LUDIC GAMES: PLAYFUL FORMS OF INSIGHT

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ABSTRACT

The name *Ludics,* is derived from the term *ludus,* meaning "play," a term that is useful in connection with games and rules of play. As a concept for artistic research, the Ludic method is introduced here as it combines both games and rules of play. Conceptual ludic art explores rules of play, systems of investigation and knowledge acquisition through game mechanics as well as the fundamentals of perception, experience and cognition. The theory and practice of artistic research are concerned with ludic methods of approaching art and science and epistemic things (*Erkenntnisgegnstände*), insights achieved through research. Their goals are written fictitiously, presented participatively and made public processually. The methods of artistic research comprise contradictions, and are found in feedback between peers in conference contributions and in exhibitions, between radical artistic uniqueness and the claim of universal validity (which is required for the validation of artistic research). We need to clarify the scientific understanding of epistemic things, and as a consequence, introduce a new concept of a ludic artistic research epistemé. Ludic objects are artefacts that trigger discourse and the application of certain rules of research. They constitute an interplay of art and knowledge. Teaching this understanding is equally tied to a certain playful approach toward serious, rule-driven research. Following a ludic method, we introduce a new trope to artistic research, the idea of a playful movement in thinking that dissolves the established trope of art as a field with no further connections than aesthetics per se. The ludic objective thus stems from technologies and cultural techniques of insight, as well as theories, experiments and philosophical conceptions that are connected to the perceived, conceived and lived world.

KEYWORDS

ludic research method, ludic objects, experiments, epistemology

Ludics: Playful Forms of Insight

Artistic research is increasingly gaining in interest within academic discourses. Accordingly, there is a need to more fully understand its potential. Artists doing research also need to invent their own artistic methods of research. This paper presents a new conception of artistic research, a playful form called *Ludic research.* The name *Ludics* is derived from the Latin *ludus,* meaning "play," and the contemporary scientific term *systemics.* The Ludic method is introduced here as a concept for artistic research. Conceptual ludic art explores rules of play and systems of investigating and gaining knowledge through game mechanics. It addresses principles of perception, experience and cognition. Developments in artistic research mirror these principals. Ludics is also imagined as a conceptual game concerned with artistic research. It applies academic "rules" of forming a research society, participating in a research association, and writing regular texts concerned with exemplary art works. Ludics as a concept can be read as a reference to playful methodologies, as introduced in the project and research association, the Ludic Society, founded in 2006 in Plymouth, England. In the proceedings of this early artistic research society, poetic writing was published and presented as research theory about play. Each issue of the Ludic Society magazine was published on the occasion of the creation of a new Game Art work. Game Art projects include public interventions through urban games, the playful modification of technical objects of everyday life into discourse objects, or performances in public space as forms of activism with playful mechanisms. Among these art works are *Objects of Desire City Wifi-Sniff* (2008), *Blitzplay* (2007), and *Tagged City Play* (2007). (For documentation and texts belonging to these artworks, go to: http://www.ludic-society.net.)

A specific quality of Ludic research in actual projects (such as my own art pieces *Neuroflow Role Play Performances* and *Neurospace Games,* 2017-2019) identifies a new alliance between artistic research (AR) and scientific research (SR). (*Neuroflow Role Play Performances* and *Neurospace Games,* 2017-2019 were art pieces, combining scientific experiments and game mechanics. See documentation of the games at the webpages http://www.margaretejahrmann.net/appdate/ and http://www.margaretejahrmann.net/2018-neuroflow/) This new orientation of Ludic research involving life sciences highlights similarities and differences between both fields. It does not understand AR as a variation of SR. For Ludics, basic epistemological assumptions and methodological matters are not science-based but are informed by the logics of play and art production. A good example of such a work is the Ludic experiment *Dancing Epicycles of Collective Motion* performed in 2019 in the Tate Gallery London at the Tate Exchange Event "Moving Humans." In this event, neuroscientists collaborated with artists to perform a public experiment on memory and the perception of space and movement. A neuroscience research group from the Ludwig Maximilian University Munich sensorimotor laboratory became interested in the social aspects of artistic research and game mechanics, especially when the debriefing of participants was factored into the quantification of the experiment. The artistic contribution to the experiment was the choreographic idea of following the shape of a pentagram, a symbolic shape representing the magic circle of games and play, as described by Jan Huizinga in his seminal book *Homo Ludens* (1938). The Tate Gallery event placed a specific focus on the cultural and educational aspects of the collaboration of artists and scientists. The overall aim of the event was to communicate actual science to an interested art-and-culture public. *Dancing the Epicycles of Collective Motion* inverted this approach and made the principles of art production accessible to scientists. Afterwards, the participants made drawings based on their individual perceptions of the event. All of the data was then factored into a collective art piece in the form of a digital sculpture,[1] a figure of the movements of participants in time.

These Ludic research works couple arts game mechanics, immersion and VR with Neurointerfaces. The experimental Neuroflow Game has an "emotive" interface, an EEG tool that measures brain activities: it places meditation and passivity at the center of an absurd game with a brain interface that serves as a

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1   Comparable artworks applying Ludic methods are "Neurospace" (2017, http://neuro-space.net) and pieces published under the label Neuroflow.

Figure 1. Artificial Research Graph, Max Moswitzer, 2019.

symbolic object promising a future of "brain reading," wherein thoughts can be read via brain scans. Because the participant/player, with an Emotive EEG Interface mounted on his or her head, navigates through the game levels by doing nothing but relaxing, this art work can be said to critically question game mechanics and the insistence upon activity in contemporary digital culture thanks to an interface that only asks players to meditate. The very new consumer neuro-interface and its difficult use is presented in conjunction with an anachronistic re-built game console that shows the game display. Staring at the screen of an old-school game console is experienced in relation to the recent increase of more and more available brain-reading devices. Both the daily, constant demand for self-optimization and the inherent data surveillance of gamified life-style technologies are being questioned in this installation. The principal message of this Ludic piece lies in the artistic questioning of the social meaning of neurosciences and aesthetics in relation to personal "data" as a potential "inscription," the inherent meaning written into the data, about the human condition. This exemplary piece also makes it clear that Ludics is about introducing a systematic set of rules that allow a new form of a controlled environment for artistic research. And, after the introduction of such rules, the variations grow with their artistic application. To more effectively position artistic research in relation to scientific research, the following section will outline the essence of AR as conceptualized within Ludics, as well as highlighting distinctive differences between AR

and SR. AR theory and practice are concerned with specific ways of approaching art, science and epistemic things. Their goals are sometimes written fictitiously, presented participatively and made public processually. The methods of artistic research comprise—in a structural coupling—contradictions such as a joyful science and an associative memory theater, both elements of Ludic research. Such couplings can be found in every exhibition that claims to be radically and artistically unique and to possess universal validity!

The Ludic way: Features of a Ludic conception of artistic research

The Ludic Society was founded in 2006 as a research association, with members recruited at international media arts festivals such as transmediale Berlin, ars electronica Linz, Siggraph Los Angeles or DIGRA (digital Games REarch Association) Tokyo. The society's members' magazine, the *Ludic Society Magazine,* was published from 2006 to 2016; it was a journal of artistic research and related play principles. Members of the Ludic Society submitted articles to issues centered around such subjects as game, play and research. The magazine introduced theses about the politics of play, the societal impact of playful practices and the application of rule-driven systems such as games, gamification and artistic research.[2]

Ludics as a model research discipline builds on the artistic evidence of a sustainable body of ludic art works by Ludic Society members. The joint reflection of theory interwoven with art practice was elaborated in the interpretation of the individual art works via written reflections upon the art practices. The theoretical foundation for the incorporation of the idea of a ludic *playsure*—a merging of play with pleasure—was tested in particular in game art works by Margarete Jahrmann's game fashion series, *f.ex. Pong Dress* (2006), and the art piece *Sema Dress* (2009).[3] These are garments that render the wearer self-determined and emancipate the female body from the limitations of social acceptance in regard to exposing and controlling who is looking at the body and when and under what conditions. On the Pong Dress two persons are allowed by the performer, who wears the dress, to play Pong, the first computer game version of "Tennis for Two," on her chest. The scores are located at the height of her nipples. This art piece is still running and frequently presented.[4] The "playsure" aspect of such performative appearances is identified in the theoretical reflection of the piece's reference to the idea of enjoyment and erotic attraction—the feminist approach towards *jouissance* of feminist theorist Julia Kristeva (1984). Playfully taken roles are closely tied to the shift of subjectivity and identity for political agency. In this sense, *jouissance* embraces physical and intellectual pleasure, delight, even ecstasy. However, it should be added that this shift goes beyond its constraints in terms of social effects, considering the ubiquity of contemporary mobile technology and social media networks. This particular concept of enjoyment and pleasure, from the perspective of play, has a theoretical, but also a more mind-centered psychological grounding. Joy and enjoyment form the socio-political principals of the efficacy of play concerning technological objects. The joy of "freeplay" with technologies can be identified as a dimension of political agency. A critical reading of the contemporary relationship of play and *jouissance* in the context of networked technologies introduces enjoyment as the antipode of the rational demands of utilitarian society, which is usually associated with technologies. The proposed understanding of a playful generation of political consciousness by an enjoyment of interventions through freeplay with the objects of technology, finds a profound grounding in contemporary and historic activist arts practice—practice that contextualizes Ludic *art work* as the *activist work* of an emerging *playsure:* Ludics as a method of artistic research.

In sum, the term Ludics describes a second-order perspective in interdisciplinary research. It draws from a popular orientation of gamification in *funware,* a concept coined by Gabe Zichermann when he spoke about the scoring mechanics of social media network technologies (Zichermann and Cunningham 2011). The fun aspect of scoring, rating and classifying is used here in relation to social processes. The term *funware* means that in a sort of second-order game, play mechanics and game dynamics are applied to another context. When it comes to education and the application of Ludics in teaching artistic research, it is essential to understand how game dynamics support our understanding of Ludic principles. It is also important to see that Ludics applies playful mechanisms of self-reflection that imply fun and pleasure, or more precisely, *jouissance.*

The process of *gamification* refers to the use of elements of game-design in non-gaming contexts like research or teaching. Gamification has been employed in various non-game areas such as learning, rehabilitation, marketing, etc., mainly to increase the motivation of participants (Robson et al. 2015). Gamification uses the main framework of game design, which lists mechanics, dynamics, and aesthetics—the MDA framework—as its core components. Mechanics are the game components, which can further be subdivided into setup mechanics, rule mechanics, and progression mechanics (Elverdam and Aarseth, 2007). Dynamics describes player interactions in response to the mechanics. Aesthetics concerns the game design with respect to player emotions and feelings. All of these elements are useful in learning, but for higher-level education they oversimplify learning processes and ignore the driving force of intrinsic motivation, which is necessary for developing long term research projects that have the aim of gaining insight into certain research questions. In contrast, Ludics aims to respect the self-determined aspects of intrinsic motivation, necessary for the enterprise of research, but still approaches research with playful methods, including free play, in order to achieve a form of creative flow in research.

Ludic objects: towards epistemic things

In Ludic research, the difference between discourse objects and epistemic things is essential. Discourse-activating art objects are not already epistemic things, but they become such things when they contribute to the momentum of insight. Only when the entire assemblage of artistic objects, discourse objects, discourse, reflection and peer-reviewed settlement generates research data will the epistemic object arise in artistic research. This artistic epistemic object is generated through a *Spiel* [game] from idea to object to discourse to theory and, finally, to findings that allow insights—this is the magic circle of artistic research!

Figure 2. *Decision Demon*, installation view, Jahrmann and Glasauer, Ars Electronica 2017.

The Ludic impact of AR

Ludic artistic research introduces a *Spiel* of optional research rules. It has the potential to score points in canonical discourse networks. But it will also be able to position itself in different discourse cultures, be accessible and accepted—all of which ultimately lead to valid research results. But artistic research must always remain in a creative and pleasurable state of flow and maintain its potential as a form of critical activism in research itself. For a Ludic researcher, the impact factor (Wikipedia 2019) of scientific journals appears as a social scoring game. Of course, for artistic research too the wish to evaluate quality (Karlsson and Biggs 2011) remains as vibrant as it was a decade ago, when a deeper institutional interest in the field reached the European discourse field. But newer studies (Caceaux 2017) touch upon very urgent questions in the field, questions that are addressed to each educator and facilitator about the methods of artistic research: Is it necessary or at all possible to transfer the very subjective(s) of art into the objective(s) of research?

1. Is creative writing the only field capable of direct artistic research? Isn't any other field of arts production in a painfully secondary transfer position?
2. How do we process the phenomenological to the cognitive on a level of extended consciousness—which all art implies?

Some answers can be given through case studies of game art works connected to scientific experiments. These art works demonstrate that Ludic research is very distinct from scientific research, which is grounded in facts and data. From the point of view of an artist, active in playful forms of public interventions into society and technology, artistic research can be identified as open, free and playful, but also rule-driven. In Ludics we consider performative practice and installations as experimental systems. Ludic artists generate artefacts that become epistemic objects through play. Ludics provides a science of science in artistic research. Nevertheless, it acknowledges the significance of research data in the arts.

Case study I

The project *Decision Demon* (2016-2018) by myself and the experimental neuroscientist, S. Glasauer, can serve as an example of a highly transdisciplinary arts research performance installation following a Ludic Epistemology. Gamified science experiments in general can inspire, but are essentially different from publicly performed artistic research. In this project, the structural coupling of methods and disciplines offers a new form of discourse in the public space of exhibitions. A theory of "objects that drive the game of cognition," understood as artistic representatives of research questions, allows insight between the poles of discourse cultures, and creates the possibility of more natural experiments with viable data for scientists and artists who develop from this data epistemic things in artistic research.

Ludic experiments: performative experience for all

> [experiments ...] systems of manipulation designed to give unknown answers to questions that the experimenters themselves are not yet clearly ready to ask. (Rheinberger 1997, 28)

The science theorist Hans-Jörg Rheinberger (1997) describes the experimental system as a conceptual unit. One can therefore argue that it is thoughts and concepts that give an experimental system its identity.

Figure 3. Valentine Green, Mezzotinto after Joseph Wright of Derby's *A Philosopher Shewing an Experiment on the Air Pump* (1769), from the catalog *Wright of Derby*, New York 1990

When Rheinberger argues that in the natural sciences it is the configuration of an experiment in the sense of a research design that is begun rather than a theoretical reference that is described, he shows that this understanding of an experiment is suitable for artistic research. In art with an interest in insight, the experience made in the enacting of a "Gedanken Experiment" ("thought experiment") will be at the foreground. The theoretical question of the personal experience to be had in a participative performance is essential. This means that in Ludic artistic research we have to understand games as experiments. Ludic research allows one to actively participate in a research process, according to the earlier defined rules. A free from of play that allows for the making of subjective experiences—as opposed to scientific research—is placed at the center of the analysis.

Behavioral experiments in learning normally already share various properties with games: Experiments have rules, little or no risk, multiple trials, occur under controlled and reduced conditions, and have no consequences for normal life afterwards. In other words, they are outside of "ordinary" life. The same is true (Huizinga 1955) for most games (those involving real money not included here). As for learning, behavioral experiments seem to be well suited for enhancement with game-design elements, which may 1) improve motivation, and 2) bring experiments closer to naturalistic situations and thus increase their ecological validity. Behavioral experiments could thus be transformed into "games with a purpose" (von Ahn and Dabbish 2008) or "serious games" (Michael and Chen 2006).

Ludic teaching concept: Mediating through performative play

The conceptual structure of artistic research that draws on ludic conceptions of knowing, experience, theory and practice offers guidelines for considering the pedagogical implications of teaching artistic research methods. A summary of the implications for teaching AR will serve as a model for a teaching concept.

Ludics as an artistic research method can be summarized as the application and interpretation of experiments as *play with consequences having real life relevance*. In the mediating practice of teaching artistic research, we can draw from the scientific theoretical analysis of experimental systems in Ludics as a scientific theoretical method that playfully reflects research mechanisms. Historically, as the image of the "Air Pump" demonstrates, experiments were staged publicly. They were dramaturgically communicated as social events. A key role model of teaching and knowledge-dissemination is seen in the 1769 painting painting by Joseph Wright of Derby, *Philosopher Shewing an Experiment on the Air Pump*. The image can be interpreted as exemplary of the conditions of contemporary arts research in regard to its participative/performative format: live on stage, at conferences, in museum and exhibition spaces. The public intellectual can serve as the mimicry play figure for the arts-based researcher in an educational situation.

Artists over time often took on different roles in research processes. For example, Christian churches used art for educational purposes; in the Renaissance research was coupled to artistic production and engineering. The UNESCO definition of research (Klein 2010) supports this understanding, as it calls research "any creative systematic activity for the purpose of expanding the level of knowledge, including the knowledge of humanity, culture and society, and the use of this knowledge in the development of new applications." This offers a valid argument in regard to questions about how to teach artistic research methods.

Exploring the Boundaries[5] of knowledge production strikes a broad field from the very precise analysis of the human condition to the more speculative associations of Ludic artistic research. Art and artistic working methods in exchange with science, artists in lab programs and art and science collaborations gain in repute because they seem to touch the new complexity of research objectives in the natural and social sciences (Karlsson and Bigs 2010. Also see: https://www.bernstein-network.de/en/news/nachrichten-en/yuta-ka-makino-chosen-to-realise-the-project-201con-display-an-artistic-view-on-computational-neuroscience201d.).

Artists' ability to communicate in a playful and ironic manner can also be useful in scientific research. This was already acknowledged by the influential thinker, science theoretician and political stakeholder Helga Nowotny when she indicated an interest in the collaboration between the arts and research a decade ago (Nowotny 2011). Such an approach can be taken up in teaching artistic research as a form of experience-based Ludic research.

5   "Exploring the Boundaries, Public Panel Discussion," Sept 2018, Berlin, during the Bernstein Conference as part of the "Science and Society Session." Striving for insight is a goal that unites scientists and artists, even though their approaches and methods differ. Yet insight as such is a contested term. The panel revolved around the interdependent relationship between the arts and the sciences. https://www.bernstein-network.de/en/bernstein-conference/past-conferences/2018/insights-in-art-and-science-exploring-the-boundaries

Teaching with the Ludic method: Art, experiments and game mechanics

The Ludic method offers a new way of teaching artistic research, one that is informed by Ludic principles and game design. The application of game mechanics in the arts appears to be a contradiction. However, in teaching artistic research, the application of certain rule-driven aspects and constraints allows an unexpected form of transdisciplinary discourse. The social implications of political mechanics about play in the arts follow trajectories of political agency through a close look at game art. In artistic research the development of a Ludic method came out of urban and exhibition games as part of the Ludic Society project. Transformative play with game mechanics can essentially be applied in experimental performances of Game Art.

Game Art evolved almost two decades ago as a subgenre of media arts. Critical statements towards the game as a regulating system, game mechanics as control mechanisms and an inverse use of game technologies and interfaces were core to this emanation of netart activism. Just now, Game Art continues to grow in importance, as evidenced by recent exhibitions and festivals. In its present form of philosophical commentary and research, Game Art is ideally suited to embrace the principle of political agency in relation to technologies. It includes elements of game design and public experiments. Game art—creative practice in social and avant-garde art experiments—finds its creative and intellectual leitmotif in ludic activist arts connected to contemporary forms of game arts. Its claim for the efficacy of such ludic practices is informed by the game arts mechanics of Deep Play.

Case study 2
The Ludic Society project

Crucial to political "activism" based on play in the Ludic Society project is a connection between game art-based works with a critical approach towards society, in particular in relation to conditions of technologically shaped everyday life and the role of the individual and her/his identity in such a society. The Italian art critic and media theorist Alessandro Ludovico (2008) discusses the Ludic Society art project with the following words:

> The Ludic Society magazine involves different cultural sectors and perspectives of the analysis of the real. This magazine is a precious independent voice, striking a discordant note compared to the suddenly established academic videogames studies. From the "Pataphysics to the role and potential of the graffiti and tag in the videogame," until the real game, or

the game played in the public urban spaces, there's a vast and free editorial perspective. It is pointed in different directions but with a common horizon, and it is framed in a '90s zine layout, comic size, using striking black and white contrast. Here the "game rules" rise to the level of a vital paradigm, implicitly defining ludology as an ironic social life science. (Neural. Technology and Cultures Magazine, issue 30, _2006 "Dangerous Games," http://www.neural.it/nnews/ludic_society_magazine_e.htm [accessed: march 12, 2018])

Issue 30 of the magazine was published with a cover featuring a Ludic Society art piece on electronic urban tagging. The image shows an absurd play interface, and connects it to the topic of "dangerous games." This publication provides evidence of public media's echoing of such critical and absurd game art pieces. The attention and political discourse caused by the reviews of the magazine demonstrate the viability of the thesis of agency through play. Public attention was achieved by the absurd coupling of game mechanics with play in urban streets. The Ludic Society magazines featured political play and game art pieces; their numbers have been exhibited as artifacts in museums since the first Ludic Society exhibition at the Neue Galerie Graz in 2006. The aesthetically appealing magazines with graphic art by Max Moswitzer have become collectors' items. For example, in 2010, a reprint of Issue 1 was published in the Swedish media theory journal *OIE,* discussing the playful writing project of the magazine. (See: http://www.oei.nu/w/6.html)In the context and logics of the arts, game systems can serve as a looking glass into everyday life interface cultures and technologies, habits and the cultural evaluation of rule-driven systems in societies. Acceptance of the macro-mechanics of games as regulation tools is actually expressed in everyday gamification. The Ludic Society's playful theoretical starting point for a methodology around the act of play as a state of transformation geared towards an activist consciousness is the absolute opposite of gamification. Through urban game projects, enacted in Plymouth in 2006, in Rotterdam in 2007, and in Gijón in 2008, the society acted both as a discourse group and a game artists group, designing hybrid exhibition games based on Neo-Situationist urban and augmented reality. (For example, at LABoral in Gijón in a show called *Homo Ludens Ludens.*) Out of this pioneer status in the area—Pockemon Go only succeeded a decade later—the founding board members (Jahrmann, Moswitzer, Bauer) established a network of activism in games. Works like those of *Blast Theory* were shown in parallel exhibitions with the anti-war shooter *Nybble engine toolZ* by Jahrmann and Moswitzer at the Dutch Electronic

Arts Festival 2003. The show, curated by the V2 lab for Unstable Media in Rotterdam, fostered new approaches toward games and art as combinatory forms. This approach went beyond the development of indie games or graphically well-designed games. The "Ludic Manifesto" was published in *Eludamos,* a peer-reviewed game studies magazine. In 2013 the specialist on pervasive games, Ian Bogost, made a very profound point about the anachronicity of the format of a manifesto, an absolutist statement that deals very slightly with game mechanics of irony or playfulness in themselves: "...the manifesto itself was such a staple of twentieth-century thought. The [...] modern manifesto as a written prescription that makes manifest." (See: http://bogost.com/writing/blog/on_the_manifesto_for_a_ludic_c).   ) The structural coupling of methods and disciplines offers a new form of teaching artistic research. A theory of "objects that drive the game of cognition" as artistic representatives of research questions offers insight between the poles of discourse cultures to create epistemic things in Ludics.

As an artistic research method, Ludics investigates research topics, applying poetic practices to the subject and introducing specific rules of investigative inter-play to it. This conception elucidates philosophical reflections of the process of research and its methods, and can be identified as artistic play with scientific theories. At its core, Ludics' methodological approach appropriates the practices of playfulness and the mechanics of games for art production and research purposes. In that sense, the artistic research system can be a game in itself; nevertheless, scientific games are not to be confused with the element of playfulness in Ludic research.

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