TEXT 1 MARGARETE JAHRMANN P.319-329

LUDICS: THE ART OF PLAY AND SOCIETAL IMPACT

INTRODUCTION

The "art of play" and "societal impact" is introduced in this manifesto as a tool for commenting on and intervening in social and political questions and the challenges of climate change. The design of play objects has an impact on everyday life in society, simply through the presence and daily use of play in relation to our social life and devices. The play object, as a designed object with the aim of intervening in individual behaviour, has an impact on our daily lives. The impact factor of ludic objects is not measured, but present in discursive reflections in the field of artistic research. The ludic as a method for rule-driven design elucidates states of play, combines free play, 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 as insights achieved through arts objects as research vehicles. Ludic objects are artefacts that trigger discourse and the application of certain rules of research. They constitute an interplay of art and knowledge. Finally, ludic, experimental research games are tied to a certain playful approach toward serious, rule-driven research. Following a ludic method introduces a new trope to artistic research. Speculative games provide an element of role play, and use performance elements in order to understand the role of the artist, the researcher and the designer. The ludic objective is the idea of playful movement in thinking. It is informed by technologies and cultural techniques of insight, as well as theories, experiments and philosophical conceptions that are connected to the perceived, conceived and lived world.

As a concept for artistic research, "ludics" embraces research, cognition and the arts. The word is derived from the Latin "ludus," meaning "play," and the contemporary scientific term "systemics." Ludic research goals are written fictitiously, presented participatively and made public processually. Ludic methods of artistic research comprise contradictions, and are found

in feedback between peers and in exhibitions, between radical artistic uniqueness and the claim of universal validity. These poles are required for the validation of artistic research.

The conceptual ludic art of play explores rules of play, systems of investigation and knowledge acquisition through game mechanics. It uses new, emerging play mechanics to intervene in the awareness and consciousness of experience design in certain topics, as for example in the impact of microplastics on the oceans across the world.

We shall here discuss an installation of the artist Victoria Vesna as an example of play and games with a social impact. It was exhibited at the Arts Innovation Lab Vienna and numerous other venues worldwide. Her work *Noise Aquarium* (2019) was presented in its final form as a game of navigation through polluted plastic and plankton seas. At the Angewandte Innovation Lab (AIL) in Vienna, she presented a major installation using VR headsets and a gaming mechanism that put the player in the position of a microbial creature in the seas. The movement of the wearer was intended to promote "support for the survival" of microplankton.

This work was a result of a close collaboration between the artist, scientists and scientific visualisation. The aim of the artist and game designers was to contribute to raising awareness of the current marine ecological crisis and to identify a suitable epistemological framework for the global challenges of overfishing, pollution, acidification and rising temperatures due to climate change. During the exhibition at AIL in Vienna in the summer of 2019, a critical mass of visitors subscribed to climate change resistance through their participation in the game. As a consequence, in 2019 the Art|Sci Center and the Nanotech Systems Institute of the University of Los Angeles held a major conference with international speakers on the topic of Social and Climate Change. [xxiii]

THE ART OF PLAY CONCEPTS

The "art of play" concepts address principles of perception, experience and cognition. Developments in artistic research mirror these

[xxiii] Margarete Jahrmann, "The Double Rod Pendulum of Ludic Art and the Artist as Agent of Change" (lecture at the symposium *Arts based Research in Times of Climate and Social Change,* UCLA, California NanoSystems Institute (CNSI), Los Angeles, April 4, 2019).

principles. Ludics is also imagined as a conceptual game concerned with artistic research. [1] It applies academic "rules" of forming a research society, participating in a research association, and writing regular texts concerned with examples of artworks. 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 in England. During 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 spaces 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). [2]

For over a decade, under the label *Ludic Society,* experimental, pervasive, urban and alternative reality exhibition games were developed as free artworks, with an activist momentum in favour of the influence games might exert on society. The games featured aimed to deal with elements of social status in arts and game research communities.

The name *Ludic Society* was used as a label for the development of a series of activist art games that were accompanied by a corresponding series of theoretical publications. At its core, its concept is informed by approaches to agency through play. In the peer-reviewed *Ludic Society Magazine,* a methodological approach of associative arts texts was linked to real games that were performed at art festivals and in public spaces. These games included reflective texts written by the designers and artists themselves as "design experiments," such as automatic or "pataphysical" writing instead of pure analytical texts. Pataphysics is a concept coined by the French writer Alfred Jarry. It is a philosophy dedicated to studying what lies beyond the realm of science

[1] For further reflections on the Ludic Society and its methods see Margarete Jahrmann, "Ludic Games: Playful Forms of Insight," in *Teaching Artistic Research: Conversations Across Cultures,* eds. Ruth Mateus-Berr and Richard Jochum (Berlin: De Gruyter, 2020), 55–66; Margarete Jahrmann, "Ludics for a Ludic Society: The Art and Politics of Play" (PhD diss., University of Plymouth, 2011), http://pearl.plymouth.ac.uk/handle/10026.1/453.

[2] For documentation and texts about these artworks see Ludic Socity, http://ludic-society.net.

and metaphysics; it is a parody of the theory and methods of modern science, and is often expressed in nonsensical language. Pataphysics is also defined by Jarry as the "science of imaginary solutions." [1]

[1] Alfred Jarry, *Exploits & Opinions of Doctor Faustroll, Pataphysician: A Neo-scientific Novel*, trans. Simon Watson Taylor (Boston, MA: Exact Change, 1996), 21.

COGNITIVE SCIENCE AND THE LUDIC APPROACH

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" were art pieces combining scientific experiments and game mechanics. [2] This new orientation of ludic research, involving cognitive sciences, highlights similarities and differences between both fields. It does not regard 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 at Tate Modern in London, at the Tate Exchange Event "Moving Humans." At 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 Centre for Sensorimotor Research at University of Munich (Isabelle Garzorz und Alexander Knorr) 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*. [3] However, inscribed over this magic circle of play was the image of the epicycles, which before the acceptance of heliocentrism was a common scientific, aesthetic model

[2] See Ludic Society, http://ludic-society.net.

[3] Jan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (Boston, MA: Beacon Press, 1938), 10.

that used mathematical and geometric means to explain the universe, with the Earth at its centre. The Tate Modern event placed a specific focus on the cultural and educational aspects of this collaboration between 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 the data was then factored into a collective art piece in the form of a digital sculpture, a figure of the movements of participants in time. A comparable artwork applying ludic methods is "Neuroflow."

These ludic research works couple arts game mechanics, immersion and VR with neuro-interfaces. The experimental Neuroflow Game has an "emotive" interface, an EEG tool that measures brain activities: it places meditation and passivity at the centre of an absurd game with a brain interface that serves as a symbolic object promising a future of "brain reading" wherein thoughts can be read via brain scans. Because the participant/player has an Emotive EEG Interface mounted on his or her head and navigates the game levels by doing nothing but relaxing, this artwork—with its interface that only asks players to mediate—can be said to pose critical questions about game mechanics and the insistence upon activity in contemporary digital culture. The new consumer neurointerface is presented in conjunction with an anachronistic, rebuilt game console that shows the game display. Staring at the screen of an old-school console is experienced in relation to the recent increase in the availability of brain-reading devices. Both the daily, constant demand for self-optimisation and the inherent data surveillance of gamified life-style technologies are 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 controlled environment for artistic research. After the introduction of such rules, the possible variants increase with their artistic application. To position artistic research more effectively in relation to scientific research, we shall outline below the essence of AR as conceptualised 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 formulated fictitiously, presented participatively and made public processually. Their methods of artistic research comprise the structured coupling of contradictions such as a joyful science and an associative memory theatre, both of which are 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!

DISCOURSE OBJECTS: TOWARDS EPISTEMIC THINGS IN ARTISTIC RESEARCH

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* (i.e. a game) from idea to object to discourse to theory and, finally, to findings that allow insights—this is the magic circle of artistic research!

Some answers can be given through case studies of game artworks connected to scientific experiments. These artworks demonstrate that ludic research is distinct from scientific research, which is grounded in facts and data. From the point of view of an artist who is active in playful

forms of public intervention in society and technology, artistic research can be identified as open, free and playful, but also rule-driven. In ludics, we regard 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.

GAME ART DECISION DEMON: COGNITIVE DECISION PROBLEMS AS A GAME INSTALLATION

FIG.1
P.327

The project "Decision Demon" (2016–2018) initiated by the present writer and the experimental neuroscientist Stefan 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 insights into the different poles of discourse cultures, and creates a possibility for more natural experiments with viable data for scientists and artists who use this data to develop epistemic things in artistic research.

A theory of "objects that drive the game of cognition" as artistic representatives of research questions offers insights into the different poles of discourse cultures when creating 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 interplay. This conception elucidates philosophical reflections on 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

FIG.1 Decision Demon, installation view, Jahrmann & Glasauer, Ars Electronica 2017.

game in itself; nevertheless, scientific games are not to be confused with the element of playfulness in ludic research.

LUDIC EXPERIMENTS: A PERFORMATIVE EXPERIENCE FOR ALL

"[Experiments are …] systems of manipulation designed to give unknown answers to questions that the experimenters themselves are not yet clearly ready to ask." [1]

The science theorist Hans-Jörg Rheinberger 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. When Rheinberger argues that in the natural sciences it is the configuration of an experiment in the sense of 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 primary focus will be on what is experienced when conducting a thought experiment. 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. [2] Ludic research allows one to actively participate in a research process, according to the rules defined earlier. A free form of play that allows subjective experiences—as opposed to scientific research—is made the focus of the analysis.

Behavioural 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 ordinary life. The same is true for most games (those involving real money are not included here). As for learning, behavioural 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

[1] Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube* (Palo Alto: Stanford University Press, 1997), 28.

[2] Cf. Simo Järvelä, Inger Ekman, J. Matias Kivikangas, and Niklas Ravaja, "Digital Games as Experiment Stimulus," in *DiGRA Nordic '12: Proceedings of 2012 International DiGRA Nordic Conference* (2012), accessed January 12, 2020, http://www.digra.org/wp-content/uploads/digital-library/12168.58027.pdf; Karen Robson, Kirk Plangger and Jan H.Kietzmann, "Is it All a Game? Understanding the Principles of Gamification," *Business Horizons* 58, no. 4 (2015): 411–420.

their ecological validity. Behavioural experiments could thus be transformed into "games with a purpose" or "serious games." [1]

[1] Luis von Ahn and Laura Dabbish, "Designing Games with a Purpose," *Communications of the ACM* 51, no. 8 (2008), 58-67; David R. Michael and Sande Chen, *Serious Games: Games That Educate, Train, and Inform* (Mason, OH: Course Technology, 2006).

SUMMARY: THE ART AND DESIGN OF PLAY!

The "art and design of play" in game design appears to be a contradiction in terms. However, the social implications of political mechanics about play in the arts follow trajectories of political agency through a close look at play in art and design. In ludic artistic research, the development of a method came out of urban and exhibition games as part of projects with the *Ludic Society* and, more recently, in cognitive play experiments with scientists. Transformative play with game mechanics can essentially be applied in experimental performances, as the microplankton works by Vesna demonstrate. It includes elements of game design and public experiments. The art and design of play as practice in scientific and avant-garde art experiments finds its creative and intellectual leitmotif in "ludic" arts connected to contemporary forms of play!

Ludics introduces a *Spiel* of optional research rules. It has the potential to score points in canonical discourse networks. However, it is also able to position play in different discourse cultures, to be accessible and accepted—which ultimately leads 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 of scientific journals has the appearance of a social scoring game. More forward-looking reflections propose the necessity of transferring the subjective(s) of art into the objective(s) of research.

Play in ludics as an artistic research method can be summarised as the application and interpretation of experiments with consequences that have relevance to people's real lives. In the mediating practice of teaching artistic research, we can benefit from the scientific theoretical analysis of experimental systems in ludics that playfully reflects research mechanisms.

ARTISTIC RESEARCH MUST ALWAYS REMAIN IN A CREATIVE AND PLEASURABLE STATE OF FLOW