

RETHINKING GAMIFICATION

**Edited by
Mathias Fuchs, Sonia Fizek,
Paolo Ruffino, Niklas Schrape**

 meson press

IMPRINT

A collaboration between the Gamification Lab and the Hybrid Publishing Lab
at Leuphana University of Lüneburg, Germany
<http://cdc.leuphana.com/structure/gamification-lab/>
<http://cdc.leuphana.com/structure/hybrid-publishing-lab/>

Editors Sonia Fizek, Mathias Fuchs, Paolo Ruffino, Niklas Schrape
Editorial Assistance and Project Management Fabian Lehmann
Proofreading and Editorial Assistance Jacob Watson
Layout, Design, and Artwork Laleh Torabi
meson press Mercedes Bunz, Marcus Burkhardt, Andreas Kirchner

Bibliographical Information of the German National Library

The German National Library lists this publication in the Deutsche Nationalbibliografie (German National Bibliography); detailed bibliographic information is available online at <http://dnb.d-nb.de>.

Published by meson press, Hybrid Publishing Lab, Leuphana University of Lüneburg, Germany
www.meson-press.com

The paperback edition of this book is printed by Lightning Source, Milton Keynes, United Kingdom.
The digital editions can be downloaded freely at www.meson-press.com.

ISBN (Print): 978-3-95796-000-9
ISBN (PDF): 978-3-95796-001-6
ISBN (EPUB): 978-3-95796-002-3



This publication is licensed under the CC-BY-SA 4.0 (Creative Commons Attribution ShareAlike 4.0 Unported) license.

To view a copy of this license, visit: <http://creativecommons.org/licenses/by-sa/4.0/>.



CONTENTS

Introduction	7
--------------------	---

RESETTING BEHAVIOUR

Niklas Schrape	
Gamification and Governmentality	21
Paolo Ruffino	
From Engagement to Life, or: How to Do Things with Gamification?	47
Maxwell Foxman	
How to Win Foursquare: Body and Space in a Gamified World	71
Joost Raessens	
The Ludification of Culture	91

REPLAYING HISTORY

Mathias Fuchs	
Predigital Precursors of Gamification	119
Felix Raczkowski	
Making Points the Point: Towards a History of Ideas of Gamification	141

REFRAMING CONTEXT

Fabrizio Poltronieri	
Communicology, Apparatus, and Post-History: Vilém Flusser's Concepts Applied to Videogames and Gamification	165
Thibault Philippette	
Gamification: Rethinking 'Playing the Game' with Jacques Henriot	187
Gabriele Ferri	
To Play Against: Describing Competition in Gamification	201

RECLAIMING OPPOSITION

Daphne Dragona	
Counter-Gamification: Emerging Tactics and Practices Against the Rule of Numbers	227
Matthew Tiessen	
Gamed Agencies: Affectively Modulating our Screen and App-Driven Digital Futures	251

REMODELLING DESIGN

Sonia Fizek	
Why Fun Matters: In Search of Emergent Playful Experiences	273
Scott Nicholson	
Exploring the Endgame of Gamification	289
Sebastian Deterding	
Eudaimonic Design, or: Six Invitations to Rethink Gamification	305

APPENDIX

Authors	333
Index	337

PREDIGITAL PRECURSORS OF GAMIFICATION

by **Mathias Fuchs**

INTRODUCTION

If we believe what renowned US-American market analysts tell us unani-
mously, then we have to accept that nothing will influence our lives as much
as these: mobility, social media, and *gamification*. The latter is said to have
the strongest impact: “Gamification is projected to be a \$1.6 billion market
by 2016” (Corry 2011). Other sources predict \$2.8 billion for 2016 (Palmer,
Lunceford, and Patton 2012) and \$5.5 billion for 2018 (Markets and Markets
2013). In 2011 marketing analyst Gartner, Inc. said that “by 2015 more than
50 per cent of organizations that manage innovation processes will gamify
those processes” (Gartner, Inc. 2011). Yet one year later Gartner, Inc. said,
“Gamification is currently being driven by novelty and hype. By 2014 80%
of gamification applications will fail to deliver” (Fleming 2012). But irre-
spective of whether gamification will change little, something or everything,
no one can deny that it has become a buzzword that describes what many
fear or hope to happen right now. The process of a total permeation of our
society with methods, metaphors, values, and attributes of games (Fuchs

2011 and 2013)¹ was christened “gamification” in 2002 (Marczewski 2012) and has since been popularised by US marketing companies and their respective PR departments. Even though there have been attempts to differentiate between games-related and play-related phenomena, or processes that could be seen as either driven by *ludus* or *paidia* (Caillois 2001 / 1958), gamification has remained the buzzword. Greek, Italian, Spanish, Swedish and German terminological creations have been introduced and discussed in the scholarly world, but neither *παιγνιδοποίηση*, *ludicizzazione*, *ludificação*, *gamificación*, *ludización* nor the German-Latin *ludifizierung* could compete with the Anglo-American *gamification*. The reason for this might be that the Californian league of gamification evangelists such as Zichermann (2011), McGonigal (2011), and company have already been sowing on the semantic field at a time when European game scholars were not quite sure whether the ludification they observed was more of a curse than a gift. Flavio Escribano’s terminological creation of a “ludictatorship” points in that direction.

The US politician Al Gore did not seem to be worried about what gamification might bring to our society when at the eighth annual Games for Change Festival in June 2013 he declared, “Games are the new normal”. On the one hand this seems to be the Democrat’s or even the democratic assumption that everybody should have the right to play. On the other hand, it declares total play with the hidden implication that those who cannot play society’s games and those who do not want to play them are not to be considered normal. Even though 2002 is usually said to be the year when the term gamification was coined, it was only around the beginning of this decade that gamification became a buzzword. Deterding, Dixon, Khaled, and Nacke (2011), Schell (2010)², Reilhac (2010),³ and others presented different flavours of gamification, some of them design-oriented, others psychological or judgemental. For Sebastian Deterding and his colleagues:

1 German original: “Gamification ist die Durchdringung unserer Gesellschaft mit Metaphern, Methoden, Werten und Attributen aus der Welt der Spiele” (Fuchs 2013).

2 “Gamification is taking things that aren’t games and trying to make them feel more like games” (Schell 2010).

3 “There is no doubt that video games are the emergent form our times and that the process of gamification is transforming our world, contaminating it like never before” (Reilhac 2010).

[. . .] it is suggested that “gamified” applications provide insight into novel, gameful phenomena complementary to playful phenomena. Based on our research, we propose a definition of “gamification” as the use of game design elements in non-game contexts. (Deterding et al. 2011)

All of the definitions of gamification that have been proposed since 2002 are based on the idea that the digital computer and digital computer games are a reference without which gamification could not be conceived. There were, however, predigital predecessors of gamification long before digital computers became popular. A decade before programmable computers such as the Z3, Colossus or the ENIAC were introduced, a playful labour attitude had been mentioned and praised by the author Pamela Lyndon Travers. As early as in 1934 Travers’ Mary Poppins character was developed to tell the following rhyme in the Disney movie:

In ev’ry job that must be done
There is an element of fun
You find the fun, and snap!
The job’s a game! (Travers 1934)

This is obviously what we would nowadays call the gamification of labour. It is precisely the use of game elements in non-game contexts, as the definitions of Zichermann, Reilhac, Schell, Deterding et al. suggest.⁴

This article intends to present examples for gamification *avant la lettre* and compares these predigital forms of ludification with recent approaches that build heavily on the historic ideas, concepts, and gadgets. In particu-

4 I owe my colleague Paolo Ruffino thanks for the request for a clarification in regard to the “game elements” mentioned. In an email from January 21, 2014 Ruffino comments, “Deterding et al. talk about the use of game ‘design’ elements. They refer to a specific knowledge and practice: game design – a field mostly born with the emergence of video games as an industry.” Ruffino has a point there. I acknowledge that I am trying to recontextualise gamification here not only in using predigital examples but also in looking at games before computer game design existed. Having said so, my understanding of gamification is close to what other authors label “playification” (Mosca 2012) or “ludification” (Raessens 2006).

lar the following fields of predigital gamification will be looked at: religious practice, music, magic, education, lifestyle, and styles for killing.

1 GAMIFYING RELIGIOUS PRACTICE

Gods from antique Greek myths knew how to play tricks on each other. Indian avatars experienced lust and joy and even the warrior gods from Nordic mythology had a lot of fun every now and then. The Loki character from Edda is a joker and a jester. Little fun however has been reported from the Christian God, Son of God, or the corresponding spirits. Protagonists in Jewish-Christian mythology never laugh, never make love, and they rarely play. Einstein is said to have commented on God's resistance to play with his famous phrase of "God doesn't throw the dice". If playing or gambling is reported of in the bible, it is usually the bad guys who do so. The maximum offence against piety and the example *par excellence* of how not to behave in the vicinity of Christ are the soldiers at the cross who dare to play when Christ is dying. Completely in line with the negative sanctioning of playfulness is the prohibition of any gambling practice in Christian culture. Play, that was felt to be the pastime of the gods in other religions, was associated rather with the devil in Christianity. Who could have invented such a nuisance as play? Reinmar von Zweter, a poet from the thirteenth century had no doubt about that when he wrote in a truly Christian spirit: "The devil created the game of dice":

Der tuivel schouf das würfelspil,
dar umbe daz er selen vil
da mit gewinnen will (Wolferz 1916)

His anger about dice games is actually exemplifying a much wider rejection of play in general. Almost every century in Western European history has known legal sanctions on gambling, prohibition of certain games, and violent destruction of games (Ritschl 1884). On 10 August 1452 Capistrano, a travelling sermoniser, was said to have collected games that he labelled "sinful luxury items" and piled them up to an impressive mountain of 3640

board games, some 40,000 dice games and innumerable card games. The games were then burnt publicly (Dirx 1981, 82).⁵

It is frightening to see that game burning preceded book burning and that in both cases it was not the medium that was intended for destruction but a cultural practice and a practicing group.

In Western Europe gambling that involved monetary benefits was often prohibited. Reports about public houses that were accused of being gambling houses were used in many cases to shut down the pubs or to penalise the innkeepers. A class action from 1612 in Ernsdorf united the village mayor and members of the parish choir to sue an innkeeper who served alcoholic drinks in order to “attract gamblers and scallywags to visit his inn” (Schmidt 2005, 255).⁶ In 1670 a list of all the inhabitants that were suspected of playing games was posted in the very same village of Ernsdorf. Nine years later the court usher was told to withdraw bowling pins from children on the day of their catechism classes (ibid.).

Yet real politics within Christian ethics developed ways and means to play and be pious at the same time. Gerhard Tersteegen can be called an eighteenth century gamification expert for religious practice. His Pious Lottery⁷ (1769) was a card game consisting of 365 cards that contained words of wisdom and advice for the believers. By randomly selecting a card from the deck of cards the pious gambler would perform two activities at the same time: playing an aleatoric game of cards and practicing Christian-minded devotion. Tersteegen’s gamified prayer book was successful because of the popularity of profane lottery practice of the eighteenth century that his game appropriated and adapted for Tersteegen’s own purposes. The sermonist announces his game as a lottery with no danger of losing; however, if you hit the jackpot (“drawing the best lot”), your prize will be unsurpassable:

5 Translation by the author, German original: “Er errichtete einen Berg von 3640 Brettspielen, an die 40.000 Würfel, Kartenspiele ohne Zahl und 72 Schlitten und verbrannte dieses sündhafte Luxuswerk” (Dirx 1981, 82).

6 Translation by the author, German original: “so daß sich allerhand Gesinde bei ihm einfinde und spiele” (Schmidt 2005, 255).

7 Translation by the author, German original: Der Frommen Lotterie. The Pious Lottery was part of Tersteegen’s Geistliches Blumengärtlein. This book included the Pious Lottery at latest in the fourth edition, published in 1769.

This is a lottery for Believers,
and nothing can be lost,
Yet nothing would be better,
then drawing the best lot (Tersteegen 1769, title)⁸

Not everybody was happy with Tersteegen's ludification of serious content. One of his contemporaries and critics, Heinrich Konrad Scheffler, mocked the pious lottery in his essay from 1734 on strange religious practice: "Praxis pietatis curiosa" (Brückner 2010, 261) as not pleasing to God.

The itinerant preacher Tersteegen was faced with a problem that is not unlike today's problems of selling products with low use-value as desirable – or boring work as fun. Common eighteenth century practice of prescribing a prayer per day must have been extremely fatiguing for the average believers. When the radical pietist Tersteegen introduced *alea* (Caillois 2001 / 1958) he achieved what today's gamification evangelists try to accomplish: increasing customer loyalty with fun elements. "Gamification is Driving Loyalty" (Goldstein 2013), "Motivation + Big Data + Gamification = Loyalty 3.0" (Paharia 2013), "Gamification = Recognition, Growth + Fun" (DeMonte 2013). More than 200 years before the notion of gamification had been introduced, similar practices were already in use: establishing loyalty by hiding the primary company's goal and offering "peripheral or secondary mechanics" (Ciotti 2013) that establish pseudo goals and re-direct the attention of the customers, a.k.a. gamers.

2 GAMIFYING MUSIC AND DANCE

Contemporaries of Gerhard Tersteegen, Johann Philipp Kirnberger, Carl Philipp Emanuel Bach, and Maximilian Stadler worked on something that

8 Translation by the author, German original: "Diß ist der Frommen Lotterie,/ wobei man kann verlieren nie,/ das Nichts darin ist all so groß,/ als wann dir fiel das beste Los".

could be called the gamification of music⁹ when introducing a ludic generator for musical composition.¹⁰ Kirnberger's Ever-Ready Minuet and Polonaise Composer¹¹ was first published in 1757 and then again in a revised version in 1783. The game preceded the *Musikalisches Würfelspiel*¹² from 1792 that dubitably has been attributed to Wolfgang Amadeus Mozart. If Mozart was the author of the *Musikalisches Würfelspiel*, his intention was most likely to present and sell another virtuosity stunt and not to question the nature of composition. It is probably also fair to say that Mozart was not particularly hesitant in appropriating material and concepts from fellow composers and to polish them in his personal way to make them a successful commodity. The idea of Kirnberger's gamified system of composition as well as that of Mozart's was to propose that music could be conceived as a game that follows certain rules and is affected by an element of chance, or "alea" as Caillois would name it (Caillois 2001 / 1958). This idea is completely anti-classical and anti-romantic, but was epistemically coherent with the eighteenth century thought. It is therefore not surprising that systems like the

-
- 9 When eighteenth century musicians used card games and dice to facilitate composition processes, they aimed at something that is similar to contemporary gamification attempts in the field of marketing: The former wanted to implement a layer of fun and entertainment and they wanted the audience to believe that they were composing. Actually the audience did not compose, they were just instrumental in starting algorithmic processes. The latter try to implement a layer of fun and entertainment above the functional level of marketing and they want the customers to believe that they desire what they are told to desire. In both cases rule-based ludic systems serve as persuasive devices for subject matter that is not play. That is why I speak of gamification in the context of music and in the context of recent marketing, even though the object of gamification differs in both cases.
- 10 The examples for aleatoric composition methods given here do not make claims about the earliest attempts to do so. There is a history of aleatoric composition in the eighteenth century, in the digital age (Nierhaus 2009) and much earlier than that. Already in the seventeenth century, composers had begun thinking of a piece of music as a system of units which could be manipulated according to chance processes. Around 1650, the Jesuit Athanasius Kircher invented the *arca musurgica*, a box filled with cards containing short phrases of music. By drawing the cards in combination, one could assemble polyphonic compositions in four parts.
- 11 Translation by the author, German original: *Der allezeit fertige Menuetten- und Polonaisencomponist*.
- 12 English: Musical Dice Game.

Ever-Ready Minuet and Polonaise Composer or the Musikalisches Würfelspiel have been devised by various eighteenth century composers.

In 1758 Carl Philipp Emanuel Bach's *A Method for Making Six Bars of Double Counterpoint at the Octave without Knowing the Rules*¹³ introduced a game for short compositions as a demonstration of method and a tool for rule-based composition. It would not be appropriate to criticise Johann Sebastian Bach's son for a mediocre quality of the counterpoint compositions produced. The compositional spirit of the eighteenth century was different to classical musical thinking and for the late Baroque composer the main achievement was to produce something that fitted the rules of musical craftsmanship as effectively as possible. Aesthetic subtlety was not the point.

Maximilian Stadler was another composer who worked with a set of dice. His *Table for composing minuets and trios to infinity, by playing with two dice*¹⁴ was published in 1780 and might well have been the inspiration for Mozart's Würfelspiel. Stadler was friend to Mozart, Haydn, and Beethoven and it would not be too surprising, if Mozart had picked up a few ideas from Stadler when meeting in Vienna. Innovative ideas were not protected by copyright at the time of Mozart, and Mozart was reported to have appropriated material, ideas, and concepts from fellow composers. But it is also possible that Haydn, another friend of Stadler's, might have influenced Stadler, Mozart, or both of them when presenting his Game of Harmony, or an Easy Method for Composing an Infinite Number of Minuet-Trios, without Any Knowledge of Counterpoint,¹⁵ which was published in 1790 or in 1793 in Naples by Luigi Marescalchi. The piece, which is said to have been written in the 1780s, is very close in concept and terminology to Stadler's Table. *À la infinite* is what Stadler had in mind and Haydn, if he really wrote the *Gioco* himself, refers to it as "infinito numero". Once more, it was the

13 Translation by the author, German original: *Einfall, einen doppelten Contrapunct in der Octave von sechs Tacten zu machen ohne die Regeln davon zu wissen.*

14 Translation by the author, French original: *Table pour composer des minuets et des Trios à la infinie; avec deux dez à jouer.*

15 Translation by the author, Italian original: *Gioco filarmonico, o sia maniera facile per comporre un infinito numero di minuetti e trio anche senza sapere il contrapunto : da eseguirsi per due violini e basso, o per due flauti e basso.*

easy method – *maniera facile* – that served as key motivation for composers of the eighteenth century to use gamification for the compositional process.

Leonard Meyer observes that the practice of aleatoric and ludic methods in musical composition and in musical performance are for good reasons present in the eighteenth century but hard to find in nineteenth century musical practice:

Eighteenth-century composers constructed musical dice games while nineteenth century composers did not [. . . W]hat constrained the choice of figures were the claims of taste, coherent expression and propriety, given the genre of work being composed, rather than the inner necessity of a gradually unfolding, underlying process [as in nineteenth century music]. (Meyer 1989, 193)

I would argue here that gamification provides methods for coherence and propriety in the context of music – as has been demonstrated by Meyer –, but also in other contexts such as learning (cf. the section below), religious practice (cf. the section above) and dance. That is why the eighteenth century is a time when examples of predigital gamification can be found in many cases. Processes that are driven by gradually unfolding underlying structures are much harder to be gamified. The ludic turn of the eighteenth century became apparent not only in the passion for games, in ludified social manners, in religious practice or in music. It also shaped the way people used to dance then. In her “Sociology of Dance on Stage and in Ballrooms”¹⁶ Reingard Witzmann notices that dance was conceived as a game in Mozart’s Vienna. At the end of the last act of *Le Nozze di Figaro* Mozart calls the actors of *Le Nozze* to reassemble on stage and proclaim what could be called the motto of the century: “*Sposi, Amici, al Ballo, al Gioco!*” (Witzmann 2006, 403).¹⁷

There are two points I want to make here by putting examples from the gamification of music and dance in close vicinity to the gamification of religious practice of the very same decades:

16 Translation by the author, German original: “[. . .] Zur Soziologie des Gesellschaftstanzes auf der Bühne und im Ballsaal.“

17 English: “Beloved ones, Friends, lets Dance, lets Play!”.

1. I'd like to support the concept of gamification as "permeation of society with methods, metaphors, values and attributes of games" (Fuchs 2011, 2013) as opposed to the idea that gamification can fully be understood as the transfer of game design elements to non-game contexts with no regard to the historical and social framing. The latter is symptomatic for most of the scholarly attempts to define gamification (Deterding et al. 2011¹⁸, Schell 2010¹⁹, Werbach and Hunter 2012²⁰). If I understand Deterding, Dixon, Khaled and Nacke, Shell, Werbach and Hunter correctly, then a single instance of adapting game design elements for non-game contexts could qualify as gamification. My understanding of gamification differs from that and I would be extremely hesitant to theorise societally isolated actions like convenience store marketing or flight sales optimisation as relevant for the phenomenon of gamification, if they are detached from a historical view and a social perspective that includes cultural analysis on a global scale. The way I want to use the notion of gamification is in line with various "fications" and "izations" that have been introduced in the social sciences over the past 20 years. *Globalization* (Robertson 1992, Ritzer 2011), *McDonaldization* (Ritzer 1993), *Californication* (Red Hot Chilli Peppers 1999)²¹, *Ludification* (Raessens 2006), *Americanization* (Kooijman 2013) or *Disneyization* (Bryman 1999, Hartley and Pearson 2000) are all based on the assumption that we observe large societal changes that are driven by apparatuses that influence various sectors of society at a time. Of course, McDonaldization cannot be attributed to a society as a result of a few fast-food restaurants having been spotted in countries other than the USA. It is a way of living based on an economic structure, a power structure, a number of neologisms and changes in spoken language, introduction of a set of

see also
Raessens
p. 95

18 See introduction to this article.

19 "Gamification is taking things that aren't games and trying to make them feel more like games" (Schell, 2010).

20 "Gamification is the application of game elements and digital game design techniques to non-game problems, such as business [. . .]" (Werbach and Hunter 2012).

21 The video to the rock song *Californication* by the Red Hot Chilli Peppers is a perfect example for gamification of pop music.

manners and habits, and a perceptual shift that make McDonaldization what it is (Kooijman 2013). I would in analogy claim that game design elements applied to non-game contexts do not make a society gamified. It is the permeation of many societal sectors with methods, metaphors, and values that stem from the sphere of play that produce gamification.

2. I want to show here that certain historical constellations have provided fertile ground for the process of predigital gamification. The second half of the eighteenth century certainly was one of those. The intention is also to explain why certain moments in history lent themselves to foster gamification, and to propose a few good reasons why our decade seems to be one of those as well.

3 GAMIFYING THE MAGIC ARTS

In 1762 Wolfgang Schwarzkopf published a book in the German city of Nuremberg that presented an enlightened and new take on what formerly has been said to be black magic or premodern sorcery. Schwarzkopf subtitled the book *Playground of Rare Sciences*²² and combined a description of mathematical and mechanical skills with essays about card and dice games followed by an encyclopaedic section of prestidigitator tricks. This book was one of many scientific attempts of the eighteenth century to reclaim magic and enchantment as playful activities – and to separate it from any connotations to diabolic and irrational activities. In their book *Rare Künste* Brigitte Felderer and Ernst Strouhal lay out how the cultural history of magic took a dramatic turn in the eighteenth century and abandoned medieval black magic in favour of a ludic activity (Felderer and Strouhal 2006). This new form of edutainment was based on an enlightened concept of popular science, socially embedded empirical research and a post-religious belief in the fact that the new type of magic had much more in common with science than with ritualistic or obscure practices from the past. As James George Frazer put it in his *Golden Bough*:

22 Translation by the author, German original: *Spielplatz rarer Künste*.

Magic is much closer to Science than it is to Religion. Different to what religion tells us, Magic and Science both are based on the presupposition that identical causes result in identical effects. (Frazer 1989, 70)

As a consequence, it made a lot of sense for the eighteenth century publisher to talk about “natural magic” – as Schellenberg did in 1802²³ – or “the magic of nature” – as done by Halle in 1783²⁴. The reappearing pattern of legitimation for the act of talking about magic as a game and as science is the rhetoric figure that magic is useful in societal daily life and that it is entertaining: “Revised to Take Account of Entertainment and Serious Applications” (Halle in Huber 2006, 335) or “Useful for Social Life” (Schellenberg in *ibid.*). This line of argumentation can be followed via Goethe’s *bonmot* of “scientific games like mineralogy and the likes”²⁵ (Kaiser 1967, 37)²⁶ up to the present. This is probably not the place to develop the idea, but I would speculate that the notion of *serious games* can be followed back to the eighteenth century programmatic efforts to declare magic as a game, and in doing so introducing the idea that science can be entertaining and that entertainment can be scientifically relevant. Today we call this project *edutainment*.

23 The full title of Schellenberg’s book is *A Glance/at/Döbler’s and Bosko’s/Magical Cabinet,/ Consisting of/New Enchantment from the Field of/Natural Magic/that is Useful for Social Life*. (Translation by the author, German original: *Ein Blick/in/Döbler’s und Bosko’s/ Zauberkabinet,/ bestehend/in neuen Belustigungen aus dem Gebiete/der natürlichen Magie,/ im gesellschaftlichen Leben anwendbar*, Huber 2006, 335).

24 Johann Sebastian Halle’s book was published by Joachim Pauli in 1783 in Berlin as *Magic,/ or/ Magical Power of Nature,/ Revised to Take Account of Entertainment and Serious Applications*. (Translation by the author, German original: *Magie,/ oder, die/Zauberkräfte der Natur,/so auf den Nutzen und die Belustigung/angewandt worden,/ von/Johann Samuel Halle,/ Professor des Königlich=Preußischen Corps des Cadets/in Berlin*, Huber 2006, 335).

25 Translation by the author, German original “wissenschaftliche Spiele wie die Mineralogie”.

26 Johan Wolfgang von Goethe’s autobiographical *raisonnement* called *From my Life: Poetry and Truth* (German original: *Aus meinem Leben. Dichtung und Wahrheit*) was written between 1808 and 1831. It is said to be a reflection on Goethe’s life in the 1750s to 1770s. The phrase about “scientific games” is quoted from Kaiser 1967.

4 GAMIFYING LIFESTYLE IN THE “CENTURY OF PLAY”

In 1751 Daniel Bernoulli tried to catch the zeitgeist of his century by saying, “The century that we live in could be subsumed in the history books as: Free Spirits’ Journal and the Century of Play” (Bauer 2006, 377).²⁷ Bernoulli expressed an observation about the gamification of lifestyle that was based on observations in Vienna, but was valid for the main European capitals like Paris, Rome, London, the Haag, and Naples. The gaming culture was a pan-European phenomenon based on widely distributed types of games and game rules. *L’Hombre* (14th century), for example, was a game of cards originally developed in Spain, then picked up by Maria Theresia, the wife of Louis XIV, and was within a few years played in all European countries with only a few local variations.²⁸ This made it possible for a new travelling social class that extended beyond aristocracy to engage in gaming as a European lingua franca. Frequent travellers such as Mozart or Johann Wolfgang von Goethe could expect to find a gaming community in almost every city in Europe that they could share experiences and social skills with. Instructions for games like the mid-eighteenth century “Pleasant Pastime with enchanting and joyful Games to be played in Society” (ibid., 383)²⁹ were translated into most of the European languages and became popular among people of different social classes (ibid.). Lotteries could be found everywhere and became a source of income for some and a serious economic problem for others. Hazardous games or *jeux de contrepartie*, such as the *Pharo* (18th century) game or *Hasard* (14th century) were temporarily banned.

The eighteenth century was also the time when “*apartements pour le jeu*”, or play rooms, were introduced in the houses of the aristocracy as well as in houses of the bourgeoisie. Special furniture was designed to both display

27 Translation by the author, German original: “Das gegenwärtige Jahrhundert könnte man in den Geschichtsbüchern nicht besser, als unter dem Titel: Das Freygeister=Journal und Spielsaeculum nennen”.

28 In Spain the game was called “Juego del tresillo” and there was the Spanish set of cards used lacking the eights and nines.

29 Translation by the author, German original: “Angenehmer Zeitvertreib lustiger Scherz-Spiele in Compagnien” (anonymous 1757, quoted by Bauer 2006, 383).

well-designed games and to hide such games from view.³⁰ Social lifestyle evolved from the seventeenth to the eighteenth century through gamification: via the increased availability of games and gaming circles, trans-European distribution channels for gaming, and social acceptance that transcended class and social group. This is why Bernoulli's proposition to call the eighteenth century the "Century of Play" makes a lot of sense. Having said so, Bernoulli was unable to see how another wave of gamification would change another century; nevertheless, the twenty-first century is about to repeat the games craze of the eighteenth century. Today we see ubiquitous availability, transplanetary distribution channels, and an acceptance of computer games that transcends class and social group, and games no longer belong to any age group, ethnicity, gender, or subculture.

5 GAMIFYING LEARNING

In 1883 Samuel Langhorne Clemens, also known as Mark Twain, was trying to create an easy way for his daughters to remember the English monarchs and the dates when they commenced and finished ruling. Twain described the problem he was faced with in his notebooks: "It was all dates, they all looked alike, and they wouldn't stick" (Twain 2009). So Twain figured out a playful method of remembering dates, names, and numbers by mapping them to positions on a piece of land. He measured out 817 feet – each foot representing a year – and then put stakes in the ground where kings and queens started their reigns. His daughters remembered the dates by remembering spatial positions. "When you think of Henry III, do you see a great long stretch of straight road? I do; and just at the end where it joins on to Edward I. I always see a small pear-bush with its green fruit hanging down" (*ibid.*), he wrote.

When Twain's daughters learned the monarchs' dates in two days (they had been trying all summer), he knew he had discovered an efficient method for gamified learning. After a couple of years of tinkering, Twain patented the Memory Builder (1895): A Game for Acquiring and Retaining All Sorts of Facts and Dates. It consisted of a game board similarly divided by years.

30 See Salomon Kleiner's "apartements pour les jeu" from the first half of eighteenth century as found in Lachmayer 2006.

The game included straight pins, and players would stick a pin in the appropriate compartment to show that they knew the date of the event in question. Points were awarded based on the size of the event and how specific players could get on the date.

Mark Twain's invention introduced two elements of play into a teacher-learner relationship. On the one hand, he declared learning as an entertaining activity by framing it within a board game. On the other, he gamified historical data as spatial information. Information and knowledge about time and chronological order is reframed as spatial relationship. In terms of Derridean philosophy there is some type of play taking place (and taking time) on a semiotic level and the level of the very game's board. According to Derrida there is *différance*, an active movement involving spacing and temporalising. The presence of one element cannot compensate for the absence of the other. A gap or interval remains that escapes complete identity. "Constituting itself, dynamically dividing itself, this interval is what could be called spacing; time's becoming-spatial or space's becoming temporal (*temporalizing*)" (Derrida 1972 / 1968, 143). Mark Twain's board game therefore plays on two levels: The game is obviously a playful approach to teaching history as it differs from traditional and rather solemn forms of classroom lectures. The second level of play is a metalevel of spacing and temporalising, as described by Derrida. The instructions for the Memory Builder game state that:

1. The board represents *any* century.
2. Also, it represents *all* centuries.

This is what would have to be called dynamic spacing in Derrida's words or an ambiguous and playful potential for spatialisation of historical data. The player in this learning application encounters history as gamified and not as a solid body of knowledge based on numbers only.

6 GAMIFYING KILLING

In this section of the article, I want to present a rather small number of examples how the act of killing and the selection of victims can be gamified. I am not going to differentiate between military-action killing as the so-called legal procedure during war and illegal activity by gangs or individual gangsters.

It seems to me that it is impossible to differentiate between those two except on a cynical level. My intention is rather to show how the selection of victims can be influenced by a games system with proper rules and an outcome to the game played. The examples I would like to choose are the infrequent process of decimation in the Roman army and other military forces and an example taken from literature that is based on aleatoric gaming.

Roman praetor Marcus Crassus, when sent to the south of Italy in 71 BC during the Spartacan revolt, noticed that Mummius, one of Crassus' officers, had engaged the rebels in an early fight and lost. Many of his troops deserted the field instead of fighting. Crassus, in response to this embarrassment, ordered his legions decimated. The process of decimation is an aleatoric process that results in what Roman law would consider fair by selecting one out of ten accused to be killed. The logic in devising such an inhuman procedure, which seems completely unfair to us, is ludic. The rationale of random killing refers to a concept of Fortuna being both blind and just at the same time. Gamified mechanics of killing can therefore not be called unfair, a cheat, corrupt, or meaningless – if one believes in the apparatus of play, they must be seen instead as the ultimate form of game-inherent logic. I have tried to suggest in another publication that this circle of perfect logic makes gamification a perfect case of ideology in the sense of Sohn-Rethel's understanding of ideology, i.e. *necessary false consciousness* (Fuchs 2014).

“The century that we live in could be subsumed in the history books as . . . the Century of Play“

- Daniel Bernoulli, 1751

The idea to use alea is not an exclusively military accomplishment. Small crime can sometimes arrive at similar methods to solve problems. So did Anton Chigurh in *No Country for Old Men* (McCarthy 2005). Chigurh forces his victims to have him toss a coin, and to be killed or left alive depending on the outcome of the coin toss. The perfidiousness of delegating a vital decision upon chance is in line with the rationale of Roman martial law to decimate the legions. Chigurh's motivation to allow for an escape from the fatal consequences of his manhunts has been speculated about at great length. Isabel Exner describes the killer as “*Homo aleator*” who introduces a de-individualised form of violence. (Exner 2010, 61) This “new man” is obviously a counter-concept to the traditional heroes of Western movies: The sheriff, the honest loner who is looking for revenge, and the intelligent

gangster are both “*Homo faber*” type characters. They could solve their respective problems via individualised decision-making and action. Isabel Exner’s proposition for the emergence of the *Homo aleator* in *No Country for Old Men* is not exclusively cinematic or related to the history of American movies and crime stories. Exner suggests that chance has become “the fundamental working principle of the prevailing order [. . .] that has already integrated Michel Serre’s finding, that ‘chance, risk, terror and even chaos have the potential to consolidate the system’” (ibid.).³¹

7 CONCLUSION

This article cannot provide the reader with a complete history of gamification and gamification-related historical documents to prove that something that we call gamification now has happened already in former centuries. Neither can I sum up all of the possible differences that might exist between games of former centuries and computer games of our days. My main hypothesis is that we can detect similarities in aspects of the games hype, games craze, seriousness of games, and of a process that transforms non-game contexts into playgrounds for ludic activities and of ludic experience across centuries. Such playgrounds could once be found in learning, religious practice, music, magic, dance, theatre, and lifestyle. Such playgrounds for ludic activities can be spotted equally well nowadays: When we look at theatre theory and find “Game Theatre” (Rakow 2013); when we look at religious blogs and find “Gamifying Religion” (Toler 2013); when we look at the information from health services and find “Fun Ways to Cure Cancer” (Scott 2013) or “Dice Game Against Swine Flu” (Marsh and Boffey 2009); or when we investigate collective water management and find “Games to Save Water” (Meinzen-Dick 2013).

It is the range of applications and not the individual examples that support the hypothesis that gamification takes place as a global trend, a new form of ideology – or as a *dispositif*, if you will. This is not exclusively

31 Translation by the author, German original: “das basale Funktionsprinzip einer herrschenden Ordnung [. . .] die Serres’ Erkenntnis längst integriert hat, dass ‘Zufall, Risiko, Angst und selbst Unordnung ein System zu konsolidieren vermögen’”. Exner quotes Michel Serres here from: *Der Parasit* (1987), page 29.

dependent on the digitalisation of society or the massive economic success of computer games. What I have tried to demonstrate here is a historic perspective on an understanding of gamification as a way of living (and dying), making music, selling and buying, engaging in economic processes and power structures, communicating, and introducing new manners and habits for a decade or a whole century. This can be the decade of the 2010s, but it can also be the eighteenth century, the “Century of Play” – *Spielsaeculum* – as Bernoulli called the century in which he was living in 1751.

The second half of the eighteenth century shared “pragmatic-relevant networking” (Lachmayer 2006, 35) with our days. The contemporaries of Wolfgang Amadeus Mozart, Schikaneder, Tersteegen, Casanova, Bernoulli, Schwarzkopf, and Stadler were deeply involved in a European “supra-nationality” (ibid.) that assembled a multiplicity of languages, lifestyles, games, and sources of knowledge; all of which somehow resembles our activities on the World Wide Web – without being worldwide then. Still powered by the naivety of a desire for unfiltered access to a variety of scientific, semi-scientific, popular, or superstitious forms of knowledge, the enlightened and the not-so-enlightened of the eighteenth century were striving for visions of progress. Playfulness on a personal level that included *mimesis*, *alea* and *ilinx* (Cailliois 2001 / 1958) was a driver for *caprice* and virtuality rather than flat realism. The ludicity of the times was conducive to multifaceted identities and strictly contradictory to a monosequential development of character and career that later centuries required for social inclusion. It might be that we have returned to the state of Mozartesque playfulness and that the gamification of our society sets up a scenario for an intelligent plurality of expression, experience, and knowledge on a global level. Not completely serious, but myth-making and myth-breaking at the same time.

It might, however, also be true that our decade resembles the second half of the eighteenth century in a way that Doris Lessing once described with these words: “This country becomes every day more like the eighteenth century, full of thieves and adventurers, rogues and a robust, unhyprocritical savagery side-by-side with people lecturing others on morality” (Fielding 1992, 762). Rococo culture developed a style that was jocular, florid, and graceful, while at the same time being full of sophisticated coarseness. And is this not identical to the state that our discourse on gamification is at. We want to be SuperBetter (2012) and want to enjoy “self-expansion escapism” (Kollar 2013).

We are slightly worried about it and we speculate about a forthcoming “revolution” (Zichermann 2013), yet we shout out loudly “Gamification is Bullshit!” (Bogost 2011). We finally discover that “gamification is transforming our world, contaminating it like never before” (Reilhac 2010).

That’s so Rococo!

BIBLIOGRAPHY

- BAUER, GÜNTHER. 2006. “Mozart, Kavalier und Spieler.” In *Mozart: Experiment Aufklärung*, edited by Herbert Lachmayer, 377–388. Ostfildern: Hatje Cantz.
- BOGOST, IAN. 2011. “Gamification Is Bullshit! My Position Statement at the Wharton Gamification Symposium.” *Ian Bogost Blog*, August 8.
http://www.bogost.com/blog/gamification_is_bullshit.shtml.
- BRÜCKNER, SHIRLEY. 2010. “Lösen, Däumeln, Nadel, Würfeln.” In *Spiel und Bürgerlichkeit: Passagen des Spiels I*, edited by Ernst Strouhal and Ulrich Schädler. Wien, New York: Springer.
- BRYMAN, ALAN. 1999. “The Disneyization of Society.” *Sociological Review* 47(1): 25–47.
- CAILLOIS, ROGER. 2001 / 1958. *Man, Play and Games*. Urbana: University of Illinois.
- CIOTTI, GREGORY. 2013. “Gamification and Customer Loyalty: The Good, The Bad, and The Ugly.” *Help Scout*, May 1.
<https://www.helpscout.net/blog/gamification-loyalty/>.
- CORRY, WILL. 2011. “Games for Brands Conference, Launching I London on October 27th.” *TheMarketingblog Extra*, September 11.
http://wccorry.blogspot.de/2011_09_11_archive.html.
- DEMONTE, ADENA. 2013. “What Motivates Employees Today?” Accessed February 25, 2014.
<http://badgeville.com/2013/06/13/what-motivates-employees-today>.
- DERRIDA, JACQUES. 1972 / 1968. *Differance, Speech, and Phenomena*. Evanston: Northwestern University Press.

- DETERDING, SEBASTIAN, DAN DIXON, RILLA KHALED AND LENNART NACKE. 2011. "From Game Design Elements to Gamefulness: Defining Gamification." In *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments*, 9-15. New York: ACM.
- DIRX, RUTH. 1981. *Das Buch vom Spiel*. Gelnhausen: Burckhardt-Verlag.
- EXNER, ISABEL. 2010. "Verbrechen Als Spiel? Aleatorik im Krimi (Jorge Luis Borges, Cormac McCarthy, Etan und Joel Coen)." In *Das Spiel und Seine Grenzen. Passagen des Spiels II*, edited by Mathias Fuchs and Ernst Strouhal, 47-66. Vienna, New York: Springer.
- FELDERER, BRIGITTE AND ERNST STROUHAL. 2006. *Rare Künste: Zur Kultur- und Medien-geschichte der Zauberkunst*. Vienna, New York: Springer.
- FIELDING, HENRY. 1992. *Tom Jones*. Ware, Hertfordshire: Wordsworth Classics.
- FLEMING, NIC. 2012. "Gamification: Is It Game Over?" *BBC*, December 5. Accessed January 9, 2014.
<http://www.bbc.com/future/story/20121204-can-gaming-transform-your-life>.
- FRAZER, JAMES GEORGE. 1989. *Der Goldene Zweig. Das Geheimnis von Glauben und Sitten der Völker*. Reinbek: Rowohlt.
- FUCHS, MATHIAS. Forthcoming. "Subversive Gamification." In *Playing the System: The Playful Subversion of Technoculture*, edited by Daniel Cermak-Sassenrath, Chek Tien Tan and Charles Walker. Singapore: Springer.
- FUCHS, MATHIAS. 2013. "Serious Games Conference 2013: Erfolgreiches Comeback Nach Einjähriger Pause." Accessed February 27, 2014.
<http://www.biu-online.de/de/presse/newsroom/newsroom-detail/datum/2013/03/13/serious-games-conference-2013-erfolgreiches-comeback-nach-einjaehriger-pause.html>.
- FUCHS, MATHIAS. 2011. *Ludification: Ursachen, Formen und Auswirkungen der 'Ludification'*. Potsdam: Arbeitsberichte der Europäischen Medienwissenschaften an der Universität Potsdam.
- GARTNER, INC. 2011. "Gartner Says By 2015, More Than 50 Percent of Organizations That Manage Innovation Processes Will Gamify Those Processes." Accessed January 9, 2014.
<http://www.gartner.com/newsroom/id/1629214>.
- GOETHE, JOHAN WOLFGANG. 2001 / 1808–1831. *Aus Meinem Leben. Dichtung und Wahrheit*. Leipzig: Reclam.
- GOLDSTEIN, MARK. 2013. "Reinventing Loyalty with Gamification." Accessed March 31, 2014.
<http://de.slideshare.net/gzicherm/mark-goldstein-gamificationpresto>.
- HARTLEY, JOHN AND ROBERTA E. PEARSON. 2000. *American Cultural Studies: A Reader*. Oxford: Oxford University Press.
- HUBER, VOLKER. 2006. "Magisch-Bibliographische Erkundungen." In *Rare Künste: Zur Kultur- und Mediengeschichte der Zauberkunst*, edited by Ernst Strouhal, and Brigitte Felderer, 313-338. Vienna, New York: Springer.
- KAISER, WOLFGANG. 1967. *Kunst und Spiel. Fünf Goethe-Studien*. Göttingen: Vandenhoeck & Ruprecht.
- KOLLAR, PHILIP. 2013. "Jane McGonigal on the Good and Bad of Video Game Escapism." *Polygon*, March 28.
<http://www.polygon.com/2013/3/28/4159254/jane-mcgonigal-video-game-escapism>.
- KOOIJMAN, JAAP. 2013. *Fabricating the Absolute Fake. America in Contemporary Pop Culture*. Amsterdam: Amsterdam University Press.
- LACHMAYER, HERBERT. 2006. *Mozart. Aufklärung im Wien des Ausgehenden 18. Jahrhunderts*, Ostfildern: Hatje Cantz.
- MARCZEWSKI, ANDRZEJ. 2012. *Gamification: A Simple Introduction & a Bit More*. Self Publishing.

- MARKETS AND MARKETS. 2013. "Gamification Market." Accessed January 9, 2014.
<http://www.marketsandmarkets.com/Market-Reports/gamification-market-991.html>.
- MARSH, BEEZY AND DANIEL BOFFEY. 2009. "Fluedo: Health Chiefs Introduce Their Latest Weapon in the War Against Swine Flu... a Dice Game." *Dailymail*, August 30. Accessed January 15, 2014.
<http://www.dailymail.co.uk/health/article-1209974/Fluedo-Health-chiefs-introduce-latest-weapon-war-swine-flu.html>.
- MCCARTHY, CORMAC. 2005. *No Country for Old Men*. New York: Alfred A. Knopf.
- MCGONIGAL, JANE. 2011. *Reality Is Broken. Why Games Make Us Better and How They Can Change the World*. New York: Penguin.
- MEINZEN-DICK, RUTH. 2013. "Playing Games to Save Water." *IFPRI*, March 22.
<http://www.ifpri.org/blog/playing-games-save-water>.
- MEYER, LEONARD. 1989. *Style and Music: Theory, History, and Ideology*. Philadelphia: The University of Pennsylvania Press.
- MOSCA, IVAN. 2012. "+10! Gamification and deGamification." *GAME* 1(1).
http://www.gamejournal.it/plus10_gamification-and-degamification/#.UwtTd_R5OA8.
- NIERHAUS, GERHARD. 2009. *Algorithmic Composition: Paradigms of Automated Music Generation*. Wien, New York: Springer.
- PAHARIA, RAJAT. 2013. "Loyalty 3.0: Big Data and Gamification Revolutionizing Engagement." <http://de.slideshare.net/gzicherm/rajat-pahariag-summit2013>.
- PALMER, DOUG, STEVE LUNCEFORD AND AARON J. PATTON. 2012. "The Engagement Economy: How Gamification is Reshaping Businesses." *Deloitte Review* 11: 52–69.
- RAESSENS, JOOST. 2006. "Playful Identities, or the Ludification of Culture." *Games and Culture* 1(1): 52–57. London: SAGE Journals.
- RAKOW, CHRISTIAN. 2013. "rePLAYCE:theCITY." Accessed January 15, 2014.
<http://www.trans4mator.net/styled-2/page9/index.html>.
- RED HOT CHILLI PEPPERS. 1999. *Californication*. Warner Bros. Compact Disc.
- REILHAC, MICHEL. 2010. "The Gamification of Life." *Power to the Pixel*, October 26.
<http://thepixelreport.org/2010/10/26/the-game-ification-of-life/>.
- RITZER, GEORGE. 2011. *Globalization: The Essentials*. New York: John Wiley & Sons.
- RITZER, GEORGE. 1993. *The McDonaldization of Society*. London: SAGE Publications.
- RITSCHL, ALBRECHT. 1884. *Geschichte des Pietismus in 3 Bänden*. Bonn: Adolph Marcus.
- ROBERTSON, ROLAND. 1992. *Globalization: Social Theory and Global Culture*. London: Sage.
- SHELL, JESSE. 2010. "When Games Invade Real Life." Accessed March 31, 2014.
http://www.ted.com/talks/jesse_schell_when_games_invade_real_life.html.
- SCHMIDT, SEBASTIAN. 2005. *Glaube - Herrschaft - Disziplin. Konfessionalisierung und Alltagskultur in den Ämtern Siegen und Dillenburg (1538-1683)*. Paderborn: Ferdinand Schöningh.
- SCOTT, HILDA. 2013. "Amazon, Facebook And Google Design Fun Way To Cure Cancer." *iTechPost*, March 1.
<http://www.itechpost.com/articles/5935/20130301/amazon-facebook-google-design-game-cure-cancer-research-uk.htm>.
- SERRES, MICHEL. 1987. *Der Parasit*. Frankfurt am Main: Suhrkamp.
- TERSTEEGEN, GERHART. 1729–1769. *Geistliches Blumen=Gärtlein Inniger Seelen. oder, Kurtze Schluß=Reimen, Betrachtungen und Lieder, Über Allerhand Wahrheiten des Inwendigen Christentums*. Frankfurt and Leipzig: G.C.B. Hoffmann.
- TOLER, JONATHAN. 2013. "Gamifying Religion Part 1." Accessed January 15, 2014.
<http://www.jonathantoler.com/2013/01/gamification/gamifying-religion-part-1/>.

- TRAVERS, PAMELA LYNDON. 1934. *Mary Poppins*. London: HarperCollins.
- TWAIN, MARK (Samuel Langhorne Clemens). 2009. "How to make History Dates Stick." Accessed March 31, 2014.
http://www.gutenberg.org/files/70/70-h/70-h.htm#link2H_4_0005.
- WERBACH, KEVIN AND DAN HUNTER. 2012. *For The Win. How Game Thinking Can Revolutionize Your Business*. Philadelphia: Wharton Digital Press.
- WITZMANN, REINGARD. 2006. "'Sposi, Amici, al Ballo, al Gioco!...' Zur Soziologie des Gesellschaftstanzes auf der Bühne und im Ballsaal." In *Mozart. Experiment Aufklärung*, edited by Herbert Lachmayer, 403-414. Ostfildern: Hatje Cantz.
- WOLFERZ, LOUIS E. 1916. "The Rime Technique in the Poems of Reinmar von Zweter." PhD diss., Cornell University.
- ZICHERMANN, GABE AND CHRISTOPHER CUNNINGHAM. 2011. *Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps*. Sebastopol: O'Reilly.
- ZICHERMANN, GABE AND JOSELIN LINDER. 2013. *The Gamification Revolution. How Leaders Leverage Game Mechanics to Crush the Competition*. New York: McGraw-Hill Professional.

LUDOGRAPHY

- DER ALLEZEIT FERTIGE MENUETTEN- UND POLONAISENCOMPIST. 1757. Developed by Johann Philipp Kirnberger. Musical game.
- DER FROMMEN LOTTERIE. 1769. Developed by Gerhard Tersteegen. Card game.
- EINFALL, EINEN DOPPELTEN CONTRAPUNCT IN DER OCTAVE VON SECHS TACTEN ZU MACHEN OHNE DIE REGELN DAVON ZU WISSEN. 1758. Developed by Carl Philipp Emanuel Bach. Musical game.
- GIOCO FILARMONICO, O SIA MANIERA FACILE PER COMPORRE UN INFINITO NUMERO DI MINUETTI E TRIO ANCHE SENZA SAPERE IL CONTRAPUNTO : DA ESEGUIRSI PER DUE VIOLINI E BASSO, O PER DUE FLAUTI E BASSO. 1790 (or 1793). Probably developed by Joseph Haydn. Musical game. Luigi Marescalchi.
- HASARD. 14th century (or earlier). Dice game.
- L'HOMBRE. 14th century. Spain. Card game.
- MEMORY-BUILDER: A GAME FOR ACQUIRING AND RETAINING ALL SORTS OF FACTS AND DATES. 1895. Developed by Mark Twain. Open-air game.
- MUSIKALISCHES WÜRFELSPIEL. 1792. Developed by Nikolaus Simrock (or arguably Wolfgang Amadeus Mozart). Musical game.
- PHARO. 18th century. Card game.
- SUPERBETTER. 2012. Jane McGonigal.
<https://www.superbetter.com>.