorial toys for learning" in dialogue with the findings of designers. The academic laboratory held at the Faculty of Education during this research project was focussed on interdisciplinary findings that confirm the need of open and diversified learning forms to stimulate exploration and creativity (Munari 1977, Craft 2005, De Bono 2015). The paper aims to discuss the criteria that guided the laboratory and focuses on the potential of planning objects-for-learning with the appropriate balance among various educational issues (Munari 1981, 1985, Connor 2014, Farnè 2016, Preece, Rogers and Sharp 2014, Norman 2013). The intersection between education and design has allowed students of the Degree Course in Primary Education Sciences to develop artefacts or "sensory toys to learn" in dialogue with designers' coordinates to create playful objects or proposals. The aim of the "Sensory Didactics" laboratories, held during the EDDES project, was to invent real prototypes of educational games that support open and diversified learning forms and that stimulate exploration and creativity (Munari 1977, Craft 2005, De Bono 2015). During the presentation of this paper, I'll bring some examples, so that it will be possible to experiment and play with the "sensory objects" and discuss the criteria that have judged the realization. Furthermore, the possibilities of creating new ones based on the most diverse educational, didactic and artistic-expressive needs will be analyzed (Munari 1981, 1985, Connor 2014, Farnè 2016, Preece, Rogers, Sharp 2014, Norman 2013).

**15:00-15:20**

***Robert Houghton***

*University of Winchester*

***Critical play: historical debate through user modification***

Board games, and their digital cousins, have been used to teach history successfully at almost every level of study from pre-school to undergraduate. They can act as potent introductions to periods and events, engaging the student and sparking their interest in the field. They can present information through the narrative and detail of their worlds. They can present complex historical arguments through their mechanics and rules. The interactive and varied nature of this media makes it a powerful educational tool. Drawing on a case study conducted at the University of Winchester, this paper contends that this learning utility could be expanded through user modification. By altering the mechanics of existing games, students alter the historical arguments they represent and hence engage in historical debate. With supporting historical research and a rudimentary understanding of game studies principles,

students may create changes which alter, nuance or counter the analysis presented by the original game. This represents an engagement with advanced historical skills central to university level study.

**15:20 -15:40**    *Questions & Answers*

## Session 4: Educational use of games

**16:00-16:10**    *Andrea Ligabue*

*Università degli Studi di Modena e Reggio Emilia*

*Board games at school: a new methodology to check and improve competences*

The future of education is in teaching that focusses on the process rather than on the product. Developing social and relational skills and cognitive competences and executive functions, like working-memory, cognitive flexibility and interference control are nowadays at the base of teacher's work. Problem-solving, creativity and entrepreneurship are the main areas schools have to strengthen in students to prepare new generations for the quick changing world of work. In this talk I would like to expose a methodology to properly use boardgames in schools, from primary to high-school, starting from the theoretical basis up to practical examples. The methodology was developed and refined in more than 2000 hours of lessons in classes in the last ten years, and is now subject of study at The University of Modena and Reggio Emilia (UniMoRe). The main features of the methodology are in team-work, differentiated-work, post-game discussion and in the use of the best strategic boardgames like *Ticket to Ride*, *Settlers of Catan*, *Pandemic*, *Memoir '44*, *Twilight Struggle* etc.

**16:10-16:20**    *Tiago Hirth*

*University of Lisbon | Ludus Association*

*Evaluation and Reserach of in/non-formal learning: mathematical games*

After the preliminary inquiry on a specific board game, *Produto*, which was presented during the BGSC XXI, several questions rose related not only to that and the other games played, and cognitive impact they have on the players, which remain work in progress, but the scope of the whole Portuguese National Mathematical Championship (CNJM) itself. In this sense the topic was pursued further on an Evaluation and Research based framework to access and see how the championship can be improved further and how further insights could be gained by future inquiry. We will present some insights on the games, players, tutors and logistics surrounding the CNJM as well as share our evaluation approach.

**16:20-16:40**    *Lisa Rougetet*

*Université de Bretagne Occidentale*

*Using mancala in the high-school mathematics classroom*

This contribution is the outcome of a collaboration with Alex de Voogt and Nathan Epstein on the use of mancala in mathematics education. So far, a few studies have suggested the use of certain variants of mancala games in school, but its potential remains limited to basic primary school tasks, such as counting, adding or subtracting numbers. Thus, we decided to focus on the mathematics that could be

engaged at advanced high school and first year university levels. Apart from the fact that playing a board game in class is more enjoyable for students than a classic mathematics course, mancala prove to be a useful tool to approach more specialized notions in the field of discrete mathematics, within the scope of modeling and research situations. In this talk I will present the simplified version of mancala that has been tested in several classes, explain how these special courses have been conducted with the students, and show how the mancala game enables ways to explain other concepts in mathematics that are—most of the time—not covered by the curricula.

**16:40 -17:00**    *Questions & Answers*

**17:00-17:20**    *Matthew Stephenson, Eric Piette, Cameron Browne*  
*Maastricht University*

*Teaching and learning with LUDII*

LUDII is an upcoming digital system that aims to provide a generic implementation for describing a large assortment of traditional games across many different cultures and time periods. This system provides a great opportunity to educate people about game design principles and AI techniques. One example could be as an interactive tool for exercises in lectures, where students must identify suitable rule sets for a game given only a description of the board and pieces. These rules must present a game that is balanced, strategically deep and easy to learn for new players. The LUDII system will also allow for a greater understanding of the lineage of these traditional games and the mathematical concepts that they embody. Analyzing similar design principles between games over a long period of history allows us to model and understand the transmission of ideas across time, place and culture. Using this historical data to construct family trees that demonstrate the phylogenetic relations between games allows us to identify missing links between games that have not yet been discovered, as well as feasible game reconstructions from incomplete information (e.g. Senet).

**17:20-17:40**    *Jonathan Smets*  
*Haute Ecole de Bruxelles-Brabant*

*Using board games to teach computer science*

Time-line based card games offer a collection of cards with the same illustration and name on both sides, and the year of discovery or invention on the back. Players have to guess the year, or other additional data, and place the cards in the correct order to assemble the time line.

This type of game can be used in education to discover or remember specific information and exercise sorting. We submit here an example of another kind of use: turning the game in an observation support, for the students to learn an abstract concept.

After playing the game, the teachers conducts a debriefing session based on Britt-Mari Barth's conceptualization method. By asking students questions, we help them observe the cards, searching for attributes. These attributes become keywords, with which the students end up building a definition of the concept.

We'll look back on this year's ongoing ludopedagogy experiment, where we built a time-line based card game around the concept of computers, and play it with various groups of 9-10 year old in a Belgian school. We'll share details of how the game was made and how it is played in class.

**17:40-18:00**    *Questions & Answers*



# May 8

Department of Education G.M. Bertin  
via Filippo Re, 6

## Session 5: Board Game Design

**09:00-09:20** *Vinciane Zabban*

*Laboratoire Experice, Université Paris 13*

*Digital platforms and the spread of game creation know-how: democratizing the production of board games?*

The number of board games products which are available on the market seems to have increased dramatically in recent years, along with the consequent development of a range of products known as independent or “authors” projects, which mainly target an adult audience. This phenomenon, similar to the one observed in the video game sector, appears to be facilitated by an easier access to knowledge and tools for creation (development, formalization, vulgarization and dissemination of knowledge in game design), to those of broadcasting and manufacturing (videos, sites specialized in custom publishing), and to financing and distribution devices (use of participatory financing, self-publishing, “print and play”). This presentation examines the role that digital tools and platforms play in these changes from the point of view of professional actors. It relies on interviews conducted with French professional actors during two surveys. One of them particularly questions the role of platforms such as Kickstarter as a new commercial and cultural intermediary. The presentation highlights, on the basis of this empirical material, that digitisation accompanies the ongoing evolution and restructuring of board game production rather than contributes to its effective democratisation.

**09:20-09:40** *David King*

*University of the Arts London*

*A chance to play fair: considering randomness in modern game design*

Randomness is often used in games, the roll of the dice or the draw of the card. These actions serve different design functions: the excitement of an unknown outcome, challenging the players to react to different scenarios, or encouraging the replay of the game. But how do design decisions make randomness in games fair for all the players? Games have different number of random actions within them, anything from snakes and ladders to chess. However, it is not simply the percentage of random actions within a game that determine how fair they feel to play, it is the players’ agency within the game that matters. In a dice rolling game, what if someone keeps rolling sixes, or in a card game someone draws all the low value cards? These extreme potential outcomes are the situations that should be considered in order to create a fairer game with a higher feeling of agency for the player. In the end should a game provide players with a close to equal chance of success no matter how extremely unlikely the outcomes of random events are? Or should it be the choices players make with those results that determine the measure of their ability?

**09:40-10:00**     *Mike Cosgrave*  
*University College Cork*

*Game design as assessment: issue in course design and assessment*

In this paper I propose to review aspects of using board game design as an assessed exercise in undergraduate and graduate research-based teaching. Game design as a means of telling humanities stories of purposeful human action differs from traditional essay-based assessment. This poses challenges not only in how to assess this work appropriately, but also how to structure the humanities workflow and research methods to suit game design in a series of 3-4 'agile' sprints over the duration of a course. How this integrates with pedagogical approaches, specifically Teaching for Understanding, is considered. The relationship of game design to Unsworth's classic 'Scholarly Primitives' perspective is explored. This is set in the context of practical experience of courses delivered in several disciplines (History, Politics, International Relations and Digital Humanities) since 2007.

**10:00-10:20**     *Fabio Chiarello*  
*Consiglio Nazionale delle Ricerche*

*Experiences in the use of board games and game design for science education*

Board games can be effective tools for science education. A suitable use of commercial or specially designed board games can be helpful in involving people, fostering interest and motivation, creating an immersive environment favourable for learning, and providing useful illustrations and metaphors for complex abstract scientific concepts. The direct involvement of people in the creation of original educational board games can further increase these benefits. We report a series of experiences on the use of specially designed board games ("Quantum Race", for the introduction to quantum mechanics, "Time Race", concerning special relativity, "Lab on Chip", on nanobiotechnologies and so on) and on the implementation of game design workshops in different contexts such as schools, science festivals ("Festival della Scienza di Genova", "Campus Party" etc.) and Games Festivals, ("Lucca Comics and Games", "Play of Modena" etc.).

**10:20-10:40**     *Questions and Answers*

# Session 6: Statistics, Analysis and evaluation

**11:00-11:10**     *Emiliano Sciarra*

*Independent Researcher*

*The seven level of Play: keys to board game interpretation*

Nowadays, most games are used for enjoyment, socialization and competition, while few are used for teaching and simulation. However, the history of games shows they have been used for a wider range of purposes, many of them overlapping. We could identify seven levels of play according to the goal set by who played the game (together with who created the game in the first place): 1. the ordinary level, for fun and contest; 2. The teaching level, to preserve and pass down notions and rules (e.g. wargames and simulations); 3. The moral level, to convey an ethic message (the Victorian Snakes and Ladders); 4. the divinatory level, to know things regarding past, present or future which would be otherwise unknown (e.g. dice, knucklebones, Tarot, Lila); 5. the propitiatory level, to affect incoming events according to the play, like Senet and Chess; 6. the magical level, to actually modify the present or the future events with the game seen as a precise magical rite, like Fanorona and Enochian Chess; 7. The theurgical level, aimed to call the intervention of God (or a superior entity) by playing, like the original, speculative Tarot described by traditional accounts.

**11:10-11:20**     *Chris Van De Riet*

*Independent Researcher*

*Games of the Vedic wheel*

At a time when my research into the board games of old still centred on ancient calendars I could not possibly avoid delving into the numbers provided by Rig Veda 1:164, verses 1–48. The famous calendar-wheel of the 720 Sons in Pairs is one of the main topics there, and I soon found reason to assume that a fairly recent game like Sarakrida / Backgammon was in effect a perfect rendition of these Sons. When at BGS 2003 in Fribourg this was confirmed by Renate Syed's research on the subject, a curious thing happened. At that meeting I was scheduled to present, as a side-show, a gaming diagram that I presumed to be ancestral to Pachisi/Chaupar/etc. My hero and demon Irving Finkel took a look and stroked his beard, while Professor Balambal musingly remarked, "This is the way we think..." But that was it. Back home I suffered the usual post-colloquial depression. From sheer boredom with everything I had done so far, and literally on a rainy Sunday afternoon, I decided to do the one thing that had brought me inspiration in the past: I counted the cells and the steps taken in a game. That game happened to be the one I had presented in Fribourg. And lo! Each single piece took  $9 + 72 + 9 = 90$  steps to arrive back at its source, so that one player's pieces took  $4 \times 90 = 360$  steps, so that a team's effort worked out at  $2 \times 360 = 720$  steps...!

Another perfect rendition of the vedic Sons in Pairs, in short, and, to top it off, played out on a diagram of  $19 \times 19 = 360$  cells on a Hub-of-the-[Perfect]-Year. This made me wonder: is the world-famous Pachisi, on a similar  $19 \times 19$  cloth, a perfect rendition of the vedic calendar? No. Does it look like 'my' reconstructed wise-men's game, which I called "Game of 108"? Yes, and quite clearly so: implosion of the arms of the Four Quarters onto the centre is all it takes to produce Pachisi, its 9-fold centre, its safe-havens, its set-up, its rules of play, the works. Over the years, when geometrical notions came to accompany the calendrical ones I had collected, I saw the characteristics of 'my' hypothetical Game of 108 repeated in a host of board games recorded from Asia—ancient Astapada being the very first (yet last to recognise!), a pocket version really—and, surprisingly, from Meso-America as well. Meanwhile, perhaps back in time, an entirely new diagram of the 720 Sons in Pairs revealed itself to explain just

about everything I had been looking for. However conjectural this amateur's effort may appear to the academic eye, its visual presentation aims to show the simplicity and strict logic of the process described.

**11:30-11:40** *Marisa Uberti*

*Independent Researcher*

*Italian statistical analysis of board games called "Merels", "Little Merels", "Alquerque-12" and "Fox and Geese"*

This work illustrates the census updated by the Centro Studi Triplice Cinta until the date 31 December 2018. During the presentation, graphs related to the distribution of these schemes in the twenty Italian regions and in relative provinces will be shown, providing us with an immediate "snapshot" of the situation, from which it emerges that in our database there are 1336 copies: 1,077 Merels boards, 132 Little Merels, 107 Alquerque-12, and 20 Fox and Geese. Merels boards are present in all regions, from north to south, with inhomogeneous diffusion. Seven regions do not show the presence of Little Merels or Alquerque-12. Fox and geese (or Wolf and Sheep) is absent in all regions of southern Italy, in the light of current knowledge. The statistical analysis has brought out an important aspect: the Merels board is one example of the ways people have expressed a culture, a common knowledge, with uniform rules, known both in Piedmont and in Emilia-Romagna, in Lombardy and in Apulia, just to give some examples. The board game was therefore a strong binder, used as a means of communication, interactive, recognized and recognizable by anyone who practiced it.

**11:40-12:00** *Virginie Tacq*

*Haute Ecole Bruxelles-Brabant*

*Boardgame design: a female activity*

This presentation, based on an ongoing thesis, will present the early results of interviews of French female boardgame designers. If the question of the place of women in the videogame industry has been spotlighted by various events such as "Gamer gate", the question has not been addressed in the same way in the boardgame industry. The author planned interviews with different women who create published boardgames, in order to collect data about their careers: how did they become boardgame designers? Is there a common path for women, leading to being a boardgame designer? A collective research about game designers was completed by the students of the «Master en Sciences du Jeu» at Paris XIII University, but did not address the gender component. This is a work in progress and this presentation provides an opportunity to present the first conclusions.

**12:00-12:20** *Jakob Gloger*

*Independent researcher*

*A Royal Dice Machine? (rescheduled talk, the topic is a little bit different from the others in this session)*

This talk is about a small golden tin from the private collection of Jakob Gloger. In this round tin, there is a mechanical dice machine with two rolls made of bone. This dice machine originates from around 1800. The front of the tin shows the portrait of King George III. Is this a sign for a royal dice machine? If you take a closer look at the tin, you can discover more and more little details, which will lead to the answer of this question. For which game was the mechanical dice machine thought to be used? Sir Edward Thomason, inventor of a nowadays well-known corkscrew, plays an important role in answering this question. The manufacturer and inventor was knighted by King George IV for his merits. The talk will include a short digression to discuss mechanical dice machines.

**12:20-12:40** *Questions and Answers*

# Session 7: Public session at the University Library of Bologna

University library of Bologna,  
via Zamboni 33-35

**14:00-14:45**     *Giacomo Nerozzi*  
*Scientific Coordinator of the University Library*

*Visit at the University Library*

**14:45-15:00**     *Mirko degli Esposti*  
*Director of the Library and Vice-rector of the Alma Mater*

*Institutional Welcome*

**15:00-15:20**     *Tiago Hirth*  
*University of Lisbon | Ludus Association*

*The Power of Play, Luca Pacioli's De Viribus Quantitatis*

This opening of the session at the Alma Mater Studiorum Università di Bologna offers a brief introduction to Luca Pacioli (1447–1517), the Franciscan monk who wrote various works disseminating mathematical and game practices in the 15<sup>th</sup> century, namely the *Gli Scachi*; *De ludo scacchorum*, also known as *Schifanoia*, and finally and most importantly, the manuscript, *De Viribus Quantitatis*, one of the major works held by the University Library of Bologna. We will briefly look at the structure of the book in formal and informal sections of three parts, dedicated respectively to Arithmetic, Geometry and Natural Wonders, tightly linked in parts to games. Then, with a contribution from Lisa Rougetet, we will highlight the importance of this unique historical source with a brief excursion into the history of a subtraction/addition game, ancestor of the NIM games, and starting point for Combinatorial Game Theory in mathematics.

**15:20-15:40**     *Cameron Browne*  
*Maastricht University*

*Mathematics through games*

Games and mathematics are inexorably intertwined. All aspects of games—from the geometry of the equipment to the logic of the rules—have an underlying mathematical basis, whether the players are aware of these or not. Just as games can be described as a series of puzzles that players present each other, so can mathematics be described as a series of puzzles that the universe presents us all. “Numeracy games” are a type of “serious game” aimed at teaching basic arithmetic by explicitly including relevant operations in the game play. Unfortunately, such teaching mechanisms are often

forced onto the design at the expense of the resulting game, producing poor play experiences. An opportunity is being wasted here, as it should be possible to find more interesting games that implicitly capture the same mathematical principles more naturally as an inherent part of their design. The problem is how to find and identify such games. A mechanism for solving this problem may soon be provided as a side-product of the ERC-funded Digital Ludeme Project, which aims to map the spread of traditional strategy games and associated mathematical ideas throughout recorded history. This presentation will outline this mechanism for identifying the core mathematical principles underlying a given game, and how this may be used to promote games as vectors of mathematical ideas.

**15:40-16:00**     **Thierry Depaulis**  
*Independent researcher*

*A timeline of mind games*

A Timeline of Mind Games, with some correlations: the paper will be an attempt to point out the emergence of early mind games, and to see whether they correlate the great steps of human history, in terms of social, political, technological and cognitive evolution. It will be based on a combined chronology of dice and board games in the lands between the Indus Valley and Europe (with some glimpses at China and the Americas) from the Late Palaeolithic to the first millennium AD. This somewhat simplified overview is more intended as a basis for future thoughts and improved analysis, than a definitive conclusion. It will nevertheless fight some illusions. Fasten your belts!

**16:00-16:20**     **Alex De Voogt**  
*Drew University*

*Crossing borders in the Indian Ocean: board games in the Comoros Islands*

Our understanding of board games in the Indian Ocean has proven especially promising for the islands off the coast of the African and South Asian continent. Starting with Townshend's (1986) study of bao on Lamu, Kenya, subsequent studies on Zanzibar, Madagascar, Sri Lanka, Maldives and Seychelles have proven especially valuable for our understanding of the history and distribution of mancala games. In this context, the Comoros people were thought to play bao as found in Zanzibar, Lamu and Madagascar. In a recent study of the Comoros by de Villeneuve (2004), games other than mancala were described that highlight a different part of board games distribution in the Indian Ocean. These alquerque or checkers games were also attested in the Maldives and Seychelles but not published in any detail. In this presentation, the findings on the Comoros by de Villeneuve are augmented by recent fieldwork and are presented within the context of Indian Ocean and board games history.

**16:20-16:40**     **Wim Van Mourik**  
*Independent researcher*

*Alquerque-12 diagrams on parchment, paper and wood since the 13th century.*

Diagrams of the alquerque-12 pattern (the ancestor of draughts) with lines scratched or chiselled in horizontal lying stones, rock walls, benches in churches, etc. have been found many times. BGS participants Lúdia Fernandes, Jorge Nuno Silva and Marisa Uberti have shown images of these diagrams in their publications, as has Govert Westerveld in Spain. Summarizing publications describing non-in-stone applied diagrams are unknown. A beginning of such an iconography of the alquerque-12 is the purpose of this presentation. The question that arises is whether all stone inscriptions indeed represent a game. There is reasonable doubt. Not all those figures guarantee an alquerque-12 game board, but if they were not predecessors of our current draughts boards (64, 100 and 144 squares), what was their function? What was their meaning? In my lecture I will present an overview of all alquerque-12-like diagrams that originate from the period of 1300–1700AD of what has been found to

this day. Images will be shown of representations of the game in manuscripts and books, scratched diagrams in wooden panels, lids of barrels with the lined pattern and some real alquerque-12 game boards that have survived the centuries!

**16:40-17:00**     ***Fred Horn***

*Independent researcher*

*Games, plays and puzzles of the 19th century from De Kinder Courant (1852-1904)*

After the first half of the nineteenth century, society, especially in Europe, was taking education more seriously. Children were increasingly seen not as “small adults” but as personalities of their own with special means and wishes. This was most visible within the “better classes” where education and schooling became an important part of children’s daily life. At the same time, industrial developments made it possible to bring (relatively) “cheaper” printing on the market. Within this context, new possibilities emerged for publishers to open new markets. One of these was the publication in Holland of a weekly magazine, aimed especially at children of the “better/higher classes”, when, in 1852 the first issue of *De Kinder-Courant (The Children’s Paper)* was launched. During the time of its existence, five publishing firms in The Hague organized the paper and its content. This presentation will give an overview of more than 50 years of publication, focusing on the Games, Plays and Puzzles which were normally added, as a separate plate, to each weekly Issue.

**17:00-17:20**     ***David Parlett***

*University of Suffolk*

*America’s First Lady of games*

Lizzie Magie Phillips (1866-1948) is well known as the inventor of *The Landlord’s Game* (1904), which later developed into the game we all know as *Monopoly*. The story of her invention and the vicissitudes it underwent before becoming a world-wide phenomenon since its publication by Parker Bros in 1935 was deliberately obscured until 1998, when a book entitled *The Billion-Dollar Monopoly Swindle* was published by Ralph Anspach, the inventor of *Anti-Monopoly*. As I will show, *Monopoly* researches continue apace and can be followed online. My interest in Lizzie Magie has been enhanced by a proposal to include her as one of the first figures to be nominated as a candidate for an historical Hall of Fame for games inventors to be inaugurated, probably this year, by the ‘Dau’ Games Festival held annually in Barcelona since 2013. This proposal has led me to explore more of her games and the versatile career of the fascinating personality that lay behind them.

**17:20-17:40**     ***Cosimo Cardellicchio***

*Consiglio Nazionale delle Ricerche*

*Shedding light on the antithesis between serious school and amusing games. A personal experience in educational games.*

The Board Game Geek (BGG) database lists more than 7200 “educational” games, aiming to “teach people about a certain subject or to assist them in learning”. In general, it would be very convenient if the burden of learning could be lightened by a playing system. However, according to Huizinga and Caillois, games are, among the other things, freedom (nobody can force someone to play) and amusement (a boring game is not a game). Thus, it is particularly difficult to design an amusing educational game, an object that is to be played in a schoolroom, the place of dutiful learning. Alex Randolph, the master of the modern game designers, was very proud of his few educational games, that provided concrete help to the pupils. Classic board games, such as Chess and Go, have been sometimes

taught in school as models of the attitudes required to overcome complex tasks (for example, learning ancient languages such as Latin, Greek, or Hebrew). The results have not been always satisfactory, because learning these complex board games requires also a personal bent of the pupils. The personal experience of the author is based upon a complementarity principle, that is using a simple game mechanic to introduce challenging concepts.

**19:30-23:00**     *Gaming night with the Accademia del Tarocchino Bolognese*  
*Davide Baroncino and Lorenzo Cuppi introduced us to the game and its history.*



# May 9

Department of Education G.M. Bertin  
via Filippo Re, 6

## Session 8: Ancient history

**09:00-09:20**    *Atagiin Karayel*  
*Galatasaray University*

*Petteia in Plato: board gaming as technê: does dice-containing game fit in the picture?*

In the Platonic corpus we encounter at least ten passages containing words related to board-gaming (*pessoi*, *petteia*, etc). The number is probably more than what we get from all other Classical Greek authors combined, and they seem to give the most valuable hints. In these passages, the board-gaming practice is mentioned in a context of *technê* (and not *paidia*). Therefore, the question is how to treat board-gaming practice in terms of the Platonic conception of *technê*, and define *technê* in such a way to include board-gaming. I will try to draw the outlines of this project, which in my opinion needs to tackle one particular problem. In Plato (and maybe in Greek philosophy in general), referring to sorts of applied knowledge and skill, *technê* is put in opposition to a domain of randomness and chance, namely *tuchê*. Probably for this reason, earlier treatments on *petteia* passages in Greek philosophical texts affirmed that it has to be based “entirely on skill” and not chance—preferring to think in terms of the less clear game *polis* (a sort of a proto-checkers—they thought it as a game of pure skill), they rejected the possibility that *petteia* could refer to a game played with dice. However, it is accepted that the term *petteia* refers not to one particular game, but to a game genre, and one of these games is shown to be the dice-containing game *pente grammai* (we can describe it shortly as a proto-backgammon). Hence the problem: how could a dice-containing game be subject of a *technê*?

**09:20-09:40**    *Thomas Daniaux*  
*Université de Fribourg - ERC Locus Ludii*

*Board games and toys in Aventicum, Roman capital city of Helvetia*

After Caesar’s conquest of Gaul, Romans bring a new way of life by importing their economic and political systems, their language and so on. Among these imports, they also bring new habits. A discrete but no less important part of their identity are Roman games. The aim of this presentation is to present and analyse the different kind of ludic artefacts found in a Roman capital city like Aventicum, from the beginning to the end of Roman occupation. The localisation of those items on a map and the analysis of archaeological material can show an aspect of the sociability between humans themselves and between humans and gods. Artefacts have the power to explain how they were used for different purposes and not only for play but also for the politic, economic and religious life. This approach reveals how important are games and toys in the day-to-day life in Romans colonies in Gaul and this at many different levels.

**09:40-10:00** *Alessandro Pace*

*Université de Fribourg - ERC Locus Ludii*

*Games in Roman military contexts. Ludus for the Auxilia: an educational tool for a "Romano More Vivere"*

Recent research has underlined how gambling and games have been powerful tools for the creation of new social spaces, both in the present and in the past, by bridging different ethnic and cultural groups. In view of this, it is particularly interesting to focus on game and gambling devices to shed new light on the dynamics that brought in contact the Roman world and the various ethnic groups that were progressively absorbed into Rome's orbit following her political and military expansion. The scope of this paper, therefore, is to explore whether games can offer new insights into that process of cultural co-optation. The presence of Roman type game tools in some of the Britannic sites occupied by the auxilia is important to understand aspects of the Romanization process. This evidence sheds light on how during their years of military service, these non-Roman soldiers had the possibility to come in contact with the practices and customs of the *romano more vivere*. Among such practices, an important role was played by gaming and gambling.

**10:00-10:30** *Questions and Answers*

## Session 9: Ancient and Medieval history

**11:00-11:20** *Nicola Bergamo*

*École des Hautes Études en Sciences Sociales - Paris*

*Chess in Constantinople*

"In fact, the emperor, after waking up in the afternoon, played chess (a game invented by the Assyrians for leisure, that finally survived until us) to relax and have a distraction from his hard work". This is how the princess and historian Anna Comnena describes the attitude toward the chess games of her father in *The Alessiade*. It seems that chess arrived at Constantinople from Persia and together with the Tzykanion (a game of movement similar to Polo), the Tavli (board games, called also Chatrang in Persian), and riding were part of the education of the imperial elite. This is true also for the administrative elite at the service of the Pahlavi king.

This presentation will focus on the history of chess in Byzantium, its rules and its players. In particular, it will give a deeper view of the use of chess by members of the imperial family, comparing this tradition in Pahlavi's Persia and in Komnenos' Byzantium, shedding light on similarities and differences in their gaming and recreational habits.

# Session 10: History and Archaeology

Archaeological Museum of Bologna, via dell'Archiginnasio, 2

**16:50-17:00**    *Laura Minarini*  
*Keeper at the Museo civico Archeologico*  
*Welcome at the Museum*

**17:00-17:20**    *Ulrich Schädler*  
*Université de Fribourg - ERC Locus Ludii | Swiss Museum of games*  
*Greek, Etruscans and Celts at play*

With the Etruscan expansion in the second half of the 6<sup>th</sup> Century BC, the Etruria Padana became an area of intercultural exchange between Greece, the Celtic world in the North and West, and central Etruria and other Italian peoples in the south. From the 5<sup>th</sup> to the 4<sup>th</sup> Century BC, Spina and the newly founded town of Felsina (Bologna) became major centres for trade with Greece. The Etruscan population adopted elements of Greek culture and lifestyle. During the second half of the 5<sup>th</sup> Century, the presence of people of Celtic origin is attested, long before the Celtic expansion in the early 4<sup>th</sup> Century and the conquest of Felsina by the Boi. In Etruscan and Celtic graves around Bologna and Ferrara, gaming material such as dice, counters, pebbles, and cowries has been found in great quantities, although not always thoroughly published. Some of this material can be seen in the permanent exhibitions of both the Museo Civico Archeologico di Bologna and the Museo Archeologico Nazionale di Ferrara. As far as the history of games is concerned this material is of great importance, not only with regard to the games played by the Etruscans, but also concerning the possible adoption of Greek games in the Po Valley and their further transmission to the Celtic world.

**17:20-17:40**    *Stela Maris Ferrarese Capettini*  
*Keeper of the Ethnic Toys Museum of Neuquen*  
*Board games in Patagonia*

In the Argentine and Chilean Patagonia, the Tehuelche and Mapuche indigenous peoples practiced board games. One of those games is Trapial Kuzen, the other is known in Chilean Patagonia as komikan and in the Patagonia region Argentina with the name The Little Lion (El Leoncito).

This last game is also known, with different names, among other indigenous peoples Argentina as the Guaraní and Chiriguano. Our research allowed us to recover them and make a comparative study of the different forms of practice and board design.

# May 10

Department of Education G.M. Bertin  
via Filippo Re, 6

## Session 11: modern and contemporary history

**09:00-09:20** *Eddie Duggan*

*University of Suffolk*

*Uncovering Cupid: two hitherto unseen or unknown editions of The Royal Pastime of Cupid, Or New and Most Pleasant Game of the Snake, published by Robert Sayer and Henry Overton*

Literature related to *The Royal Pastime of Cupid, or Entertaining Game of the Snake* alludes to an edition published by Robert Sayer in the 1770s. The Victoria & Albert Museum holds a copy of the game printed in London by R. H. Laurie, c. 1850. The V&A website offers:

*An edition of the Game of the Snake (an adaptation of the Game of the Goose) is known to have been issued by Robert Sayer about 1750. Robert Laurie and James Whittle succeeded Sayer at his premises at 53 Fleet Street in 1794 and were in turn succeeded by R. H. Laurie in 1813; it would appear that the [print] is an impression from the original plate with altered lettering. (V&A Online <<http://collections.vam.ac.uk/item/O26286/>>).*

Similarly, Caroline Goodfellow suggests Laurie's print "may have been taken from a mid-18th century plate produced for Robert Sayer" (Goodfellow 1991, p. 18). It appears to be assumed that, because Sayer's stock passed to his assistants, Robert Laurie and James Whittle, Laurie & Whittle's 1794 edition of the game, and R. H. Laurie's subsequent 1850 edition, were struck from Sayer's plate. However, a recent discovery by the author shows this assumption is unfounded. This presentation will show

Robert Sayer's "peasant dance" edition of Cupid, thereby demonstrating Laurie & Whittle's edition uses a unique design not printed from Sayer's plate.

A second discovery by the author has unearthed another "peasant dance" edition of *The Royal Pastime of Cupid* published from The White Horse without Newgate, an address associated with the Overton family. The presentation will also briefly review the various locations of the White Horse and several Overton catalogues to suggest this edition was published by Henry Overton c. 1717.

**09:20-09:40** *Therese Marie Santos*

*University of Asia and the Pacific*

*Venturing into No Man's Land: exploring the potential of "The Grizzled" in World War I discourse*

This study focuses on the formal (technical) and dramatic (narrative) elements of "The Grizzled", a First World War-themed tabletop game that involves pure cooperation and sheds light on the experience of ordinary soldiers involved in trench warfare. By looking into the interactions of the game's elements,

one can understand better the unique teaching strategies and insights that this game provides. By stepping into the shoes of a group of friends who have promised to make it through the war together, the players understand better the physical, mental, and emotional hardships in the trenches, as well as the crucial roles that support and morale play in survival.

**09:40-10:00**     **Jacob Schmidt Madsen**  
*University of Copenhagen*

*The mechanics of resistance: playing at sabotage in WWII Denmark*

Recent years have brought to our attention several historical propaganda games promoting exclusivist ideologies, such as *White Australia Game* (Melbourne, 1920), *Let Me Pass Through the Land* (Tel Aviv, 1929), and *Juden Raus!* (Dresden, 1938). The majority of these games originated in societies where exclusivist ideologies were already dominant, and thus did not pose any serious threat to those who made them. Quite the opposite was true for those who made games resisting such ideologies from within the same societies. For obvious reasons their games have rarely come to light, but this does not mean that they did not exist. The present paper takes a closer look at the game of *Sabotage* developed by Danish resistance fighters during the German occupation of Denmark from 1940-45. The game simulates an actual act of sabotage that took place against the Scandia Locomotive Factory in Randers on 6 July, 1943. It pits two saboteurs against two factory guards, and challenges the saboteurs to inflict as much damage as they can before they are either caught, killed, or manage to escape. The game presents itself as a training simulation, and does not include any fixed victory conditions. Copies of the game will be available for play at the colloquium for those interested in trying their hands at carrying out or preventing a sabotage mission on an industrial complex in WWII Denmark.

**10:00-10:40**     **Bjarne Toft**  
*University of Southern Denmark*

*Hex, the full story*

The boardgame *Hex* was discovered in the early 1940s in Denmark by Piet Hein. Newly found documents in the Jens Lindhard Archive of Aarhus University reveal how Piet Hein was able to publish and maintain a regular bi-weekly newspaper column of *Hex*, of his plans to publish a *Hex* book, and of his narrow escape in 1943. The full story of *Hex* is the subject of a recent book *Hex: The Full Story* (by Ryan Hayward with Bjarne Toft, published in 2019 by CRC Press.

See:

<https://www.crcpress.com/Hex-Inside-and-Out-The-Full-Story/Hayward-Toft/p/book/9780367144227>

The talk will focus on 1943 and the happenings then. The full book has a wider scope, as shown in its summary: "*Hex* is the subject of books by Martin Gardner and Cameron Browne. Hex theory touches on graph theory, game theory and combinatorial game theory, with elegant proofs that the game has no draws and that the first player can win. From machines built by Claude Shannon to agents using Monte Carlo Tree Search, *Hex* is often used in the study of artificial intelligence. Written for a wide audience, this is the full story of *Hex*, inside and out, with all its twists and turns: Hein's creation, Lindhard's puzzles, Nash's proofs, Gale's *Bridg-It*, the game of *Rex*, Shannon's machines, *Bridg-It's* fall, *Hex's* resilience, Hex theory, the hunt for winning strategies, and the rise of Hexbots."

**10:40-11:00**     **Questions and Answers**

# Session 12: What's next

**11:00-11:20**     **Herbert Tulleken, Liuwa Westra,**  
*World Championship of Frisian Draught*

*Frisian Draught: a game changer?*

The 10 x 10 game of Frisian Draughts (FD) is very old. It is undoubtedly the most aggressive and explosive game in the checkers family and, as a consequence, draws are quite rare (about 10% in top tournaments, as opposed to at least 80% in international draughts), as the combinatorial richness is huge. The WFD Foundation has successfully revived international awareness over the last decade, achieving exponential rate of coverage, such that even top chess players and international draughts players have embraced this game with great enthusiasm. We will explain that this is a consequence of the combined diagonal and orthogonal ("over-all") capture rules and illustrate such with examples. The basic game features will be further explained using software to analyze the simpler 4 x 4 and 6 x 6 boards, from which the complexity and razor-thin drawing margins are easily seen. Next, we will present our activities on the educational front, which comprises several projects (amongst them *Frysk!*, which is an endgame variation) at elementary and secondary schools in various countries. The youth is embracing these activities whole-heartedly. Not only because the explosive game tactics are very entertaining to them, but analytical and creative skills are encouraged in a natural way, according to our observations and those of the teaching staff. Finally, we will sketch our plans for the next few years. We want to combine age-old tradition, modern mathematical insights and educational skills to secure the FD game for future generations.

**11:20-11:40**     **Mark Hall**  
*Perth Museum & Art Gallery*

*Games and character: the role of board, dice and card games in popular cinema*

This paper will seek to adopt a cultural biography perspective in examining some of the different ways board games are portrayed in the movies. It will explore films through three, overlapping categories:

- Those films specifically about board & card games – including for example *Computer Chess*, *The Go Master*, *The Queen of Katwe*, *A Throw of Dice* and *The Cincinnati Kid*.
- Those films in which board & card games have an incidental supporting role – including, for example, *Casablanca*, *Harry Potter and The Philosopher's Stone*, *Mr Majestyck*, *The Guns of Navarone*, *Where Eagles Dare*, *Night of the Demon*, *El Dorado* and *Star Wars*.
- Those films in which board games are particularly situated within a historical reality, both as period detail and metaphorical or psychological comment. Chess figures strongly here, including *The Seventh Seal*, *Beckett*, *The Lion in Winter*, *Agora* and *The Robe*.

**11:40-12:00**     **Dario De Toffoli**  
*Italian Game Archive of Udine*

*A new games archive has been born in Udine*

The Archivio Italiano dei Giochi (Italian Games Archive) aims to preserve and enhance game-culture in today's world, as we consider gaming an essential component in the improvement of everybody's quality of life, as well as a basic tool to bring people together. AIG was born in Udine in October 2017 and operates as follows:

- Toy library / library: Collection of games and publications about games (5,000 items so far).
- Events: every kind of game-event, lectures, tournaments, training courses, exhibitions (some 50

events so far).

- Studies: Partnering with Institutions and Associations to promote game-culture.
- Online Archive. This is the most peculiar and important part of the AIG, and will allow:

- a) Development of a scientific way to classify games and publications about games (books, magazines, issues);
- b) Cataloguing of both games and publications, according to librarianship's standards, adding new features to the software in order to obtain a more detailed semantic description of the different items.
- c) Importing data into a newly developed—and friendlier—portal that can be freely used by anyone and where extra contents can also be uploaded in any format.
- d) Development of a crowdsourcing platform to import data from remote experts previously accredited.

**12:00-12:20**     ***Mikael Le Bourhis***

*Game in Lab Project*

*Presentation of the "Game in lab" project*

**12:20-12:30**     ***Marco Tibaldini***

*University of Bolzano – Clio '92*

*Presentation of the volume Giochi & Civiltà*

**12:30-12:40**     ***Vincent Berry & Virginie Taqc***

*Organizers of the next BGS Colloquium*

*Presentation of the BGS Xolloquium XXIII*