Ludics for a Ludic Society

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Ludics for a Ludic Society. The Art and Politics of Play

by

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A thesis submitted to the University of Plymouth
in partial fulfilment for the degree of

Doctor of Philosophy

CAiiA, Centre for Advanced Inquiry in Integrative Arts,
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April 2010

Abstract

This dissertation provides an analysis of, and critical commentary on, the practice of playfulness as persistent phenomenon in the arts, technology and theory. Its aim is to introduce political reflections on agency through the study of playful technological artefacts, which were largely ignored in the recent discussions on game and play. Following the critical analysis of historic discourses and actual studies of play under differing auspices, and in order to understand play as inherently political agency, this thesis' research question addresses the immersive effects of playful agency in symbolic exchange systems and in the material consciousness of the player.

This thesis conducts an analysis of material cultures, in order to categorise play as technique of an inherent critique of technological culture. It traces the development of contemporary technological objects and their materiality in relation to the application of the concept of affordance in design theory. The author consequently proposes a new category of 'play affordances' in order to describe these new requirements of play found in consumer technologies. The structure of the analysis in the distinct chapters is informed by a stringent historic, theoretical and arts analysis and an alternating arts practice. The convergence of these elements leads to insights on further uses, options and perspectives of the research problems discussed, in particular in relation to the requirements of playful interaction in contemporary technologies, which increasingly radicalises the importance of play.

The thesis' hypothesis states that playful practices in arts and technologies provide models for political agency, like the strategic use of Con-Dividualities (Jahrmann 2000). This term describes the concept of shared identities in society or social media consumer technologies, as discussed in historic case studies and the author's own arts practice, related to the modification of technologies as methodology of arts research. In this way the arts practice and theory of playfulness informs the emergence of a new methodology of research, intervention and participation in society through the arts of play, which is coined as Ludics, as an original outcome of this thesis.

Contents

List of Illustrations

Appendix/ DVD Index of the author's arts practice

(Video-clips of Ludic art works and images on DVD)

Copies of relevant Ludic publications (PDF documents) on DVD:

Ludic Society, issue #1, 2005.	
Ludics. New Bachelor Machines, Graz, Madrid.	DVD
Ludic Society, issue # 2, 2006.	
Real Players. Ludic Interfaces, Vienna, Zurich.	DVD
Ludic Society, issue # 3, 2007.	
Tagging the City, Plymouth, Zurich.	DVD
Ludic Society, issue # 4, 2007.	
Metaverse and World3, Zurich, Vienna.	DVD
Ludic Society Manifesto, 2007. In: Eludamos,	
European Game Studies Journal, Essen	DVD
Ludic Society, issue # 5, 2008.	
Objects of Desire, Bari/Vienna.	DVD

Acknowledgements

I would like to thank my supervisors: Professor Roy Ascott and Dr. Martha Blassnigg. I thank Roy for encouraging me to trust in my own arts-research in the development of the thesis and for constantly supporting the radical intervention of Ludics by actively contributing as a Ludic Society honorary member since its foundation. I would like to thank Martha for teaching me how to gain epistemic insights and the value of structuring an academic study. Thank you to Dr. Mathias Fuchs for supporting the early stage of this thesis. Thank you to Dr. Michael Punt and Prof. Mike Phillips for insightful tutorials and to my colleagues at Caiia, for all the discussions and seminars that have supported my writing and practice. I also thank my colleagues at the Game Design Department at the University of Arts Zurich for their openness towards my interest in Game Arts, Game Fashion and Ludic Society.

I would like to thank my Ludic Society collaborators for their creative and technical skills in the production of elements of my practice. Thank you also to Aileen Derieg, Juanita Schläpfer-Miller and Christopher Holden for their editorial proofreading.

Finally, I would like to thank Max Moswitzer for his expertise as an artist and for being my partner, who enabled the emergence of Ludics for many years in arts and life.

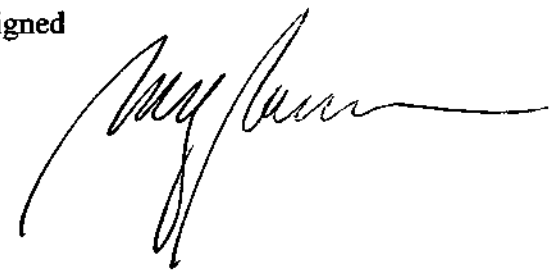
Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

Arts practice projects specifically related to the thesis are available in chapter 5.
A DVD is also included that contains further documentation of projects described.
Publications specifically related to the thesis are available in the appendices on DVD.
Full details of publications and projects are available online at
http://www.ludic-society.net/
http://www.konsum.net/

Word count of main body of thesis: 59,685

Signed



Date 26th April 2010

Introduction and Overview

This thesis addresses the emergence of playfulness as crucial category of political agency in contemporary technologically determined societies. It puts an emphasis on the use of play as strategy in arts, which increasingly gave agency to the user. This thesis' qualitative analysis distinguishes its theoretical and practical intervention from games studies, where play is only seen as sub-category of games. Games is seen in this understanding as rule based activity, whereas play transgresses in creative ways the borders of games as rule driven systems. Drawing from the systemic distinction of games and play, this dissertation connects very distinct fields, methodologies, theories, practices, and discourses from arts, technologies, critical theory, cultural studies, anthropologies and political philosophy. The methods used in this thesis comprise a literature survey, discourse analysis and critical reflection of historic case studies around the use of technological artefacts and a synthesis of evidences of the application of methods of playfulness for political agency in present technologies and arts. Proceeding from a literature review of the research fields of game studies and political theories, the author synthesises a critical narrative about an emerging form of „Ludics" and its particular research methodologies to support the processes of subversive agency in relation to technologies, that are suggested through her arts practice.

In order to develop a hypothesis of playfulness as relevant quality of agency beyond the closed systems of games, a clear distinction between play and games is crucial. In his article „ The Game, the Player, the World: Looking for a Heart of Gameness", presented at the Level Up conference in Utrecht, 2003, the game studies scholar Jesper Juul (2003) argues about the definition of games:

> So let's assume that a good game definition should describe three things: 1) The kinds of systems set up by the rules of a game (*the game*). 2) The relation between the game and the player of the game (*the player)*. 3) The relation between the playing of the game and the rest of the world (*the world).* (Juul (2003:2)

Juuls defines the borders of the field of games with the help of classical game models, which are best expressed in his graphical overview, shown in Figure 0.1:

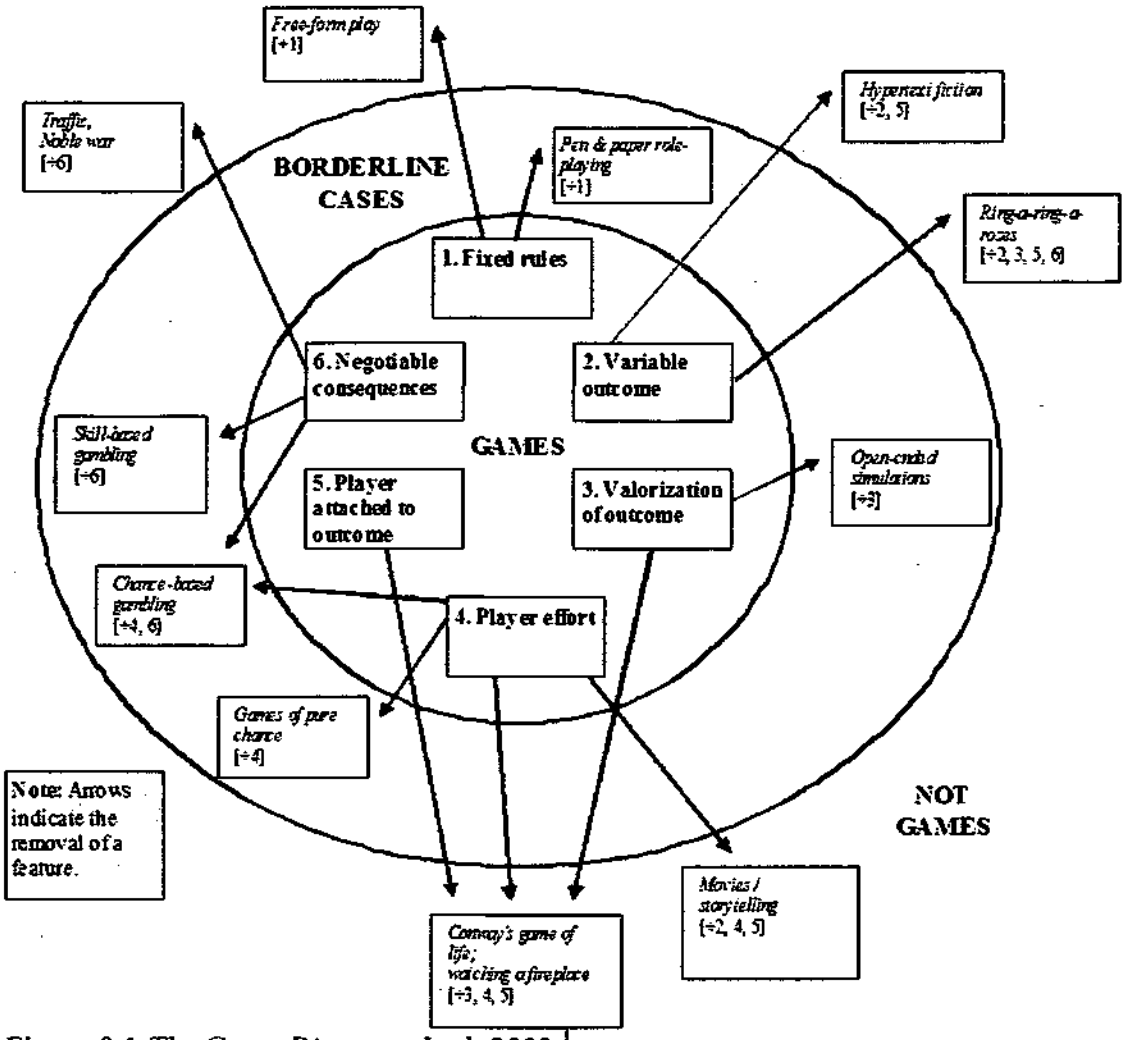


Figure 0.1 *The Game Diagram*, Juul, 2003.[1].

Nevertheless, in this distinct definition of games, which draws on the most important historic definitions of games, playfulness and the role of objects/ toys are left out. This thesis aims to overcome this lack through analysing electronic artefacts as toys of electronically networked every day life and arts. This thesis' method uses a rather dense writing in the context of very distinct fields and disciplines in a critical evaluation of strategies and propositions for future arts-research. A literature survey in games studies identifies the lack of existence of playfulness studies as coherent field of study in chapter one.

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[1] Juuls describes the game diagram as follows:" In diagram form, all of this can be visualized as two circles as things considered games having all 6 features within the inner circle, borderline or game-like cases falling in the outer circle, and decidedly non-game cases falling outside the outer circle as well." In Level Up: Digital Games Research Conference Proceedings, edited by Marinka Copier and Joost Raessens, 30-45. Utrecht

The first chapter *Anthology of Playfulness*, defines how this thesis is informed by the study of play as process and of playfulness as category of agency. It discusses distinctions of games and play, and understands games as rule-driven systems which allow processes of agency, as introduced in chapter 1.1 *Play as Form: A brief systemic differentiation of playfulness* and in chapter 1.2 *Playfulness in Games Studies: Providing a theoretical framework for the analysis of play as process.* Referring to texts ranging from arts-informed social design (Constant 1959) to cultural studies (Debord 1958), as a barometer for the importance of the subject of play, the author identifies new fields of investigation. The thesis describes the importance of the research field of play, in particular in relation to the requirements of playful interaction in contemporary social networks of everyday life (Rheingold 2002). The literature survey suggests the invention of a coherent „playfulness studies" (p. 25 ff) as a field of study in order to consider and justify the subject of play as research object in contemporary technologically determined realities. Ubiquitous play is unravelled as a condition of contemporary technological smart materiality (p. 66 ff). These reflections upon a playfulness discourse are found in three distinct disciplines, systems theory (Spencer-Brown 1972), games studies (Juul 2003), and anthropology (Mauss 1925). From the angel of these fields, the potential of the research question about the efficacy of play in social systems and in arts research is discussed, and a pattern of problems is synthesised, drawing on anthropological play theories (Bateson 1972 and Geertz 1973) in chapter one.

The analysis of the existing body of theories at this interdisciplinary nexus reveals a lack of political consciousness in the discourses in relation to play. The thesis introduces a taxonomy of technological objects as anthropomorphist play objects in chapter two, using case studies on the use of artefacts to engage with perception and consciousness theories[2] (Ascott 1972; Sutton-Smith 1997; Senneth 2008). It observes the use of these objects, which leads to the introduction of a new understanding of technological materiality, by drawing on philosophic and economic concepts of electronic and media worlds.

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[2] See the cross reference to 4.3 *Chindogus as Erotic Toys. Pleasure, play, and consciousness beyond materialism* in this thesis, p. 121ff..

Chapter 2.0 *Technology, Materiality and Affordances of Play* define the relevance of toys through a survey of the contemporary field of material studies (Norman 1988) in relation to play. According to observations of developments of consumer technologies over the last decade, as introduced in chapter 2.0 *Technology, Materiality and Affordances of Play*, this chapter introduces the relation of playfulness with the concept of „affordances"[3] (Gibson 1977). With this coinage, Gibson originally defined object possibilities for action, which are enabled by object properties of things. Additionally, he reminds us that a subjective dimension — perception — drives actions related to things. (Gibson 1979: 129). Chapter two critically reflects this concept in relation to the contemporary technologies of everyday life. In chapter 2.1 *Evidences of Play Affordances* an analysis of selected evidence, helps to demonstrate how the playfulness requiring technological objects has increasingly influenced the social design of urban spaces, as well as private life. As discussed in Chapter 2.1.2 *Ludic Interfaces,* the actual discourse mostly ignores the political brisance of the influence of technological objects on individual and social life. This chapter's angle[4] embraces the increasing presence of playful interfaces, including its inherent political potentials in activism and social design. The observation of consumer electronics as toys is presented in chapter 2.1 *Introducing a taxonomy of technological play objects in everyday life*. Through an empiric analysis of case studies of contemporary technological gadgets, our contemporary society appears to be heavily determined by ubiquitous technologies and smart toys with playful interfaces, including so-called „Smartifacts"[5]. In chapter 2.1.1 *Smartifacts*, are introduced, according to the cultural theorist Paul Saffo (1997). In short, Smartifact is a term first coined by the interaction designers at Apple Computers Corporation in the 1980s, under the guidance of the Apple software designer Harry Vertelney, to refer to new forms of software-based agents. Paul Saffo describes this development from software towards „smart materials and intelligent artefacts" (Saffo 1997: pp. 93-97). This in turn, leads to a new political practice of play that is required in order to

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[3] With the coinage affordances Gibson originally defines object possibilities for action, which can be seen as objective properties of things. Additionally, he reminds us that a subjective dimension — perception, drives actions related to things. (Gibson 1979: 129)

[4] See the cross reference to the case study of the author's project „Ludic Society" in the practice chapter, page 153ff.

[5] Paul Saffo (1997) understands 'Smartifacts' as smart materials and intelligent artefacts in his study on "Sensors: The Next Wave of Innovation". Online available from http://www.saffo.com/essays/sensors.php [Accessed: September 2, 2009] .

transcend the inherent control functions of materiality. In order to understand how the relation of technological thing, object, subject and player consciousness is informed by the enjoyment of a master-servant relation to the machine as fetish, as elaborated in chapter three.

In chapter 3.0 *The Politics of Play*, the central hypothesis behind the practise and research of this thesis is introduced. It builds on the historic evidence, that, despite games and ubiquitous computing having become a key to industrial and academic fields, the peculiarity of playfulness and enjoyment or agency, as introduced in *3.1 Evidences of Play Politics* has begun to influence new methods of politics through creative intervention. The third chapter studies the political effects of the process of play by an analysis of historic evidences of how technological play objects were used for political aims. It identifies how difficult it is for the emerging field of playfulness studies to consolidate agency as a dimension of play. Examples are given to show the revolutionary brisance for society in the use of the technological objects as creative tools — an aspect that remained largely ignored in the concept of Ludic Interfaces, which the chapter revisits as a necessary political strategy. An understanding of the historic effects of the playing with technological devices in order to create art, bridges the relevance of the use of the technological artefact in history to contemporary arts, which will be elaborated in chapter five. Through this analysis, the author identifies Ludic art as a means of developing methods of political activism. Each technique of intervention by play with technological toys is used to test theoretical concepts of thing politics, real politics and the historic idea of political freedom, *Freiheit* after Schiller, in chapter 3.3 *Real Politics of Play.* The chapter maps a history of proto-computational devices, which reverberated as play objects for creative production in particular moments of time. It shows how the practice of activist role-play provides a concrete example of how a methodology for the inversion of this direction of relations and dependencies from technologies is implemented, by the subversive play with the technological object, the self and the networked social player consciousness. This leads to historic examples of political play in chapter four.

In chapter 4.0 the coinage of „Con-Dividuality" (Jahrmann 2000) as strategy of political intervention and the role of the self in play is critically addressed. Evidences of tactical role-play in relation to media technologies are given in chapter 4.2 *Evidences of Political Role-Play.* This chapter describes how new forms of critical

intervention in role-play, creative work and text began to emerge from the play with technological gadgetry in everyday life in the history of industrialisation and technologies. In particular, critical creative works, found in the deviant fields between irony and subversion in activist and arts Avant-garde, provide evidences for the development of the idea of play politics, coined as, „Playsure Politics" in this chapter. A selection of tactical solutions in performance and activism are carefully presented and complemented by an examination through the filter of the technological play object. This prepares the construction of a new technical, methodological, and theoretical framework of play agency in chapter five.

In chapter 5.0 *Ludic Practice* the supporting arts research practice provides a detailed analysis of nine case studies of the author's art practice in relation to play, which highlight the significance of play as method of investigation of the social conditions entailed by technologies. It interprets the *Ludic* art works as experiments, which test the hypothesis of play as method of research. Each project is described according to the theoretical objectives of the dissertation and tests various presented hypothesises of agency by play. The evidences support a theoretical interpretation consecutively to each project description. This chapter identifies art practice as a discrete field of research, and thus introduces arts informed methods of research. It analyses categories of conceived, perceived, and lived agency, which support a methodological framework of the mutual information of theory and practice. The added DVD can be used in conjunction with this chapter in order to more fully understand the nature of the works and their reception as theoretical and practical intervention. It puts an emphasis on the understanding of the master servant relation to machines in the internal dynamic of the player. This practice supports the emergence of a *Ludic* method of arts research.

Chapter six reflects on the method, which emerges form the synthesis of theory and practice, Ludics. In addition, chapter 6.0 *Summary and Conclusion* suggests a methodological framework of arts research, *Ludics*, through the integration of anthropological concepts of play, agency, pleasure and enjoyment in relation to practical examples of subtle erotic forces in the play with absurd machines. It provides a conclusion that reflects on the new methodological solution of *Ludics* and its potentials for theory, social design, and arts practice, in relation to technological materiality.

Ludics in its full potential can be understood as a new concept, in which philosophy and art practice converge. The practice-led research aims to offer a model of playfulness studies, which overcomes the lack of agency, pleasure and material consciousness in relation to play and technologies. With a survey of the dominant understanding of playfulness in the current electronic culture, this thesis theoretically grounds subversive practices in play as political activism of everyday life. Through historic and theoretical analysis it subjects this understanding of playfulness relative to:

1.) A critical assessment of playfulness in historic and contemporary theories and its synthesis as a particular dimension of political agency.
2.) The classification of technological materiality by an in-depth survey of cases of the *anthropomorphisation* of technological objects.
3.) Ubiquitous play as condition of social networks, based on recent activist evidences and examples of contemporary activist arts.
4.) A multifaceted evaluation of affordances of play in a comparative analysis of proto-computational historic artefacts and the observation of an *anthropomorphisation* in contemporary playful technologies and its artefacts.
5.) Political subversion and synthesis in cases of '*Con-Dividualities*' (Jahrmann 2000), which are identified as role-play in relation to technologies as precedents of the contemporary play with the self in social media networks.
6.) Case studies, which show the power of playfulness as a consciousness strategy, when it is synthesised with theoretical concepts for a new understanding of politics in everyday life and technologies.
7.) Case studies of the author's art-works that have contributed to the emergence of a new methodology of playful intervention and agency, which is coined as 'Ludics'.

This thesis grounds its intervention in a practical approach and sophisticated understanding of playfulness, which, when situated at the edge of art and games, deploys the possibilities of interconnection, interaction, and subversion that certain technologies inherently allow. In this, by means of arts, it inverts the culturally received order of efficacy against playfulness. This argument is extensively informed by the author's own practice, questioning the achievements of this practice in relation to its intentions to reveal deficits as well as insights.

This thesis draws on and is stimulated by practice-led research and theoretical reflection, exemplified by a series of Ludic art by the author. The enclosed DVD contains a selection of art works an relevant articles by the author, in which the concept and practice of playfulness can support the development of a sophisticated model for arts informed methodologies of social analysis and research. The arts projects can be considered as *initial* to the topics of the thesis, which are playfulness and agency.

Glossary of Key Terms

Throughout the thesis, a number of conceptual key terms will be introduced. These are informed by cultural and historical studies, anthropological and political theories, the arts and technical language, in order to enable further analysis of the intersection of philosophy, anthropology, everyday life, and art.

Ludics (Charmante 2006:253) is informed by play as agency. As a synthesis of practice and theory, the concept of Ludics is an emerging research methodology activities including a potential for new critical art works. Although it still draws on separate disciplines, it intrinsically integrates the arts practice as knowledge practice, oscillating between practical theory and theoretical practice. The playful Ludic method subverts the ideological complicity of technologies and user control through philosophy and arts.

Con-Dividuality (Jahrmann 2000) is used in order to describe a particularly political practice of playful activism, which stems from a subversive Avant-garde tradition of role-playing in the history of mechanisation. This concept is distinct from the idea of an Avatar, as it represents many individuals in one entity shape. This allows new forms of political agency. It refers to the altered concept of the self and representations of multiple and collective selves in relation to social networking practices and activism.

Jouissance (Kristeva 1984) is used as technical term from philosophy, cultural studies and in particular from the perspective of political theories to emphasise the quality of enjoyment and erotic attraction in the agency dimension of play. It is related to concepts of play and desire as driving forces for agency.

Ludic Interface (Gunalan 2008) is used in this thesis as a political concept, which draws on a survey of historic evidence of proto computational devices, used for political reasons. The creative reverberation of the use of these historic objects in contemporary game arts and everyday life indicates an extension of this term into the field of political agency in arts and play, where artefacts are understood as tools for political agency.

Material consciousness (Miller 2004: 12) is used to describe the shifts between the status of the subject and the object, which is expressed in a specific 'smartness' of the technological object. It addresses the dimension of agency in play.

1.0 Anthology of Playfulness

Introducing the concept of playfulness as critical research question

This introductory chapter aims to provide a selective overview on theories of playfulness. The field of study of playfulness presented here is informed by studies about games as a cultural dimension and by theories of playfulness in anthropology, which were identified as the most useful realms of investigation to support this thesis intervention in interconnecting the dimensions of play and politics. The survey in this chapter identifies perspectives of games studies and the analysis of play as a cultural technique, in order to shed light on the significance of playfulness in relation to rule-driven aspects of society. Drawing on disciplines such as systems theory and anthropology, playfulness is introduced as an increasingly important area in applied cultural studies. In particular, studies are discussed, which exemplify playfulness as a method in research that informs theory. Consequently, this critical examination suggests a new form of 'playfulness studies' (Jahrmann 2010:2), as required by the needs of an electronically networked society.

The analysis of playfulness presented in this chapter emphasises definitions of play as creative drive and a social category of agency. According to observations made in this study, the practice of play became an increasingly important area with the rise of technologies as a constitutive element of everyday life. Playfulness is reviewed from this angle and introduced as a topic of major contemporary theoretical interest. In the course of the analysis of play theories (Huizinga 1939, Caillois 1958, Constant 1959, Bateson 1972, Jameson 1981, de Certau 1988, Juul 2003, Galloway 2007) in this chapter, it became evident that the political is barely understood as a dimension of playfulness in the field of study. In contrast, a survey is synthesized, which supports the reflection of playfulness as a social dimension and perception status of the mind. This viewpoint will inform the development of the argument about the causal entanglement of play and politics (chapter 3.0) in technologically determined societies as key intervention of this thesis.

Following contemporary developments in technologies of ubiquitous computing[6] a theoretically grounded understanding of playfulness will be scrutinised from an analytical angle of what is commonly covered by the pleasure of play. According to the Nokia interface designer, Adam Greenfield (2006) ubiquitous computing is technically defined. Ubiquitous computing is a post-desktop model of human-computer interaction, in which information processing has been thoroughly integrated into everyday objects and activities. As opposed to the desktop paradigm, in which a single user consciously engages a single device for a specialized purpose, someone using ubiquitous computing engages many computational devices and systems simultaneously in the course of ordinary activities, and may not necessarily even be aware that they are doing so. Greenfield (2006: 11) argues:

> Some of these (terms for ubiquitous computing) are general 'pervasive computing', 'ambient intelligence', and more recently, 'every ware', while others primarily concern the objects involved ('physical computing', the 'Internet of things', 'haptic computing', 'things that think', and 'spime').

Consequently, a leading orientation of modern societies can be noticed in game-like electronic interfaces, which are increasingly connected to social networks. According to the game design theorist Zichermann (2008), these social platforms are designed as playful 'Funware'[7], which can be identified as an indicator for the everyday presence of play in social life. Funware is the use of game mechanics in non-game contexts. According to the Game Designer Gabe Zichermann, Facebook "looks, feels, smells like a game", and he describes Yahoo Answers as "a research game [and also] a status game." A particular angle of investigation is required to unravel the multiple facets of play in such new social systems, which have been designed as competitive games of social status. These kinds of theories of play have not yet been subsumed so far, but

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[6] On ubiquitous computing Greenfield states 2006: "There are a variety of terms in use to describe this paradigm, many of which are associated with a particular institution or perspective.".

[7] Facebook as a "non-fiction" game has "so many more users, and hours spent on [it] than any comparable virtual world". It's easy to use, 2D, html. It has tangible benefits in real life. It's free without any hidden fees. It's fun, and he describes it as a "socially-propagating story", and status, likening it to a "fireplace mantle of trophies, except you don't need to invite people over to your house." (Zichermann 2008:2). Available online from: http://www.worldsinmotion.biz/2008/02/funware_gaming_the_web.php [Accessed: June 4, 2009].

can be extracted from a variety of fields of study. A critical analysis of play will be the result of a relevant inquiry in this chapter. It aims to present a study of playfulness as a political tool for an efficient *Learning from Las Vegas* (Venturi, 1972) in terms of subtle agency. In contemporary playful life, conscious agency can be understood as basis for political interventions, which offer options for a re-ordering of social structures. As consequence, a comparative analysis of philosophies on playfulness can demonstrate creative and political potentials by effects of play.

From the perspective of social design, this chapter's literature review discusses playfulness in a variety of disciplines, e.g. systems theory, games studies, and anthropology. A contextualisation of these approaches, through the filter of contemporary electronic life and its objects, firstly demonstrates that systems theory provides an appropriate frame of thinking to review the formal distinctions between play and game. Secondly, it elaborates that in the present discourse of games studies, play has only been considered intermittently, and that the crucial relation of playfulness and materiality has barely been addressed. Thirdly, the anthropological angle of analysis is introduced as crucial in order to understand the social urgency of the dimension of play in relation to critical engagement with social status and contemporary technology-based hierarchies of agency. Finally, with the intention of introducing a method of playfulness as model of analysis, the question of what is play? And what is a game? is critically reviewed.

1.1 Play as Form

A brief systemic differentiation of playfulness

A productive way to more precisely articulate play within the studies of playfulness is to see it in the light of a systems theory. In order to cope with the complex appearance of play-systems, a consideration of formal frameworks supports a clear determination of playfulness. Both, play and games, cope with complexity, build structural dynamics, and deal with forms. This classification understands play as a process in rule-driven systems. By departing from this simple perspective of play in games and adding the filter of the everyday culture of play in present societies, an essential distinction can be made, which alters the dimension of playfulness in its meaning for social life. The coupling of cultural agency and social practice is generated by the

efficacy of play in technological environments. This coupling of the play principle and the social system can be identified as specific systemic method, which results in a new, meaningful view of play as a practical form of social agency, informed by the practices of playfulness.

According to the system theory of 'marked space' (Spencer-Brown 1972), a process can be identified as a self-referential form of social agency. In this type of marked space, a form is generated by a differentiation in the moment when a distinction is made. Spencer-Brown introduced a formal conception of a method, in which three ways of the handling of a differentiation generate a form[8]. This operation is based on an internal distinction and self-referentiality. In that self-referential sense, form is made inside the differentiation as a marked state. Outside, the differentiation is the form's unmarked state. The differentiation itself is determined as call or cross, and additionally a sign for the re-introduction of the differentiation in system theoretical language is called re-entry. Therefore it can be said that play follows a conceptual movement of a social form, in interaction with object and subject. From this kind of systemic perspective, play culture can be introduced in this section's synthesis as an interpretative organisational form, as an incorporation of syntactic relations. In order to achieve a definition of this kind, playfulness can be seen as marked space, which applies laws of form, game-like, laws of calling and crossing, play, and is supported by the possibility of re-entry in a social system. This system theoretical perspective can be applied to identify discrete processes of interaction between subjects and objects in society, in particular between players and technological objects. This kind of consciously observed relational structure expresses what Frederic Jameson (1981) called the *Poetics of Social Form*. Social forms are identified in playfulness in this thesis in the chapter on the author's art practice, 5.0 *Ludic Practice* in particular in the collective art piece *Nybble-Engine-toolZ*, 2004. This observation can serve as a contribution to the understanding of the relation between social formations and cultural forms. This understanding suggests a model of an analysis of playfulness, which builds on the formation of a principle of agency in the social realm. Beyond the cultural form of games, this analysis provides a new understanding of the form of play

[8] In the context of this is useful to compare the aspects of form elaborated by Dirk Baecker (1993) on a calculus of form.

as a systemic process of interaction. In this conceptual model, play is not analysed as a given status of society, but as an interaction process in social discourse. Communication and meta-linguistic structures will then later be identified as elements of play that support agency. Consequently, a systemic relation of play and interaction can be introduced in this section, as a precondition for the development of a new form of an analysis of playfulness as a meta-level of activist communication.

From the perspective of play as meta-communication in a systems-theoretical field, the epistemologist and anthropologist Gregory Bateson (1972) described how psychological frames are affected in the ecology of play objects. In his inquiry into the symbolic exchange of play-processes, he identifies play as ritual action. This particular position of Bateson is discussed in this context, because as an anthropologist he regards play within a system of meta-communication. According to Bateson's observations, play constantly indicates what is play. Social creativity is shaped in the moment when the assumption is questioned, whether an action is play or not. This kind of frame of symbolic exchange playfully shapes the player's consciousness and alters structures of dominance and hierarchy in an *Ecology of Mind* as system. (Bateson 1972: 180) He further proposes:

> Now, this phenomenon, play, could only occur if the participant organisms were capable of some degree of meta-communication, i.e., of exchanging signals which would carry the message 'This is play'. (Bateson 1972: 316)

This dimension of consciousness appears as most relevant in further observations in this thesis around the question of play as condition for agency and political intervention. Influenced by a view of play as a process of creativity, certain properties of playfulness come to the fore, which affect communications and creativity. Bateson summarises a paradox of play by drawing on his observations of young monkeys, describing how "the playful nip denotes the bite, but does not denote that, which would be denoted by the bite" (Bateson 1972: 319). He identified this symbolic action of play in the course of his study as extremely fruitful for discussions of frame and context in culture and psychology. In this thesis, this type of insight appears crucial for a future understanding of art and play as symbolic denotation, in relation to

current sociologies of *trompe l'oeil*[9] in networked realities. A systemic analysis of relationships between messages and psychological effects of play offers a range of interpretation of consequences for the player's consciousness. From this perspective, creativity appears as shaped in the relational play of the paradox denotation of the symbolic with modern technologies.

Drawing on the observed modern technologies of computer games, playfulness and the systemic differentiation of game and play are crucial. This focus will be introduced in the next section by an inquiry into the contemporary discipline of games studies. Although all major definitions of game and play refer to rules and constraints as categories, systems theory in relation to play as form has mainly been ignored inside the discipline of games studies. As an exception, one significant current discussions of games and play by the games studies scholar Jesper Juul (2003) deals very directly with structure and formalisms. In support of the need to develop a playfulness discourse and terminology, he argues:

> For example, rules describe games as a formal system. That a game is outside ordinary life describes the relation between the game and the rest of the world. But that a game has an object, to be obtained, describes the game as formal system *and* the relation between the player and the game. (Juul 2003: 3)

Although Juul builds upon the distinction from transgressions of spatial, temporal, or conceptual boundaries of games, as distinct from real life, he emphasises the systemic relation to the player. According to this understanding, he rejects the exclusion of moral consequences and free unsettled play for the player. However, the endeavour to introduce a focus on the formal boundaries of games is useful from the perspective of this thesis. In the way Juul treats rules in a systemic perspective lies a significance of consideration for the differentiation of playfulness from games in new technologies. Juul presents a classification of games in relation to computers and software:

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[9] According to the online ArtLex (http://www.artlex.com) Trompe l'oeil (French for 'deceive the eye') is an art technique, which gives the appearance of three-dimensional realism. It flourished from the Renaissance onward. The technique toys with spectators' seeing to raise questions about the nature of art and perception. This section compares this effect of insight by a technique on recipients and players.

> 1) Rules: Games are rule-based. 2) Variable, quantifiable outcome: Games have variable, quantifiable outcomes. 3) Value assigned to possible outcomes: That the different potential outcomes of the game are assigned different values, some being positive, some being negative. 4) Player effort: That the player invests effort in order to influence the outcome. (I.e. games are challenging.) 5) Player attached to outcome: That the players are attached to the outcomes of the game in the sense that a player will be the winner and "happy" if a positive outcome happens, and loser and "unhappy" if a negative outcome happens. 6) Negotiable consequences: The same game [set of rules] can be played with or without real-life consequences. (Juul 2003: 5)

The categories borrow from the idea of a magic circle of games by Huizinga (1938: 12), in terms of their cultural, spatial and temporal definition. There the understanding of playfulness was merely seen as a subset or necessary distinction from the game. In extension, Juul doubles this conceptual circle. His theory consists of two concentric circles to define the boundaries of games by describing its fields and effects. At the Level Up conference at the University of Utrecht, this rule-oriented analysis of the boundaries of games was recognised as sufficiently significant to be identified as a cornerstone of contemporary computer games studies. According to an in-depth analysis in this section's survey, the inner and the outer circle take processes of play as identification factors for games, but exclude playfulness as an autonomous cultural category worth analysing as an independent body of research. In contrast, in the following section certain positions in a particular strand of games studies will be introduced, which consider play as a relevant process of cultural analysis, in order to study play as process.

1.2 Playfulness in Games studies

Providing a theoretical framework for the analysis of play as process

This section outlines some of the major deficiencies of methods and subjects in the current field of games studies. In this way, it provides details about how the introduced research field of games studies and its sources differ from the

understanding of play in an emerging field of playfulness studies by distinguishing between games and play as inherently political agency. The analysis of this contemporary discourse sheds light on views of play as a cultural strategy, which open up a range of possibilities for insight, if freshly contextualised.

The theory strand of games studies has been developed over the last ten years, deriving from cultural studies and informed by literature theories. Games studies found its anchor in the analysis of computer games as a cultural phenomenon. Under the premises of the digital era, a new classification system of games was introduced (for example by Pias, 2000; Frasca, 2001 and Kücklich, 2002), which focused on the technological functions of computer games. This scholarly field of games studies builds on the analysis of games as subject, and uses frameworks and taxonomies that are constantly re-modelled. Its main research strand can be seen in the analysis and definition of games, whereas playfulness was mainly considered as subset of a cultural practice, which was necessary for the analysis of games as a leading cultural orientation. Games were defined and understood as rule-driven systems in opposition to play as a vague terrain of agency. Playfulness only served to define certain types of games and player behaviour. However, in this particular matter, the scholars in this discipline frequently refer back to three key writers, Huizinga (1939), Caillois (1958) and Sutton-Smith (1997).

The seminal cultural analysis *Homo Ludens* by Johan Huizinga (1939), for example, provides a useful analysis of the process of play as cultural *agens* (Latin: acting) as synonym for agency, as introduced in chapter 3.2 Materiality of Play Politics, page 99. The title, *Homo Ludens. A study of the Play Element in Culture* refers to an understanding of play as a driving force for cultural achievements, which leads to discussions about play as a practical source of human culture. A notion of this kind emphasises the dimension of play as inevitable energy for creative processes and cultural systems. As consequence, *Homo Ludens* became one of the most important books for the evolving discipline of games studies, but in the reading of the text, the focus was shifted towards an understanding of games as a necessary frame for play. Contrary to this understanding, Huizinga originally expressed the understanding of play as a source of all culture in an appealingly radical manner. This condition was frequently overlooked in its relevance for the recognition of the role of the process of

play in contemporary life. The cultural theorist Huizinga (1938: 9) claimed:

> Hence, modern fashion inclines to designate our species as Homo faber: Man the Maker. But though faber may not be quite so dubious as sapiens it is, as a name specific of the human being, even less appropriate seeing, that many animals too are makers. There is a third function, however, applicable to both human and animal life, and just as important as reasoning and making -- namely, playing. It seems to me that next to Homo Faber, and perhaps on the same level as Homo sapiens, Homo Ludens, Man the Player, deserves a place in our nomenclature.

This view, as expressed in the quote above, is informed by a capitalist understanding of society, in which work is opposed to play. Homo Ludens is described in opposition to Homo Faber, working man, which indicates that play and game are clearly differentiated from one another by the phenomenological division of functions. By contrast, nowadays, in a society defined by technological play, work time and playtime disperse. A development like this was anticipated in an understanding of the cultural relation of man, play and games. Similarly, the French social scientist and novelist Roger Caillois (1913 - 1978) discusses the cultural relation of man and play in his book *Les Jeux et Les Hommes* (Caillois 1958) by introducing categories of players. He is recognised as a significant author in games studies for this categorisation. Considering how his categorisation circles around the phenomenological player, he also can be identified as particularly significant in the context of the analysis of playfulness. A review of his seminal writing supports the introduction of the topic of playfulness as a contemporary category of life in this thesis. In addition, in this analysis it is important to take into consideration that Caillois was a poet, surrealist and member of the prestigious *Académie Française.* An analysis of his role as researcher and as renowned poet, who embeds his theories in his poetic writing, allows drawing parallels from his writing as an example of arts as research. Indeed, even the book's original title *Les Jeux et Les Hommes* (1958) translates better as mankind and its forms of play, which indicates an emphasis on the creative process of play as research focus. In contrast, the published title of the English edition, which is *Man, Play and Games* (1961), induces an overemphasis on

the categorical importance of games as condition for play. However, Caillois' main effort lies in the categorisation of types of play, which describe the mental state of the player as achieved in certain forms of play. In order to describe altered states of mind, which are induced by particular practices of play, he introduces four categories of play experience. The distinction between *Paidea* and *Ludus* (Latin: play and game) is introduced above these categories, which emphasises the observation of player behaviour, between rule-driven and free play. Under *Alea* (Latin: chance) he subsumes addictive play practices following the principals of chance, as in casinos. The category *Agon* (Latin: competition) describes a further state of affective involvement of the player by competition or conflict fights, as common in sports. To complement this perspective, he talks about *Mimicry* (Latin: imitation) to describe playful imitation and improvisation, in which players mimic and simulate life by make-believe. From the angle of this chapter's analysis, the fourth category, *Ilinx* (Latin: vertigo), appears as crucial, because it addresses a temporary disruption of perception often caused by physical play forms. Similarly, in the real-time application of newly released computer games certain visual effects can cause temporary illness or epilepsy, which can be considered as a new form of catharsis.

The „Ilinx quality of hybrid reality play" (Jahrmann 2008), as introduced in the authors' artwork *Objects of Desire*[10], is indicated in this section as the basis for a new identification of the urgency of playfulness in electronic worlds. This practice based theoretical intervention of a hybrid reality play informs studies of „rule-driven" games, but reaches beyond the theoretical study into efficacies of „free" play in real life. A new differentiation of playfulness at odds with the field of computer games is supported by an analysis of the practice of electronically networked social media and virtual worlds. The aforementioned categories of player types are very suitable for theoretically grounding contemporary forms of play with hybrid technologies. In particular, the category of Ilinx can be identified in new forms of play, which require the player to constantly switch between realities. The description of the form of these games is discussed in the genre of Alternate Reality Games (ARGs)[11] research. The ARG consortium argues:

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[10] 4 This art piece is discussed in chapter 5.0 *Ludic Practice* in subsection 5.2.7.

[11] The term is claimed by the International Game Developers Association IGDA in a white paper 2006.

> The contents of (ARGs) constantly intersect with actuality, but play fast and loose with fact, sometimes departing entirely from the actual or grossly warping it - yet remain inescapably interwoven. Twenty-four hours a day, seven days a week, everyone in the country can access these narratives through every available medium – at home, in the office, on the phones; in words, in images, in sound. (IGDA, 2009)

However, this definition excludes the analysis of the Ilinx effects on the player's consciousness, but pays attention to the political dimension of playfulness, in the moment when technologies intersect with real life:

> Alternate Reality Games take the substance of everyday life and weave it into narratives that layer additional meaning, depth, and interaction upon the real world. Modern society contains many managed narratives relating to everything from celebrity marriages to brands to political parties, which are constantly disseminated through all media for our perusal, but ARGs turn these into interactive games. Generally, the enabling condition is technology, with the Internet and modern cheap communication making such interactivity affordable for the game developers. (Martin and Chatfield, 2006: 6)

This kind of Alternate Reality Games provides a new field of investigation in research in playfulness. However, if the aim is to broach theories of play in the context of the practice of everyday life and technology, a more concrete focus of playfulness is required. To analyse this genre's effects on the player, and consequently on society, a new theory of the dimensions of playfulness as an intervention dimension in ARGs still needs to be elaborated. Up to now, the relevant literature has not accepted hybrid play in ARGs as a new form of interaction, but has regarded it as an expanded game system. However, the massive presence of play can be analysed in physical computing and has only recently been conceptually defined by the investigation of urban gaming – understood as the application of gaming rules to the city – and urban

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Online available from http://archives.igda.org/arg/whitepaper.html [Accessed: November 2, 2010].

play – understood as improvisational self determined activity in public space.

Katie Salen (2005) coined the concept 'Urban Gaming' in relation to alternate realities games. The exemplary application of this concept is further discussed in the case study of the author's artwork *Plymouth Play*[12], 2007. In recent case studies, she suggested the term 'big games', to describe games that are modelled after computer games, but are played in physical space. In order to change the view of the meaning of play as a creative act in the age of videogames, plays in urban space were developed by Salen and others as a process to evoke public behaviours, which lead to new forms of thinking about performance art. Based on the notion of 'Transformative Play' (Salen and Zimmermann 2005), the intentional changing of rules by free form play by is identified as subcategory of such games. In the academically insightful and well informed studies on Alternate Reality Games by Jane McGonigal (2006), the question of what a game might be is characterised under the auspices of the ubiquity of technologies, performance and meaningful play. In her work as both game designer and scholar, she is interested in influencing reality by gaming. This approach is diametrically different from the first generation of games studies researchers such as Juul (2003), who aimed to set out the definition of the boundaries of games from within the computer game systems. However, even up to the present, play is underrated in this strand of theory as too ambiguous to be identified as a primary object of investigation. Nevertheless, a detailed survey reveals a few exceptions in the field of games studies, wherever the focus of investigation is shifted from a definition-based to a perception-based inquiry. Accordingly, an emphasis of investigation on the player perception and consciousness as relevant for further insights requires a completely new reading of the cultural study of games. In order to detect the elements that justify the subject of play as significant research object, it is particularly useful to examine the contemporary social realities of technologically determined augmentation in hybrid play. In these forms of playfulness, which take place in systemic configurations between the virtual and the real, an emphasis on the definition of the boundaries of games is no longer required as a basis of study. On the contrary, a focus on play as perception process is required, in order to conduct an analysis of the cultural phenomenon of playfulness as a driving force of agency. By focusing on

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[12] 4 See reference of this art piece in chapter 5.2.7 *Ludic Practice*.

hybrid realities, an understanding of the boundaries of game worlds as permeable is identified as most appropriate for a contemporary theory of play. Consequently, the question of what is necessary and sufficient for something to be a game appears to be obsolete in the study of electronically networked interactive collective environments. In games studies, however, the discourse framework of the boundaries of games has remained largely unquestioned up to now, although it was inherently discussed in earlier theories of game and play.

As early as in 1997, the literature theoretician Espen J. Aarseth (1997) provided a figure, which is highly valuable for a theory of play as process. He introduced the concept of *Ergodic* play in reference to the technique of hypertext and games. The concept derives from the Greek words *ergon*, meaning work and *hodos*, meaning path. By addressing the work of finding a way through an environment as a playful action, he presented a theory of playful decision-making. According to his analysis, individual experiences are worked out by following a certain path in the game, which calls for an active understanding and agency from the player. Aarseth points out the playful dimension by insisting on the definition of games being both process and object. He insists that the Ergodic must be played to come to life. A play cannot be understood by being passively consumed, which indicates the relevance of the cognitive interaction of the player. It took a decade for this point to be taken up in games studies, in order to carefully draw attention to playfulness:

> If games must be played, and if this is the crucial anchor point to understand games as cultural concept, then the process, the play is the relevant subject of investigation tied to the object of games. (Galloway, 2007: 24)

This section's study of games studies scholars, who investigate playfulness and the process of play, identified the necessity for an in-depth survey of the play process. Therefore, this chapter has taken up this challenge by proposing the subject of playfulness as a requisite grounding for a new arts-informed theory of playful agency. Interest has been focused on a few exceptional theories, which consider the player consciousness and cognitive processes in play. An emphasis on playfulness as a framework for cognitive processes and creativity achieved by play suggests revisiting

viewpoints on the intertwining of play and art. This becomes evident in an interview with the international curator Daphne Dragona from Greece, who also curated the author's art work as discussed in chapter 5.2.5 *Ludic Wheel*, 2007, page 141, about the tactical relation of arts and play:

> [Nowadays it is necessary] to see play as a tactic and as a practice, that can reverse mechanisms and reveal structures. I think that this brings us to the game versus play "battle" and the need to differentiate these two. So, I see play more as an instinct, a mood, a tactic, inherent in the human behaviour and a game more a system, a structure, a form. I like to correlate play and game to tactics and strategies respectively. If according to de Certeau (1988), strategies are to be found in the systems of orders imposed by authorities, and tactics in the ways people react to those to break through, then in our case, the system and the strategies form a game-space that the players try to reverse based on playfulness. And the artistic interventions in particular are such tactics of questioning the mechanisms and its formalities and reversing structures. (Interview Daphne Dragona, at the occasion of the show Homo Ludens Ludens, Gijon 2009)

This kind of tactical questioning of everyday life technologies by art was already expressed in precedent forms of urban games and play, in activist art of the 20th century. In particular, the arts movement of *Situationism* can be identified as a theoretically informed art of political intervention, with the aim of a social re-design. The thinkers of *Situationism* understood play as a method to reorder and establish social and economic relations and to evaluate new systems of thought. In the beginning of this kind of theory, a political social utopia was outlined, in which aesthetics and arts are considered as the main vehicles of the creation of society. This aesthetic realm was expected to support the evolvement of a political field and society in play. Foremost Guy Debord (1958) theoretically expressed a particular activist definition of play in an essay with the distinct title *A Situationist Definition of Play*. In this, he countered a critique of capitalist restrictions and limitations of society by a proposal to use play as revolutionary practice. In the magazine *Internationale*

Situationniste #1, which served as inspiration for the *Ludic Society Magazines*[13], 2006-2010, play was radically introduced as method and vehicle in order to reclaim urban spaces, to appropriate hegemonic power and to overcome social restrictions of love and life by free Ludic time and space.

> Play, radically broken from a confined ludic time and space, must invade the whole of life. (...) The element of competition must disappear in favour of a more authentically collective concept of play: the common creation of selected ludic ambiances. The central distinction that must be transcended is that established between play and ordinary life; play kept as an isolated and provisory exception. (Debord 1958: 11)

Further Situationist writing described the city of the future as site of total mechanisation; in which the need to work is replaced with forms of a nomadic creative play. In particular, in regard to the role of technologies and mechanisation the Dutch artist Constant (1959) introduced the idea of a ludic society. The author's concept of „Ludic Society" as an arts association is introduced in chapter 6.0 *Toward A Ludic method.* The idea of an utopian ludic society is based on creativity as process of public play. This fictional model was based on an idea of social design by an intelligent architecture, where mechanisation offers a positive chance to overcome capitalist demands of work. In summa, Constant suggested a playful social interaction and creativity model, enabled by technologies. He spoke about the invention of a ludic society, liberated from the domination of time and labour, which is redeemed by mechanisation. In the magazine *Potlatch* (1959) Constant positioned his idea of a mechanically liberated Homo Ludens. In the following quote, some words are left out, for better understanding. These left outs are marked with brackets:

> The creative man, Homo Ludens, can only claim his rights on rare occasions. The opposite of utilitarian society is ludic society, where the human being, freed by automation from productive work, is at least in a position to develop his creativity. (...) He learns by playing. (...) Such

[13] 4 See reference of this art piece in chapter 5.0 *Ludic Practice*, p.155 ff.

> play is possible due to the integral technical control of all those elements, which thus become a conscious creation of the environment. (Constant 1959: 6)

By using the expression Homo Ludens, Constant borrows from the Dutch theoretician Huizinga (1938) and his idea of a culture that emerges from play, but interprets it in a socio-political way. Considering the thesis expressed in Constant's quote, that Homo Ludens "dispenses with education" (Constant 1959: 6), it can be said that artists often also aim to transport their utopian ideas of society and social interaction using educational frames. Such an angle necessitates a brief view on the radically playful work of the artist Roy Ascott (1963) in arts education, in particular in the 1960s. As is evident in the relevant literature (Ascott, Shanken 2007: 34), Ascott introduced the practice of play in arts education as result of his conceptual cybernetic investigations in art. In addition to other practices of social play, an educational toy, the *Calibrator for Selecting Human Characteristics* (1963), was developed as student work in the Ground Course held at the Ealing School of Art in London (1961-64).

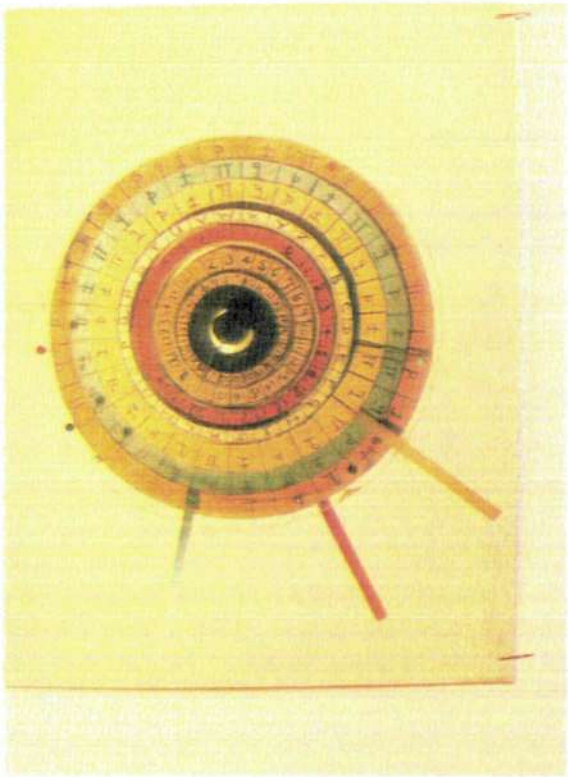

Figure 1.1: *The Calibrator for Selecting Human Characteristics*, Ascott, 1963

By its shape and playful mechanics, the object evokes associations with a combinatory wheel of Raimundus Lullus, as discussed in chapter 3.1 *Evidences of Play Politics. Historic Ludic Interfaces and real politics.* In comparison, the wheel of play for education in "the construction of change" (Ascott 1964: 98), as developed in Ascott's programme, can be understood as a logical machine, which comments on behavioural aspects and psychology. Ascott applied processes and methods such as inverted logic, chance operations, and behavioural psychology in small discrete groups of six students, in a sort of social participatory work. Such experiments corresponded to play in physical space. In a conversation between the author and Ascott in 2007, he described the object's function as a particularly enjoyed playful 'torture' to his students. In order to develop the graphical representation of their behaviours, the students had to introduce a framework for play records, which were expressed as mind maps and play experiments. In distinct student groups of six, for example, the physical ability to move was limited for one member of the group, by being tied to a trolley. The rest of the group had to interact playfully with their colleague and to integrate him in the group, without loosing their ability for agency as a group in order to reach a goal. One of the former students in Ipswich, the artist, musician and composer Brian Eno (1986), described Roy Ascott's radical method as follows:

> One procedure employed by Ascott and his staff was the mind map. In this project, each student had to invent a game that would test and evaluate the responses of the people who played it. All the students then played all of the games, and the results for each student were compiled in the form of a chart—or mind map. The mind map showed how a student tended to behave in the company of other students and how he reacted to novel situations. In the next project, each student produced another mind map for himself that was the exact opposite of the original. For the remainder of the term he had to behave according to this alternative vision of himself. (...) For everybody concerned this . . . extraordinary experience . . . was instrumental in modifying and expanding the range of interaction each student was capable of. (Eno, Mills, and Poynor 1986: 40)

According to the qualitative interview conducted by the author with Ascott in 2008 for this study (July 12th, University of Plymouth, School of Computing and Communication), he considered such behavioural experiments on play as social dimension as his most radical interventions of this kind in terms of teaching projects. Such insight on the play experiment in arts education is comparably highlighted by the games studies scholar Sutton-Smith (1997), who highlights the psychology dimension of play as a creative learning process in terms of the development of an individual's values. Comparably the *Ludic Method* of the author, as suggested on page 168 ff, integrates educative aspects of the art and politics of play. Brian Sutton-Smith argues that play contains a dimension, which provides a form of mental feedback that reinforces animal and human creativity. Supported by a respectable developmental psychology study of play, he presents a seminal theory on the ambiguity of play as rhetoric of emotional survival. Consequently, he describes play as a constitutive element of such cultural realms, which facilitate techniques of psychological stress management. With an emphasis of this kind, this study is unique in the field, because it identifies discrete dimensions of the conceptual ambiguity of play in a positive way. In a systematic analysis, it describes the practice of play as driven by personal interests and obsessions, but recognises its values for the development of identity, progress, fate power, the imaginary, frivolity and the self. With these six dimensions, Sutton-Smith introduced a rhetorical canon for a discourse on how to understand play, but with his emphasis on the rhetoric of play, he also facilitated understanding how forms and experiences can be constructed in the academic discipline of play. He draws on psychology and sociology, but also allows other expertise in his study, as rhetoric, by applying a particular trope of playfulness in his writing. In that sense, his analysis of play appears as an example for the contingency of a second order study. He allows self-referentiality on the subject investigated by an exemplary research on play. Such research is grounded in psychology, it uses reference to empirical investigation, but on top of that, it provides an idea about joyful research. Although his writing is organised as proper scientific study based on field studies and evidence, it also applies playful association as a method, and with this kind of practice, it is able to successfully link elements of educational psychology with a variety of interdisciplinary realms from sociology to design. However, in the growing field of games studies Sutton-Smith is often cited as a researcher, who addresses games as systems of organised play and mainly analyses the how and the effects of play.

> Sutton-Smith asserts that we are so burdened by play in terms of action and epistemology that it becomes a paradoxical task to overstep this framework and gaze upon play in a neutral and ontological fashion. The *how* obstructs the *what*. (Kampmann 2003: 12)

By analysing the developmental psychology effects of play, Sutton-Smith argues for a categorisation based on affects, and emphasises the consequences of play for the individual's development as a personality. Children's play is exemplarily analysed in order to understand how multi-facetted social intelligence is developed, which will be discussed in more detail in the next section on play anthropologies. The added value of this kind of particular playfulness study lies in the insights gained into the functions of play that reach into the realm of essential abilities for life. In this sense, the understanding of play introduced by Sutton-Smith goes far beyond a position of regarding play as a recreational leisure time activity. Such a farsighted viewpoint can be identified in stark contrast to a common sense negative definition of playfulness as a vague aimless activity, which is only worth being analysed in contrast to games. He proves that, on the contrary, on the one hand games as rule-driven systems work for the training of activities, but on the other hand play as free developmental ability supports self-determined experiences.

The conclusion can be drawn that the ambiguity of play provides the individual with a positive opportunity for intervention. This conclusion is applied in the case study 5.2.1 *Plymouth Play*, 2007, page 131, where the brutal surgical implant of an RFID chip under the artist's skin as a live performance of a public play with the self and identity in a gallery space, allows an ambiguous reception of the play situation. An analytical reading of psychological case studies introduces a view on play as a creative principal of self-empowerment. From the perspective of this thesis, the meta-discourse on the ambiguity of playfulness as a rhetorical principle, as suggested by Caillois, allows the deduction of a playful research methodology. The suggestion of a trans-disciplinary method might shed light on the analysis of further aspects of playfulness in this thesis. This thesis' original intervention proposes a new form of investigation, which draws on the added value of trans-disciplinary approaches.

Summing up this section's selected overview of games studies and play in different disciplines, it can be said that even in arts-informed studies of play, the key authors Huizinga, Caillois and Sutton-Smith are taken as references to explain something external to games by an analytical focus on play. In their distinct fields of cultural analysis, psychology and rhetoric, play is mainly understood as discourse and language structure. A contemporary analysis of their statements enables identifying the play principle as a relevant research question in the culture of the ubiquitous technology-based *hic-et-nunc*, (Latin: here and now). In a new theory of play, as proposed in this thesis, such techniques of presence and perception will be informed by anthropological viewpoints, as described in the following section.

1.3 Playfulness in Anthropologies

Foundation for the analysis of play as social network dimension

This particular section illustrates a survey of theory, which highlights the cultural meaning and the use of play in social network configurations of everyday life. In anthropologies of the 20th Century, some analysts have attempted to draw fine distinctions between the social and the cultural in playfulness. This anthropological discipline can be understood as an emerging field in the investigation of social dimensions of life. Significantly, playfulness is analysed in several key texts of the genre. The analytical observation of playfulness with an emphasis on the efficacies of the process of play on the social realities of players, has led to a sharpened understanding of play as strategic practice in everyday life in this field of study. In addition to such cultural synthesis, play has also been discussed as a method of theoretical practice in anthropologies.

In the analysis in this section, cultural anthropology emerges as pivotal approach to playfulness for new insights into the efficacy of play in political life. Preliminary work by thinkers of the philosophical strand of Structuralism (Derrida 1978) informed the idea of playfulness as structure of a social network of contemporary play itself. In a practical philosophy, some of the writings support a reflection of society as a political construct from a particular angle of play interactions. In this understanding, play provides a distinct practice of purposeful social interaction. In particular, the

French philosopher Derrida (1978) understood play as a principle marking the permanent shift of relations among elements in a society. In processes, which he calls free play (Derrida 1978: 196), he describes how constituting elements of structures are shifted. A description of playful structures of this kind includes a deeper understanding of play relations as seminal for the emergence of a free and open society. Inside society, the free movement of play is interpreted as an associative agency of thought. In corresponding free agency, play serves as an external pattern for generating a dynamic structure – for a coming post Structuralist society, where everything is possible and acceptable. The structure of how to move social relations is analysed as a question of intervention design. As such, play is applied in order to entail a practice of creativity and to generate a field of meaning. Derrida states:

> The function of this centre was not only to orient, balance, and organize the structure - one cannot in fact conceive of an unorganized structure - but also above all to make sure that the organizing principle of the structure would limit what we might call the free play of the structure. (Derrida, 1978: 196)

Derrida questions how things come into play in the chain of signification of things as a structure, which organises play. Besides the tension of free play with history, there is also the tension of free play with presence. Free play is the disruption of presence. The presence of an element is always a signifying and substitutive reference inscribed in a system of differences and the movement of a chain[14]. In language and semiotic contexts, Derrida addresses the symbolic, meaningful function of play by describing the process of the generation of a siginifier and signified. His survey *Structure, Sign and Play in the Discourse of the Human Sciences* (1978) introduces reflections about the meaningful dimension of 'free play'. In this regard, Derrida's theoretical statement on free play as a crucial element of agency in society can be considered as a groundbreaking manifesto of an emerging playfulness discourse[15], which announces

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[14] To indicate a focus on critique of discourses, the title of the investigation, which includes the concept of free play, names sciences as a field of investigation: "Structure, Sign and Play in the Discourse of the Human Sciences". Compare the online published text on http://hydra.humanities.uci.edu/derrida/sign-play.html [Accessed: May 6, 2009].

[15] "Explicitly and systematically posing the problem of the status of a discourse which borrows from a heritage the resources necessary for the deconstruction of that heritage itself." (Derrida 1978: 199).

potential post Structuralist societies. With a profound critique of society as too static in its present configuration, Derrida marks methodological references to play. Free play is of course introduced as method of soft social revolution, but can also be understood as a soft structure for new possibilities in research in networked societies, which overarches one-dimensional research methods. As consequence of such synthesis and convergence of principles of social design, research and play, the necessity of the methodological separation of the investigation of play and play as method can be subsequently critically questioned. The free play idea is used in particular art works of the author, as referenced in chapter 5.2.6 with the work *GoApe Chindogus*, 2006. In this art work the related concept of social hierarchies and Deep Play (Geertz 1973) was applied, as a particular methodological objectification from the broader context of anthropologies. The study *Deep Play* by Geertz (1973) builds on the mutual information of investigated subject and research object. The social analysis method of thick description was introduced with a case study of Balinese cockfighting as a particular play practice with highest social impact. An analysis of an immersive betting game answers the question of how social hierarchies are embodied by play. This also inherently identifies how to ask and frame research questions of playfulness. Geertz observes and tries to understand players, who bet on fighting cocks and gain or loose social reputation, money, and credibility. By doing so, the researcher causes a conceptual migration of the social structure, as observed in his social reputation system. He participates involuntarily in the social hierarchy game. In the analysis, Geertz describes this particular situation of embodiment of phenomena as follows:

> What makes Balinese cockfighting deep is thus not money in itself, but what, the more of it that is involved the more so, money causes to happen: the migration of the Balinese status hierarchy into the body of the cockfight. (Geertz 1973: 441)

This view is supported by the identification of play as a frame for the formation of social status, which demonstrates how political and social consequences entirely outside play can be embedded in it. The coinage 'Deep Play' is a word play, informed by interpretations of the effects of betting and winning on social status, and how the player's social hierarchy deeply incorporates a play result. As Geertz reminds us, play

is experienced as embodied social relations. However, in terms of playful methodology this intervention emphasises play using the method of 'thick description' [16]. By definition, thick description is a very dense view of certain actions, close to an incorporation of the matter investigated. Such research coinages play with the immersion of investigated research subjects and in research hierarchies. It describes the dense involvement of the researcher in the phenomenon investigated, which results in the accuracy of the terminology developed in a discipline. The observation of how a society integrates play principles into social life is indicated as 'status hierarchy' (Geertz, 1973: 444). Under this term, it details a play system of (living) toys as an indicator of hierarchies in contemporary social networks. This original insight by Geertz is based on the observation that the cockfight not merely represents and 'plays out' social hierarchies, but that it is a self-reflexive vehicle for the Balinese to narrate and reiterate these relations among themselves[17]. It is one indicator of many other facets to be found in their culture, where Geertz claims:

> Quartets, still-lifes, and cockfights are not merely reflections of a pre-existing sensibility analogically represented; they are positive agents in the creation and maintenance of such a sensibility. (Geertz 1973: 444)

According to this kind of anthropology of playfulness, the object's role in the framework of a socially informed exchange is elaborated in its symbolic dimension. The value of playful social interaction via objects as vehicle is introduced as anti-thesis to a capitalist understanding of objects as tool to generate individual surplus. In contrast, the action of how an object is exchanged as gift, the moving of an object from one point to another, appears to be relevant for the identification of social dimensions and hierarchies. A particular form of social intelligence and creativity is requiredto identify objects, which are suitable for symbolic exchange. This observation by Geertz underlines this thesis' argument about playfulness as a political vehicle for activism and agency.

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[16] Geertz compares the method of thick description of an interpretive anthropologist, who accepts a semiotic view of culture, with the method of the literary critique when analyzing a text: "Analysis, then, is sorting out the structures of signification—what Ryle called established codes—and determining their social ground or import." http://academic.csuohio.edu/as227/spring2003/geertz.htm [Accessed: February 21, 2009].

[17] The author thanks Martha Blassnigg for calling attention to this playfulness relation in

The following section introduces an analysis of the function of playfulness rituals associated with the exchange of gifts[18]. In his seminal cultural analysis on the gift Marcel Mauss (1925) argues that gift exchange can be read as a system of social play. Accordingly, this chapter suggests the adoption of this social theory of symbolic gift exchange for a contemporary theory of playfulness as frame of exchange of symbolic capital in electronically determined realities. The anthropologist Mauss' survey of the form and function of excessive gift exchange draws on his observations of an extremist form of the construction of social relations by a culture of unavoidable gift exchange among the native Chinook tribes in America. He analysed the concept of 'Potlatch', which meant 'nourishing', but which nourished a process of the de-valuation of the most precious objects in exchange for the rise of social status of the donor. By giving a precious object as a gift, the donator gives a part of his entity but receives social status. The rules of play demand a more precious gift in response. In comparison, Mauss describes the meaning of the object before the Roman Justinian law[19]. The Roman family consisted of *res*, thing, and *personae*, persons (Mauss 1990: 124). In this type of social understanding, things have personality and power as constitutive elements of social ties. Surveys such as that conducted by Mauss have shown that an anthropomorphised perspective of objects of playful exchange is possible and productive. It allows conclusions about our contemporary system of laws of exchange, which in the following will be applied to the social gift exchange in electronic networks. According to this thesis' observations of contemporary culture, an understanding of objects as a playful identifier of social status is increasing. Personal mobile electronics are used as social status objects in modern societies. They serve as vehicles for the private exchange of software objects, which are often considered or treated as 'gifts', even if they are not. As anthropomorphist objects,

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anthropologies.

[18] The topic of gifts, of de-pricing the world of commodities, is exemplified in the artwork performance *Plymouth Play. Tagging the City*, 2007, as presented in chapter 5.0 *Overview of Arts Practice*. .

[19] In the field of contemporary law Giorgio Agamben (1999) suggests playing with laws in states of exception, which he identifies increasingly in everyday life: "There is a third function, however, (...) and just as important as reasoning and making -- namely, playing. It seems to me that next to Homo Faber, and perhaps on the same level as Homo Ludens, Man the Player, Homo Sacer, Man the sacred applying the law of free play (...) deserves a place in our nomenclature." (Agamben 1999: 243). In theories of sovereignty and state, as discussed by Agamben in his theoretical figure of a being beyond law, Homo Sacer, appears as a deviant figure in urban zones of passage and transfer (as at airports). This figure can be discussed from this perspective as an extended nomenclature of a playfulness society, which resists rules and regulations under conditions of the exception in this manner of play.

these technological 'things' reverberate in particular forms of playful modern gift exchange in Free and Open Software cultures. The relations of Potlatch and the economy of gift exchange have been theoretically elaborated by the Harvard Law School, in particular by Lawrence Lessig (1999). He defines code as matter of social control in an Internet gift economy. An aspect, which has not yet been considered in Lessig's arguments about software culture, is the crucial element of playfulness involved in the social game of exchanging code, in order to develop creative commons as a Potlatch-like protocol. This relation of code, software as symbolic things and social exchange, will be exemplarily referenced in the practice chapter 5.0 of this thesis, in example 5.6 *GoApe Engine*. This project technically mirrors elements of dominance and hierarchy in open source societies in a play system of social status.

A synthesis of anthropological play theories, as introduced in this section, draws on the immersive effects of playful exchange systems as a constitution for social agency. Agency in relation to playfulness as a framework can be considered as a basic cognitive structure by using the concept of frame analysis by Erving Goffman (1974). In order to guide the perception and representation of reality, he argues:

> I assume that definitions of a situation are built up in accordance with principals of organization, which govern events and our subjective involvement in them; frame is the word I use to refer to such of these basic elements, as I am able to identify. (Goffman 1974: 10)

If we consider a socially informed meta-level of playfulness as framework, it is important to notice that play has effects outside playfulness as reference. Playfulness can be understood as a model for research situations, because playfulness as a framework helps to address what Goffman described as the need to "transform serious, real action into something playful" (Goffman 1974:11), and to gain new insights through this transformation. The transformation of play from a cultural practice to a practice of insight with significant consequences for real life and social relations, contradicts the 'irrelevance'- 'relevance' dichotomy, which is attributed to play in certain general assumptions. Instead, the anthropological view on play strengthens an understanding of differentiated levels of social efficaciousness, which will be critically analysed in the following conclusion of this thesis' introductory

chapter on playfulness theories.

1.4 Critical Analysis of the Present Playfulness Discourse

Suggesting steps towards a new ecology of play objects

This chapter's analysis of structural theories of playfulness reflects on contemporary conditions of the entanglement of phenomena and practices. Its inquiry deals with the ways in which the evidence has been discussed in theoretical approaches to understanding play as process and the structural framework of playfulness in a range of research disciplines, from social design to cultural theory. The following conclusion evaluates the methodological dimensions of these investigated theories and paves the way to a theoretical understanding of some of the ways in which play as practice of everyday life has evolved from the last century into our digital times. Finally, it sheds light on particular dimensions of agency in play. Drawing on the existing debate in games studies and in cultural studies, this chapter synthesises the survey of such a selection of scholarship of playfulness, which goes beyond the study of computer games into tracks on play as social practice. It embraces theories of games and play and looks into the notion of play in a wider spectrum of playfulness as a tactic of cultural critique. According to contemporary theoretical interventions, play is being reformed and reversed into a crucial social technique of a critical theory of culture. As a strategy, it embodies acts and raises social and political issues; it becomes a tool for activism. Play and the increasing presence of the technological toy mingle the virtual and the real world. From the perspective of ubiquitous presence observed in technologies, play revitalises other disciplines, raises new questions on social conditions of status, and offers different understandings of practices of play as highly significant phenomena in everyday life. This notion leads to a new definition of playfulness as a category of social agency in everyday life that matters!

The classic thinkers of play like Johan Huizinga and Roger Caillois or Brian Sutton-Smith formed a kind of basis for the understanding of playfulness in games studies as a cultural technique, but additionally had sections in their study, which regarded playfulness as research matter. From the perspective of this thesis' synthesis, play has become an increasingly important area in an applied critique of technologies, in the sense of a new '*playfulness studies*' on play agency.

This chapter's conclusion argues that play has been enriched as a tool for intervention by different play theories and fields of study and arts. An emphasis can be placed on the cultural ambiguity of play in the sense of Sutton-Smith (1997) in relation to psychological and emotional effects on players. Only this perspective includes the multiple psychological dimensions of play, which are crucial for the player's political consciousness. Accordingly, an emerging new discipline of playfulness studies will theoretically analyse how the consciousness effects of play influence a critical perspective on cultural value and capital. This perspective on play as intervention has been prepared by an anthropological approach of analysis, which considered the contextual breadth of playfulness as a social strategy. In retrospect system theoretical views on play as a cultural form can be identified as the best way to organise the scattered knowledge on playfulness in different fields of study and design.

Embracing playful tactics is appropriate in an era of technological social networks, which opened the survey in this chapter by referring to Funware in the introduction of this chapter. New theories of playfulness come either from resources of art like the *Situationists*, or from contemporary alternate reality and urban game art theories. Scholars such as Salen (2005) and McGonigal (2006) identify today's world as a game space. In these new playful public spaces, play is a factor of an improved empowerment for agency. It allows posing questions about hidden ideologies inherent to present technologies of everyday life.

Play principles can serve as a vehicle of practical intervention. As consequence of the observation of contemporary cultural techniques, it can be suggested that play no longer stands for a symbolic action alone of larger issues in life. Rather, the larger issues in life have become play themselves, as a principle in economics and politics as well as in social interactions. Based on this chapter's survey, it is possible to identify a need to consider playfulness in relation to social hierarchies of everyday life. In contemporary worlds, this approach of revisiting playfulness as relational play on social status will subsequently be examined as inherent to the structure and requirements of technological objects. As a reaction to the growing number of mobile gadgets, the seductive power of playfulness leads to an ongoing desire for consumer electronics, neglecting evident restrictions of individual freedom.

As a solution, a new critical sensibility with an emphasis on playfulness as a research topic will be introduced in the course of the following chapters. This will draw on conditions of playfulness technologies in physical and social realms of everyday life. The dimension of consciousness foreshadows what can be identified in the following chapters as quality in the relation and agency of the player.

A distinct analysis of the field identified a lack of attention for the technological object as toy within games studies analysis. The toy has so far largely been excluded from the discourse. The next chapter aims to introduce a strong focus of interest on the technological object materiality as toy and political thing.

2.0 Technology, Materiality and Affordances of Play

A synthesis of the contemporary field of study

The theoretical intervention of this chapter is nourished by a practice-informed analysis of technological objects of every day life, the mobile gadgetry of ubiquitous computing, as for example smart phones, Global Positioning Systems and game consoles with network features. Building on the survey of technological evidences and its theoretical analysis, the practicesof the use of technological objects will demonstrate that new requirements for agency emerge through the particular materiality of the new electronically networked gadgetry. This chapter coins these material requirements as „play affordance" in regards to technology. As basis fort his argument, the concept of 'affordances' in design studies in relation to the particular materiality of technological objects are investigated in this chapter. It will address the question: 'what is play affordance?' by highlighting a particular relation of materiality and play through the original definition of 'affordances' by Gibson (1977), which describes interaction possibilities of an object in relation to its user. By analysing the concept of affordance, this chapter puts a focus on theoretical and practical aspects of the inquiry of technologically enhanced playfulness and considers player interactions. From this angle, it aims to question materiality as such. Starting from an outline of some key definitions of materiality in cultural theory, this analysis will open up the meaning of materiality for playful interaction and contemporary technology. This allows a richer understanding of the strong presence of a new category of 'play affordances' in everyday life and media based arts.

Drawing from the differentiation of game and play in relation to technologies in chapter 1.0, this chapter shows, how a closer observation of developments of consumer technologies over the last decade has led to a dominance of play in interaction with technologies. This observation is introduced in the analysis of contemporary case studies of „Factual Play Objects" in the following section. In a comparative field study, toy-like technological gadgets are identified to intrinsically establish play as a predominant condition of contemporary life. Accordingly, the sources for a new categorisation of play consist of the social qualities and political inscriptions of technological objects, interplayed with materiality. This hypothesis

will be tested by an analysis of technological evidences in the following section.

2.1 Factual Play Objects in Public, Private and Hybrid Play

Evidences of technological play objects in everyday life

The classification requirements for the following evidences of play are taken by means of how the objects are used, in public, private and hybrid play situations. Public and private overlap sometimes, in the use of factual[20] objects, which the following examples will demonstrate. An effect of the everyday use of the contemporary technological objects is an increasing „anthropomorphosis" of play objects. This occurs when human (*Anthropos* is Greek for human) qualities are imputed to the raw material of technological gadgets, such as the iPhones or other ubiquitous computing devices, which connect with electronic networks through playful engagements. Through the objects play affordance the „smart" object is emotionally transformed („morphed").

The category of public play introduced in this section concerns factual objects, which are used in department stores and supermarkets, the RFID, Radio Frequency Identification tags for commodities. According to the Fraunhofer Institute[21], RFID can be understood as one of the most influential hybrid technologies, which connect materiality and immaterial databases. Its impact lies in relation to its commercial and expected future economic applications. Since then, electronically networked objects are extended into virtuality. The virtual intrudes physicality, in terms of a ubiquitous potential for electronic detection. The technology was developed to make goods electronically detectable, in location and history:

> A radio wave is sent to a transponder – more commonly called 'RFID tag' –, which (...) consumes the energy of the initial radio wave and sends back data to the sender/receiver unit. Through the 1950s to1960s,

[20] The adjective factual is used in this section in order to explain how a particular materiality of technologies is charged with the ability to constitute reality.

[21] In a publication as consequence of a workshop in 2006 entitled *How I learned to love RFID*, ed. Hartware Medienkunstverein Dortmund. Representatives from Fraunhofer Institute Germany in dialogue with artists speculated and presented facts about the economic interests in RFID technologies. See particularly page 15 and following of the publication.

> this concept was developed into electronic anti-theft devices that were in fact 1-bit RFID tags. They could be set either on or off and would signal if a person has paid and the cashier did subsequently deactivated the tag. So, the theft alarm devices that are positioned on each entrance/exit of shops are very basic RFID readers. (Hartware 2006:15)

The complete electronic surveillance of all facts associated with a physical object is enabled by the technological materiality of RFID. RFID is a technology used for tracking objects. In this way, facts are embodied into materiality, which is used in public configurations, and objects become factual objects in a very literal sense. The connection of physical commodities to electronic networks is increasingly made possible by RFID based ubiquitous computing devices. An example of such a factual object, influencing public play, is named NFC, Near Field Communication[22] enabled mobile phone. NFC, basically, means that a RFID reader is built into a mobile phone. In a commercial context, Nokia, for example, released NFC handhelds and describes their aim on the mission statement of their research page as follows:

> Touch is a research project that investigates Near Field Communication (NFC), a technology that enables connections between mobile phones and physical things. We are developing applications and services that enable people to interact with everyday objects and situations through their mobile devices. (Nokia 2008:1)

By contrast, the activists Rob van Kranenburg investigated the RFID critically. He introduced these technologies as enhanced states of public surveillance. The sensual dimension of objects, as observers were the subjects of his inquiry. He subtitled his analysis of ambient technology the *All-seeing Network of RFID* in 2007. His practical investigation can be seen in the tradition of critique on technological objects, expressed in an activist's description. In this perspective, the RFID technology, which he declares as synonym for the *Internet of Things,* declares each commodity and each

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[22] On the Nokia research page commentaries on the planned use of NFC in public space are posted:" NFC is discussed as being immediately suitable for developed markets where there is infrastructure already in place (such as RFID ticketing and credit card systems such as Oyster and Visa Wave)." http://www.nearfield.org/2008/05/thoughts-on-nokias-nfc-developments [Accessed: June 7, 2009]

object as an elaborated entity with its own history and traceable time and way of nascence. The conscious shift of personal empowerment over the world of things is altered in this way. These personalised worlds of things change the role of the subject/object dualism. The important point is how electronically marked things influence the shape of society by play as practice, and how critical practice and discourse can alter the given condition of factual objects by play. Accordingly, the key aspect emphasised in this chapter's analysis is to exemplify how a factual object is used in order to demonstrate the advantages and dangers of play in technological objects.

The effects of factual objects on society can be subsumed under the following perspective: In RFID equipped stores customers are permanently under suspect. Control of the subject by ubiquitous traceability is established by the networking ability of this technology. Furthermore, the possibilities of drawing conclusions from patterns of movements of both objects and persons give another meaning to the idea of leaving their mark on an object. However, as counter-reaction to this trend of surveillance, for example the RFID theft protection is inverted by its public use on subjects. In reference to the public play with RFID technologies, the following quote expresses, how the original intentions are inverted. The aim to produce a smart supply chain that thinks, responds and adapts, can become a playful target of public play, as IBM representative Hesseldahl (2004: 6) had to admit:

> All the things that radio frequency identification technology was supposed to do for retailers, simplifying inventory management and supply chain issues, (...) creating a new type of theft weren't one of them. But that is exactly what could happen.

Through this observation, we can draw the conclusion that only creative play will change the commercial object into a public object, which redirects suspicions. In opposition to rigid technological features of commodities tracking technologies, an activist play-scene around electronic tagging technologies evolved. With the arts performance *Evening of the Ludic Society* (Jahrmann 2007), as presented at the Ro theatre Rotterdam at the Dutch Electronic Arts Festival 2007, the RFID (and NFC) technology was used for a subversive arts play with mobile phones as factual objects.

As described in chapter 5.0 *Ludic Practice* this work tests the category of public play and the concept of factual objects.

Evidences of inversion of surveillance technologies are to be found numerously on the online *Hackers Guide to RFID*[23]. An enhanced awareness about surveillance qualities of RFID, at least among those who play with the technology, becomes evident in these online forums. They describe how to use the technology as gadget for public play. Supported by the availability of industrial technologies online, RFID-tags, -readers and technological process instruction, explain how to program a new autonomous usage of industrial technologies in a playful Do it yourself way. The introduction of this specific use aims to provide an understanding about the advantages of play with factual objects in everyday life. The example demonstrates how a playful use of technology can change the consciousness about the materiality of technologies.

The second category introduced in this section is private play. It concerns electronic objects, which were constructed and sold for play in the private realm, but which are frequently used for other means, as it is the case with game consoles for example. The use of game consoles in accordance and in certain moments in opposition to the category of private play is exemplified in the author's artwork *Objects of Desire*, 2007, presented in chapter 5.2.7. Private play enables a certain 'otherness in use' of highly critical industrial technologies, as game consoles. Game consoles are sold as toys for private use in order to consume games, but by closer examination, it becomes clear that the technological toys are fully functioned networking computers[24]. This smart materiality allows a use beyond gaming, which induces a metamorphosis of these toys into creative play objects. For example, the Wii remote game controller can be identified by its intended use as a private play object. It was promoted by the producing industries as a revolutionary new kind of interface, which allows the private use of advanced technological sensor developments for free movements to interact with the game console, which was before only accessible in public arcades

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[23] Hackers Guide to RFID is a very accessible site, describing the public play with RFID. http://www.forbes.com/2004/07/29/cx_ah_0729rfid.html [Accessed: May 12, 2009]

[24] Although built for private use, the features of game consoles, as the Nintendo DS, allow a ubiquitous Internet access. http://www.akkit.org/dswifi/ [Accessed: May 12, 2009]

and controlled environments of technological institutions. However, the privacy of use opened the possibility to deliberately recognise the ambiguity of technological smart materiality by trial and error, which allows a wider range of applications. For example, Lee (2008) changed the toy into a cheap gesture detection device. As a developer of interfaces as derivates of game console technologies, Lee (2008: online[25]) argues in a DIY (Do It Yourself) description of his experience:

> Using the infrared camera in the Wii remote and a head mounted sensor bar (two IR LEDs), you can accurately track the location of your head and render view dependent images on the screen. This effectively transforms your display into a portal to any virtual environment.

This DIY instruction caused a rush of hardware manipulation of the game interfaces in a new form of creative private play. Nerd pages as the Spark fun webpage[26] give evidence of this rush of the private play of game consoles for other means than playing only games, as which these game console interfaces are sold by computer game industries. This example of private play addresses the materiality in itself, which makes a big difference in empowerment with regards to terms of the conditions of the media. According to the analysis of the use of factual play objects, a communication of experiences made with the object allows it to shape shift a user's dependency from technological materiality into a player empowerment. This technological play is identified as outcome of private play in this section. It is based on the pleasure and attraction of the machine, where the engineer Johnny Chung Lee (2008) demonstrated a participatory use of the game controllers material abilities for movement detection. Lee inverted the use of this interface, also in terms of cultural direction, from a focus to control the body, to a focus on the consciousness about being controlled by the interfaces.

The third category introduced in this section is hybrid play. It demonstrates that aesthetically shaped technological objects can become tools of economic and

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[25] Such a Nerd-Page contains textual DIY instructions and images, which shows systematically how to modify a game controller. http://johnnylee.net/projects/wii/ [Accessed: May 12, 2009]
[26] The creative practice of changing technologies is described on the Spark fun webpage. http://www.sparkfun.com/commerce/tutorial_info.php?tutorials_id=43 [Accessed: May 15, 2009]

technological power. The hybrid play concept of an aesthetically anthropomorphised technological object is tested in the artwork *Ludic Wheel*, 2007, in chapter 5.2.5.

Hybrid play addresses the personal identification with the technological object as addition to the way of the use of factual objects materiality, as addressed in public and private play. The playful identification with a technological object as hybrid between the private and the public goes so far, that it conceptually changes the object into another being. The physical materiality of the technological gadget and its seamless integration to network connectivity in order to support the players identification with the object is identified as main indices of hybrid play. This relation is demonstrated through the press release text of Apple's iPhone in June 2008, praising its global positioning abilities and promising the possibility to the users to always remain in contact with their friends, if one is represented through the technological object, which further demonstrates the power of factual objects. The 'I', in other words the self, becomes a part of the objects' name „i-something". This message is very clearly communicated. The personalised iPhone is the subject of anthropomorphosis. The iPhone's touch screen with its gesture sensitive interface draws on the tangible quality, which enforces emotional ties caused by playful interaction. The "affordances" of the gadget include stroking the touch screen, giving names and personalised access to the object, direct connections to personal data and person related data. Similarly, the application Nintendogs, on the Nintendo DS exemplifies these principles. The player has to stroke little puppies on the screen which would react. These touch applications express the discovery of materiality of the technological object by industries in order to build on the mutual exchange of the principals of interaction affordances and an emotional immersion of self-identification by technological objects. The gadget transforms then, as final surplus, into a hybrid play object, enhanced by ubiquitous network availability for a selected social status group, which supports the physical location of the identity of the player. Here the Google Latitude[27] program comes into play. The ubiquitous computing gadget detects the geographical location of the user, of friend's online on the fly. As consequence of the technological materiality, the user's social status develops by the instantaneous

[27] The PR text from the official Google website features a social use of the phone as gadget to connect to a community. http://www.google.com/intl/en_us/latitude/intro.html [Accessed: June, 6 2009]

rating of presence[28], which can be identified as a practice of hybrid play, between the private and the public play. The individual is shifted into a forced competitive play mode, including negative connotations of pressure and loss of decision-making. From an angle of privacy, the permanent monitoring of an individual's presence forces subjects to become public objects in hybrid play[29] in order to connect real and virtual movements and activities, to support an anthropomorphic identification with the „smart" object.

2.1.1 Introducing Smart Materiality

Contemporary networked data are characterised by what could be called "smart materiality". Following such an understanding of smart materiality, as a dimension of networks, these technological objects can be defined as fact-holders, supporting the factual power of things, which affects the consciousness of the individual player. The cultural theorist Richard Senneth (2008: 119) introduces what makes objects interesting:

> Rather than get lost in this philosophical forest, it might be better to focus on what makes an object interesting. (...) We become particularly interested in the things we can change. (...) People invest thought in things they can change, and such thinking evolves around three key issues: metamorphosis, presence, and anthropomorphosis.

Drawing from this observation of Senneth, the factual materiality of "clay[30]" can be taken as an analogy with the smart materiality of current technological objects in a contemporary context. In this kind of smart materiality, the player's consciousness merges with the technological material. This kind of „anthropomorphosis" is registered by leaving a mark of „presence" in the object — through a personal login to

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[28] This particular kind of social surveillance appears as opposed to DIY cultures, which were described as practice of independence from the objects' technological materiality in the last section.
[29] The hybrid is often used as metaphor in games. Examples are monsters, She-devils, griffins. They can be identified as anthropomorphised hybrids of technology and medieval symbolism. Such examples are given in computer games, which use medieval aesthetics but also combine with hybrid monsters: Elexis Sinclair, SiN, Ritual Entertainment (1998), Resident Evil (2003), Mary Sheeva, Mortal Combat (1993), Final Fantasy X (2006), Second Life Furys (2004).
[30] Senneth describes these attributions to the material among craftsmen working with clay.

the connected networks. The change of the object into a personal object is registered as "metamorphosis" in the factual object. By focusing on the material as power structure, as Senneth termed it in the quote above, the pure utilitarian aspects of the technologies are faded out. This is what makes its substance culturally consequent. This personal marking of the electronic gadget, like spray-painting, is identified as a political act of "anthropomorphosis", in order to reclaim the object by the cultural practice of re-engineering.

The cultural act(ivity) of customizing objects finds its expressions in technological DIY (Do It Yourself) practice. A whole culture of DIY attitudes evolved around the technological objects of everyday life, describing the possibilities for change of these objects with images, software and hardware manipulations. This cultural practice of manipulation also informed the author's artwork, as exemplified in chapter 5.2.8 *Nybble-engine-toolZ*, 2004, which was based on a manipulation of a computer game engine. The ability to alter the private technological toys of computer game technologies, introduced a new critical dimension to the technological positivism common around technological toys. The 'factual' activist dimension of subversive DIY activities cannot be underestimated. It means that personal identification with the object serves as an opening to an independent use of technologies in general. The observed connection to practical implications of these smart materiality of contemporary life give ground for a theoretical intervention on techno materiality itself.

As consequence of the analysis of these examples of the use of present technologies, newly informed conclusions about the materiality of play are possible. The examples suggest a turn towards the physical in a new culture of *factual* objects and hybrid play, which in the following will be situated and grounded in theoretical models of materiality (Miller 1998). Through the acknowledgement of agency the observations which Gibson (1977) termed „affordances" comes into sight. The above discussed case studies support a deeper understanding of play in relation to technologies and every day life as an emerging element of art, design and creative endeavour, which finds a critical reflection in the new idea of play affordances, as suggested in the next section.

2.2 Introducing Play Affordances

The analysis of subjects and technological objects materiality sets up the platform for an introduction of a particular discussion of interaction design studies in this section, which connects factual play objects and agency, drawing on the analysis of objects of the everyday. The interaction design theory of 'affordance' is discussed in contemporary usability theories (Gaver 1996, Hartson 2003), but was originally introduced as psychological model. The following brief excursion into an application of a psychological perspective to interactivity in design practice connects with the analysis of play objects in the previous section and will be tied to the insights gained by material studies, which will follow a short introduction to the origin of the idea of affordance.

The perceptual psychologist J. J. Gibson introduced *„The Theory of Affordances"* in 1977. In this work, Gibson points out that perception drives actions related to things. He refers to actionable properties between the world and an actor. Originally, Gibson defines object possibilities for action, which can be seen as objective properties of things. Additionally, he reminds us that a subjective dimension — perception, drives actions related to things. Gibson claims that the physical quality of objects can be understood as the most relevant aspect of an analysis of materiality in the context of psychology. He is explicit in stating that this insight of the relevance of how the physicality of an object is perceived had previously been overlooked in psychology. Gibson (1977: 129) argues:

> An affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of the behaviour. It is both physical and psychical, yet neither.

The design-theorist Donald Norman (1988) applied Gibson's concept of affordances to the way designers could address the user's engagement with design objects with his influential work *The Psychology of Everyday Things* (1988). He understands 'affordances' as action possibilities as being posed by objects in the context of the everyday. In his study, Norman draws on the perception of the interaction with an object as a property of the thing. Norman (1988: 43) details:

> Affordance refers to the perceived and actual properties of the thing, those fundamental properties that determine just how the thing could possibly be used. (...) Affordances reflect the possible relationships among actors and objects: they are properties of the world.

In the second edition of the book, he changed the title into *The Design of Everyday Things* (1990) and prepared the ground for practice oriented design theories in the 1990s, which focused on the peculiarities of electronic interaction. These theories of design tried to make affordances pragmatically usable for computer interface design. In the course of the reception of his studies, Norman himself tried to differentiate, that besides focusing on conceptual ideation and the role of constraints, he especially was interested in "talking about perceived affordances". In the second edition of his book Norman (1990: 39) states:

> In graphical, screen-based interfaces, the designer primarily can only control perceived affordances. The computer system already comes with built-in physical affordances.

Norman's concept of affordances is influential for new approaches to studying and designing interaction in New Media. Later on, in his online published essay *Affordances and Design* (2001), he explains the theoretical concept of affordances through his observations of contemporary design practice in the technologies:

> The computer system, with its keyboard, display screen, pointing device (e.g., mouse) and selection buttons (e.g., mouse buttons) affords pointing, touching, looking, and clicking on every pixel of the display screen. All screens afford touching: only some detect the touch and are capable of responding. But the affordance of touch ability is the same in all cases. (Norman 2001: 2)

Norman's approach towards the materiality of technological objects did not consider the playful aspects. This particular affordance will be introduced in the following section, according to the observations of everyday use of technologies, as analysed in

the introduction of this chapter *2.1 Factual Play Objects.* In this chapter's application of affordance, theory the play is unravelled as crucial in order to develop individual uses of technologies. This differs from Norman's approach in terms of the option for a free decision to be made by the active player, in relation to technological affordances. Therefore, it is necessary to take a critical position to this theory of affordance, particularly since it only constitutes one, although a key, component of a more complex network of relations of use and materiality. The object of investigation is not to be understood as the process-related affordance alone, but also as its inscription into the materiality of the physical objects. *In summa,* affordance theory is important in relation to play objects, because it ties the play quality to the contemporary dimension of the player's engagement with technological objects. This proposition needs to be first situated in the context of the material studies of objects, which followed ten years after Gibson's seminal work. The following discussion will draw on the material culture discourse and synthesize it with particular evidences of technological play objects.

In the following section it is argued that attempts to theorise materiality are crucial for the aspect of the efficacy of play with materiality, which will also be tested in relation to art practice in chapter 5.2 *Overview of Arts Practice*. The author's position towards affordances as design theory is especially exemplified in her arts practice, which considers play as inherent quality of technologies. These exemplary experiments through arts practice take player interactions by free will into account, which are not forced or predetermined by the materiality of the design object. The practical inquiry of electronic objects by the author's artwork emphasizes how the study of objects not only contributes to an understanding of artefacts but to effective means for studying social values and contradictions in contemporary electronic cultures. The joint reflection of theory interwoven with arts practice of the author is elaborated in the interpretation of the individual artworks in chapter 5.1.3 *Reflections upon Arts Practice.* This evidence of artworks makes it necessary to bring the fields of affordance studies in design together with the (ethnographic) study of material culture, in particular under the aspect of the material culture discourse by Miller (1998).

Daniel Miller (1998) laid out the idea of a contextually informed material culture. He

proposed this new wave of analysis of artefacts of everyday life in the second wave of material studies in the late 20th century, in order to constitute a relational model of artefacts. From this perspective of the mutual contextualisation of material worlds, play affordances address relational models, which reflect the conditions of the social interaction within a networked technological materiality. This appears as valuable in correspondence to practical artwork, as tested in the case study 5.2.1 *Plymouth Play*, 2007, because this art work includes claims to transcend materiality and subject-object relation. Miller argues (1998:3):

> The volume demonstrates what is to be gained by focusing upon the diversity of material worlds, which becomes each other's contexts rather than reducing them either to models of the social world or to specific sub disciplinary concerns.

The observation of new technological materiality and its play affordances inevitably requires "a theory that claims to entirely transcend the dualism of subjects and objects" (Miller 1998: 13). The observed and analysed objects serve as placeholders, for example, of virtual figures of self-representation, as it is the case with technological toys of the present. In that sense, the technologically defined materiality of new objects of everyday life can be seen as a 'transcendent materiality'. It shifts between the status of the subject and the object, which is expressed in a specific 'smartness' or more or less intelligent technological identity of the object. It follows that technological materiality as cultural dimension inherently holds play instructions. As a logical consequence, the practice of play will affect the meaning of the objects materiality in the interaction with electronic objects.

Miller and his school aim to answer the question: What is materiality[31]? Miller draws the surprising conclusion that, "objects are important, not because they are evident and physically constrain or enable, but often precisely because we do not see them" (Miller 1998: 18). This viewpoint appears to be most relevant in mediated worlds of playfulness

[31] Miller also draws on *The Sense of Order* by the art historian Gombrich (1979), on which he argues that Gombrich focused not upon the artwork, not the frame in which the artwork was set. His source is frame theory, as coined by the sociologist Goffman (1975). He argued that much of our behaviour is cued by expectations, which are determined by the frames and this constitutes context of action.

such as electronic online environments as Second Life (2004), for example. The *Whitenoise Morphosis* (Moswitzer 2008) *Second Life* artwork and video at Golden Thread Gallery/ ISEA 2009 Belfast and the *Semiautonomous Puppet Architectonics*[32] exemplified the subject-object relations[33], which open these environments as field for a new kind of „play affordances". Second Life art works often deal with invisibility of the objects of desire, which are just represented by avatars. These collaborative virtual environments technologies become increasingly accepted, and ubiquitously useable through mobile electronic objects, which inevitably require a reaction on their intrinsic play affordances from the user. As the evidences demonstrate, the interaction with the object's affordance evokes a multiplicity of uses and effects, which facilitates a new practice of technological critique not merely in terms of industrial applications but also from a critical understanding of play as a subversive, creative process, as demonstrated in selected art works by the author in chapter 5.0 *Ludic Practice*. Consequently, this section will provide a new classification of play affordances, which will serve the further discussion of social and political dimensions of art practice,

This chapter coins the term „play affordance" in order to describe the playful qualities in relation to technological materiality. These qualities were up to now hardly considered in the theories of affordances. One of the few exceptions found in the culture of material discourse, which reflects play as a dimension, which can be related to affordances, is critically reviewed as follows. This critical review is necessary in order to see the requirements for a new play affordance. This was also left out by the theories of Kudrowitz (2009), which discuss a classification of toys and creativity. Based on a qualitative study of toy objects, the MIT based researcher Barry Kudrowitz (2009) published *The Play Pyramid: A Play Classification and Ideation Tool.* in 2009, He developed this study based on practice of toy design at the Massachusetts Institute of Technology, MIT Toy lab[34], Mechanical Engineering

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[32] Subject-object relations, as detailed by Miller (1998: 13), are exemplified in the artwork of MosMaxHax. This Second Life art work is based on a huge number of Alternate Avatars,

[33] Both artworks were exhibited at Odyssey, a gallery and repository in Second Life, dedicated to art and performance and at IDIA (Institute for Digital Intermedia Arts) Artists in Residence Exhibition, For a play with particular *Second Life* objects see as reference the ars electronica Second Life Architecture Award 2007, awarded to this artist. http://mosmax.wordpress.com [Accessed: September 21, 2010]

[34] The MIT analysis aims to clarify whether a potential toy product has play value, which mainly is evaluated in terms of commercialisation. It can be said, that in this play affordance definition the materiality of an object is recognized a as main anchor to define "play value" for an aim, which seems

Department, Boston. This link to the practice of object design makes this study relevant for the development of this chapter's theoretical intervention of play affordances, which is tested in the arts work which considers toys of everyday life in chapter 5.2.7 *Objects of Desire*, 2008.

Upfront of this critical review of *The Play Pyramid* it needs to be pointed out that although this study integrates arguments about play, psychology, the materiality of the toy and affordances studies still is excluded as well as the analysis of play effects of electronic materiality. However, some of the categories presented by Kudrowitz (2009) on the creative effects of play on children are useful for the arts research. The aspect of creativity in play, which he pointed out, can be further developed towards an explicit acknowledgement of the concept of agency according to the particular conditions of play with technological materiality. First, however, it is important to understand that Kudrowitz distinguishes four different play types in his analysis, which he names Construction, Fantasy, Sensory, and Challenge. The classification's functioning mechanism is best highlighted by an example from the writing of Kudrowitz (2009: 5):

> Guitar Hero, a video game developed for PlayStation 2, is perhaps a good example of a successful and award winning toy that could be placed near the centre of the Pyramid. This is a game in which the player uses a Mini Gibson SG Guitar controller (Fantasy) to create (Construction) music (Sensory) to match the notes that are presented on the screen (Challenge).

Kudrowitz interprets play in relation to consumer toys. He sees the limitation by materiality as chance, counting on an endless number of affordances (of play) for any given product. In general, the *Play Pyramid* concept of Kudrowitz draws on the developmental psychology of the mind of children, and applies the insights taken in this discipline to the whole life span of a human. The classification model borrows heavily from Jean Piaget's (1972) four stages of cognitive development. The

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to be highly critical –: the operationalisation of creativity in design by play. The courses at the Toy lab, modelled on the systematic investigation of toy and play, aim to find a contemporary canonisation of the functionality and design of toys materiality, focusing on the industries.

categories introduced are normally adjectives to play, such as 'social' and 'active'. Kudrowitz alternatively speaks of "sliding scales of play". By using this thinking figure, he aims to describe a slide between the poles of Involvement, Social Involvement, Level of Restraint, Mental/Physical, and Gender. These poles are amplified by corresponding terms, informed by the physical process of play; Sensory (from sensory-motor); Fantasy (from pre-operational); Construction (from concrete operations); and Challenge (from formal operations). The main category of sensory play in this model draws on a dimension of play, which previously was already located by Huizinga (1938) in musical and plastic arts. As this relation was not published in his paper on play, Kudrowitz answers the following question in an interview, conducted by the author at the „Toy-Lab" of the Massachusetts Institute of Technology (2009: April 12):

> Musical instruments and toys both involve play. In Huizinga's book, the Homo Ludens there is this one line, which says, when we sing we do not call that play, but when it involves musical instruments, and then we say it is playing. His reasoning was, when it involves movement of hands (i.e. interaction with an object) then it is called musical play. That is, why we focus on physical play in the development of new toys.

Notably, he remarks that up to this point, the historic classification of play by Huizinga was not sufficient for design issues. Accordingly, Kudrowitz' classification includes an understanding of 'transformative play'[35]. The view on this newer classification of play serves the purpose of industrial toy design production very well. This is expressed in the following statement of Kudrowitz (2009:1): "A toy is in the mind of the user, but a toy product is in the mind of a designer." But this approach appears to be too simplistic[36] in a research focus beyond gaming, which has to

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[35] This observation, of course, draws on Salen/Zimmermann's notion of creative free form play, which they named as 'Transformative Play' (Salen 2003:13).

[36] As visiting artist guest critic at the 'MIT Toy Lab' in April 2009, the author met industries representatives, from US companies such as Hasbrow or Mattell, who were constantly involved in the student research and development process. In short, the methodology applied: 'Toy Product Design, Mechanical Engineering course, is a hands-on, project based introductory course in product design targeted at freshmen at the Massachusetts Institute of Technology. In this course, students work in small teams of 5-6 members to design and prototype new toys. ... After each team proposes a toy

proceed from the observation, that in the course of the 20th century, the uses of media technologies have increasingly manifested as creative practice through playfulness. Through the qualitative analysis of technological materiality in this chapter, it becomes evident that, for example, material interfaces and gadgets connect and shape the online worlds. This inherently asks for play as 'modus operandi', which this section suggests to translate as play affordances as 'mode to interact' with technologies.

By practice and observation, this chapter's systematic analysis of technological materiality and agency in relation to play identifies the change of acknowledgement about object materiality and immaterial networks in the last decade[37].
This entanglement of the materiality of the technological object and the immateriality of the immaterial economies provides the economic necessity for the theoretical intervention of play affordances. It is grounded in network technologies economic history. The first emphasis on networked play worlds as immaterial economies[38] to generate material capital in the 1990's, prepared the ground for a practice of play as condition of everyday life, as discussed in the author's art work in chapter 5.2.8 *Nybble-engine-toolZ*, 2004. The critical net arts practice culminated a better understanding of the entanglement of play, economic immateriality and materiality.

Economic viewpoints on the immaterial networks, which allow generating material capital through its „play affordances", as it is coined in this section, were introduced into the critical theory discourse in the book *Ludocapitalism* (Dibbell 2007). The report built on a one-year experiment of the journalist Julian Dibbel. He lived during this time exclusively from money that he had generated in playful online environments. Mainly by trafficking virtual goods of the classic MMO, Massive

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concept in the form of a poster, they are asked to review the Play Pyramid and Scales of Play to see how they can alter their concept to suit different audiences or enhance the play." Available online from: http://web.mit.edu/sp.778/www/pages/toylab.html [Accessed: March 3, 2009]

[37] The wide reception of immateriality led to a higher commercialisation of networked technologies. This insight is supported by the *Dark Fibre* book of Geert Lovink (2002): The Californian digerati of Wired replied that the Internet was destined to multiply the power of capitalism, to open vast immaterial markets, and to upset the laws of the economy, which predict crisis and delays and decreasing incomes and falls of profit. (Berardi 2002: 2)

[38] The broad advent of network technologies in the 1990's, the immateriality and its economies were highly celebrated: Underpinning the new economy, is what one could call an ideology of immateriality. It says that the privileging of the immaterial over the material is a necessary, technology-driven process that will reconstitute society to fulfil our true human potential. (Felix Stalder 2000: nettime reader)

Multiplayer Online Game called *Ultima Online*, the journalist drew conclusions about the relation between immaterial object trade and the generation of material capital through play. Dibbel (2007: 24) argues:

> In the strange new world of immateriality toward which the engines of production have long been driving us, we can now at last make out the contours of a more familiar realm of the insubstantial—the realm of games and make-believe. In short, I am saying that Marx had it almost right: Solidity is not melting into air. Production is melting into play.

This kind of economic materiality was not yet understood as it was tied to the play affordance of online worlds. As a backlash to this discourse, synthetic electronic worlds are identified in this section as technologically enhanced materiality. From this point-of-view, the quality of play is based on its connected perception as a requirement of a technological materiality. It can be, or affect, both materiality and immateriality. In order to understand this relationship better, we need to look into a purposeful systematic analysis of play affordances and its objects. In the following section, a systematic of play affordances in relation to technological artefacts and immaterial networks is introduced.

2.3.1 Anthropomorphosis through Smartifacts

This section emphasis the observation of „anthropomorphosis" of electronic networks and its objects that deal with the particular quality of play affordances. It classifies networked objects through distinct examples of the qualitative use of technological gadgets in contemporary everyday networks. Today, networked objects of everyday life are encoded as cultural artefacts and filled with technological abilities. By recognizing the spectacle and the absurd demands of these objects, a form of resistance is introduced via materiality and changes the technological object into a *Ludic Interface*. The agency achieved with anthropomorphised smart objects as a practice in the arts shows us how to develop strategies of resistance by the play with the electromagnetic worlds as parallel network.

The interaction designer Harry Vertelney (1986) talked about technologically

networked objects as '*Smartifacts*'. A view on the networked materiality of technological objects demonstrates how these objects inherently afford play. Physical technological means generate social virtual spaces out of databases and networks. In the following analysis, play appears as ramification of these kinds of networks made from personalised objects. This concept continues to draw on practice-based observation and on the significantly different modalities that those technological objects afford from the user, which directly contain memory and networked data.

A transcending of subject/ object dualism in technological objects can be recognized as an identification category for particular anthropomorphised *Smartifacts*. The following section's arts related analysis of the concept of the networked *Smartifact* goes beyond the common technological definition of *Smartifacts* by Vertelney (1986). It combines fictional ideas of technological networked objects with the performance aspects of intrusive technologies, which invade the human body. The science fiction author Sterling (1986: 6) argues:

> Tech [that] sticks to the skin, responds to the touch...pervasive, utterly intimate. Not outside us, but next to us.

This fictional concept of an intrusive smart networked object technology is exemplified in the RFID syringe performance artwork in chapter 5.2.1 *Plymouth Play*, 2007. A view on conceptual evidences of *Smartifacts*[39] supports the identification of them as fictional play objects in the beginning of Cyberpunk era in the 1980's. Cyberpunk[40] science fiction texts of the 20th century spoke of a new material fetish with the qualities of networked entities. The Cyberpunk genre during the 1980s served as mantle to investigate technologies of the present and near future, which made these texts into seminal subjects of emerging cultural shifts and into blueprints

[39] This footnote aims to give a particular view on Smartifacts as *Devices of wonder* (Stafford 2007). The historic term 'philosophical toy' addressed harbingers of the cinematic apparatus and mechanic androids of the 17th century. Such sensational machines find their contemporary equivalent in Smartifacts.

[40] The coinage 'Metaverse' by Neal Stephenson (1992) published in the novel *Snow Crash* gives another well traceable example of a case how fictional arts concepts of networks, of the immaterial worlds, the synthetic worlds transfer and exchange inspirations regarding an immaterial world, which has material effects in real life.

for further technologies[41]. In retrospect, the fiction writing influenced reality. The 21st century brought Cyberpunk visions to fruition. The Cyberpunk key writer Bruce Sterling (1986) focused on a shift of network principles and social networks, caused by technological materiality. In the preface to *Mirrorshades, the cyberpunk anthology,* he spoke about a vision of something, which we can identify today as *Smartifacts*. Tied to the factual technological developments, he further paired his observations of contemporary technologies with his weakness for neologisms. He discussed and presented his poetic concept of *Spimes* [42] at media arts occasions, such as Ars Electronica 2005. Sterling's coinage addresses the equivalent of technologically enhanced *Smartifacts*. Sterling (2005: 77) argued:

> The Spime is a set of relationships first and always, and an object now and then. The key to the Spime is identity. A Spime is, by definition, the protagonist of a documented process. It is an historical entity with an accessible, precise trajectory through space and time. A Spime must therefore be a thing with a name.

More evidence for cases of anthropomorphosis of technological objects by the practice of play, which includes fiction as practice of arts, comes from the other end of the spectrum of playful agency. In wearable technologies, smart fabrics monitor the wearers pulse, feeling, and behaviour and expose the most intimate information about an individual publicly. These intrusive technological qualities are mainly unquestioned as features of *wearables*[43] in order to serve economies. The scholar Seymour (2009) presented examples of these *Fashionable Technologies* in good commercial overview, but follows a simplistic view on technologies without any critical distance, and serves industries without question. By contrast, the practice chapter 5.2.2 *Pong Dress*, 2006 and 5.2.3 *Sema Dress*, 2009 will provide two examples of wearable artwork by the author, which apply game principals to solve the superstition of the techno material fascination of wearable items in a category, which

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[41] The science fiction affinity of technology developers were referenced by the paper *Labyrinth* of the Web3D developers Marc Pesce and Toni Parisi (1997) anticipated projects as VRML or Second Life.
[42] Sterling spoke at the 2005 Symposium *Hybrid - Living in Paradox*, which was extensively covered by Roger Clarke online. Available from: http://www.rogerclarke.com/SOS/HAH0505.html [Accessed: June 9, 2009]
[43] For a glossary of companies and names see the compendium of the status quo in Fashionable

the author coined as 'game fashion'.

According to observations made in the author's arts practice chapter 5.0 *Ludic Practice*, the irony of play and games can serve as ironic vehicle to overcome the connotations of control by *Smartifacts*. This evidence of understanding the *Smartifact* departs from contemporary issues of a new anthropomorphised materiality of technological gadgets – informed by its practice based activist re-use. Smartifacts mount the efficacy of play in relation to affordances of technological materiality, which the next section will discuss as Ludic Interfaces.

2.3.2 Agency through Ludic Interfaces

This section aims to clarify the role of play avoidances for the playful interface as tool for agency in the arts and in everyday life. Throughout this following analysis, the new coinage of Ludic Interfaces by Gunalan (2008) and Fuchs (2009) is critically reviewed.

The artist and researcher Mathias Fuchs (2009) describes prime examples for such interfaces from the field of so called game arts, referring to Mary Flanagan's *Giant Joystick* (2004), Leif Rumbke's *Wargame* (2005), Jess Kilby's *Center of the Universe* (2007) or to the authors work *Pong Dress* (2006). However, the playful contemporary electronic gadgetry informed, a decade ago, the identification of a paradigm shift in regards to interests in the arts around computer games from the modelling of rule-based systems toward haptic interfaces. Obviously, the description of this shift also informed Fuchs's own arts practice [44]. He argues:

> Ludic Interfaces take the best from computer games, artistic

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Technology: The Intersection of Design, Fashion, Science, and Technology by Sabine Seymour, 2009.

[44] As artist he was active in the beginning of the so-called game arts genre, mainly with electronic game mods, and not so much with the interface itself, although integrating the affordances of social interaction in play. He answers a question about this relation to his own body of arts works as follows: „ I am extremely interested in playfulness - as a musical method applied to non-musical fields. I think that processes happening in improvisation - guiding and misleading- catching someone in a trap - fighting against each other - silence - imitation and mockery make a lot of sense when done in the field of gaming, of scholarly investigation, or of other conceivable activities. I use to play with DJs, musicians as a game artist and watch how we play together, some of us on turntables, others on computers." (Interview by the author with the artist Mathias Fuchs, 2009)

> experiment, interactive media, media conversion, social networks and modding cultures to offer tools, which are adaptive to cultural specifics and cultural change, are sensitive to gender-related, age-related and ethnic specificities. (...) Playful, rich in connotative power and surprise, custom-built, aware of locative aspects, low cost, critical, inviting co-creativity, and user-generated or user-driven content. (Fuchs 2009: 2)

Fuchs discerns Ludic Interfaces from traditionally engineered systems by identifying properties of concepts, tools and installations, but due to the limits of arts research, excludes the consumer gadgetry toys. By contrast, this chapters analysis of evidences of technological play objects in everyday life in chapter 2.1 *Factual Play Objects in Public, Private and Hybrid Play* supports the identification of *Ludic Interfaces* as present not only in 'game arts' but also in consumer gadgetry in this section. This quality was unseen and only became clear, when it came to the creative re-use of electronic materiality in everyday life. The investigation of electronic 'toys' offers a chance to understand radical interventions in consumer oriented use and market mechanisms and the 'playful' use of such gadgetry allows an individual shift towards creativity. A proof of evidence for these functions of particular Ludic Interfaces is given through the presentation of electronic circuit board designs as aesthetic objects in art exhibitions, which were since the late 1990's exhibited in Device Art Shows[45]. Numerous artists create artefacts by merging the user interfaces and the virtual by applying differing qualities of hybrid play, the intrusive technologies and performance. For example, the American media artist Amy Alexander (2009: Interview by the author) describes her playful strategy in relation to electronic materiality, arts and performance in the following words:

> But maybe here is that questions of whether it is art intervening into play culture or rather just naturally intersecting. I should also mention that my earliest background is in music performance. As I mentioned above, I brought game instruments into my VJ performances partly as a conscious reaction to clerical style computer performance. One part of

[45] Compare a recent exhibition of Device Art, 2006. http://www.kontejner.org/monowheel--and--goape-chindogus-new-bachelormachines-english [Accessed: September 23, 2009]

> this awkwardness is the business paradigm (typing) that computers bring to performance. Unlike traditional mechanical musical performance, there is usually not a direct connection between gesture and instrument response in computer keyboard based performance... So the gadgets I use in my VJ performance are not only visible interventions (game pads, dance pads, air mouse, etc.) - they are also functional. They allow me to design a more gestural performance, which is helpful for me as someone who was trained as a non-computer musician. Lately gestural controllers have become more mainstream in both musical and visual performance, so some of my gadgets, like the game pad, are becoming commonplace as performance instruments. On the other hand, lately I am discovering that the humble track pad is useful as a gestural controller.

This point of view corresponds to the author's practice as discussed in chapter 5.0 *Ludic Practice*, which heavily draws on physical interfaces. There, the Ludic Interface is best described by using examples from everyday gadgetry. Ludic Interfaces as phenomenon of techno cultures and contemporary forms of play bridge emotional involvement technology. Under this angle, the concept of Ludic Interfaces can be equally reshaped by a consideration of present arts practices and the practical use of everyday life. In regard to the everyday use of consumer gadgetry, arts and popular culture inform each other in play. The understanding of Ludic Interfaces can be extended by observing the methods, which are used to change interfaces of control into artefacts of individual freedom. The Ludic principle is adapted to an interface in order to achieve certain targets as intervention to given technological conditions. This sections synthesis informs a third category in play affordances, described as semi-synthetic play in the following section.

2.3.3 Semi-Synthetic Play

This last section elaborates the theoretical concept of play affordances by the embracing of play and a critical consciousness of materiality. In order to support the handling and shaping of our technological realities according to a self-responsible life, a new understanding of play between the materiality of technological objects, the

anthropomorphisation of gadgets and the subversive quality of Ludic Interfaces appears as consequence of practice and analysis of the permeability of synthetic dimensions and materiality. This section's philosophical grounding of the play affordances model is informed by the idea of the semi-material (Punt 2008). The philosopher and artist Michael Punt introduces the idea of the semi-material[46] as a fetish-like dimension of memory, driven by affection with a media-object. He describes a particular understanding of how the meaning of a technological artefact for individual memory is produced. He historically analyses the synchronicity as quality of the power relation between the human and to the technological arrangement. Punt (2008: 226) argues:

> The fact that technologies rapidly become associated with a class of objects that are fundamentally material should not deflect our attention forms the semi-material: another class of objects that emanate in our fullest relationship with the world as necessary mnemonics to our affective dimension.

The affective dimension of early media objects, as photography or film, as described by Punt, can be compared to the affection induced by the networked smart materiality and Ludic Interfaces of the present. Consequent on a closer observation of immaterial networks and materialised networked objects, both appear as 'semi-synthetic', because they are synthesised by the technological affordances and their implied memories. This can affect the player and have consequences on the life of the users beyond play, in terms of surveillance and engagement with technologies as a basis for life in contemporary societies.

For example, the engagement with a play currency, as *Lindendollars* (from the known social online environment of Second Life, 2004) affects the individual players personal memory. This phenomenon was exemplified in the author's artwork discussed in chapter 5.2.9 *Ludic Society*, 2006-2008. In the course of these series of

[46] The idea of the semi-material was presented in the context of the Consciousness Reframed conference Vienna 2008. The paper was published under the title 'Synchrony and the Semi-material Object') in the book *New Realities: Being Syncretic* edited by Ascott, Bast, Fiel, Jahrmann, Schnell.

art works the *Linden Dollars* currency[47] was handed out to visitors of the Dutch Electronics Arts Festival in order to establish a personal memory fetish fort he evening – or to pay for their dinner. For this evening, the play currency was accepted by the festival caterer. This evidence demonstrates how the synthetic is shape shifted by an increasing materialisation of virtual realms, into a semi-synthetic materiality. The player experiences, on one side, a tangible objects appearance, and on the other side, locates its memory value in immaterial networks. In extension to the two above-mentioned concept of the semi-synthetic, the addition of play affordances to the model is suggested in this sections conclusion. The combination of both ideas supports the understanding of reality and memory constituting effects of the play with smart materiality. The proposed theoretical concept semi-synthetic play targets the social importance of play in synthetic environments and in material objects as memory objects of these environments. Semi-synthetic play is an expression, which subsumes the affordances of play in the specifics of technological materiality. It draws on the philosophical model of the semi-synthetic as a concept that is enabled by the technological smart materiality, but which is made manifest in the artefact.

This understanding of semi-synthetic play as category of play affordances directs towards the aspect, that technology can be seen as the basis for the investigation but not as its conclusion. The theoretical intervention on the affordances of play combined with the critique of the technological object, sheds a light on another aspect of materiality: the playful and creative use of materiality in subversive manners, against certain aspects of control by technology. Semi-synthetic play as creative practice can be equally identified as political behaviour in everyday life and in the arts, as the driving force for change of the negative aspects inherent to technologies, such as surveillance or suppression of individual creativeness. This trajectory precedes the efficacy of semi-synthetic play between two positions, which address the electronic object as 'middle-thing' between a social and anti-social gathering place, related to electronic social networks and real life, in order to identify the advantages and dangers of agency of play – leading to the idea of a particular politics of play.

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[47] In issue 5 of the Ludic Society Magazine, which corresponds to the artwork „Evening of the Ludic Society",Castronova (2005) describes the economic relation of the synthetic and the real as process of play. He draws parallels to the political consequences of the economic crisis of the 1920's to the contemporary online play currencies wealth and immaterial virtual worlds economies.

3.0 The Politics of Play

How practices of play inform potential revolutions

This chapter draws on the insights on affordances (Norman 1988: 43) *of play inherent to technologies, as gained in chapter two, in particular in the subsection 2.1 Introducing a Taxonomy of Play Affordances. Evidences of technological play objects in everyday life. Drawing from this understanding of affordances as impact on the behaviour of the player, this chapter introduces a dimension of play, which consolidates agency. It suggests to understand play with artefacts of technology as inherently political. Therefore, this chapter examines historical evidence of such immanence of political agency. This inquiry is informed by creative practices of play that treat technological things as expressions of inherent political tensions in current technologies. Evidences of creative play with technological artefacts and of activist play, can be found in various times of political suppression, from the 17th century to the present. The historic evidence unravels the deeply masked political aspect of the practice of play. In pervasive computing and electronic gadget culture appears the politics of play emerges as possible solution to the actual aspects of surveillance and control.*

In order to provide a theoretical grounding to the argument of play as powerful practice, precedents of play politics are traced back to the times of medieval crusades, the Baroque, German Romanticism, 19th century concepts of real politics and 20th century thing politics (Latour 2005). According to the historic evidence, the attraction of play can be exploited as both a suppressive negative, and as a positive deliberating practice. A particularly critical perspective defines the practice of play as political thing. This chapter describes theoretically how contemporary social web applications like the Web 2.0 art works presented in chapter 4.2.2 *Public Intellectuals and Minor Media Operators in Web 2.0* must be critically reviewed as competitive plays of oppression,. This review identifies play as a contradictory strategy in relation to the technological artefact. However, this chapter's analysis will result in shaping a positive possibility of play politics as a basis for a future critical social utopia, which is aware of an emerging material consciousness in the player. Based on such observation and experience in arts it can be argued that in the trajectory of historic

and contemporary Avant-garde practices, politics plays a crucial role; a role, which is embedded in the materiality and sensations of objects. Technological materiality can be identified as politically charged, according to the qualitative historical analysis of the use of these technological objects in history, they can be considered as objects of 'Playfare' (Home and Mannox 1991). This term originally excludes the technological dimension, and was introduced in relation to performance by arts activists in the 1980s. The concept is understood as wordplay on warfare, which refers to distinct practices of play as tools for powerful social intervention. The artworks *Blitz Play Bergen* (Ludic Society 2008), or as *Constraint City*[48] (Gordan Savicic 2007) can be seen as influenced by the author's artwork discussed in chapter 5.2.1 *Ludic Category I Perceived Agency: Plymouth Play*, 2007 and 5.2.7 *Objects of Desire*. These artworks integrate contemporary electronic toys as a new kind of ironic Playfare objects. The aim of this emerging genre of contemporary performance artwork with technologies is to fight surveillance dimensions in the electronic realm of wireless communication and interaction.

As investigated in the previous chapter 2.0 *Technology, Materiality and Affordances of Play*, technological artefacts very directly afford play as a method of interaction. Similarly, it is observed in this chapter, that the process of agency, which is required to handle electronic objects, evokes political interventions. By revisiting selected historic moments, which dealt with technological objects, the highly consequential interrelations of politics and play can be discussed. Such striking relations between objects, subjects, play and politics can be identified as a time continuum in western culture. This media archaeology (Zielinski 2002) analysis necessitates a new political interpretation of historic technological toys and contemporary technological artefacts. It examines how an introduced discourse of artefacts can be situated within the contemporary context of technology-criticism and the playful re-creation of artefacts. The historical evidence of political agency in technology permits the unravelling of some of the tensions and convergences of present ideas about play cultures. For a

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[48] Constraint City, http://pain.yugo.at/, reacts to open or closed wireless networks. A simple corsage, worn by the artist in a performance regulates the tight lacing. In 2007 this work was a final degree work of the University of Applied Arts Vienna, Visual Media, where the author teaches since 1998. Read the article in the first folder to the project (Jahrmann 2007).

better understanding of these, the following section will re-examine historic technological objects in relation to play.

3.1 Evidences of Play Politics

Historic Ludic Interfaces and real politics

In this section, a comparative study of historic and present day objects of play identifies a shift towards playful agency. This assembly draws on the concept of thing politics, as developed by the cultural theorist Bruno Latour (2005). It identifies the symbolic level of play for agency by regarding the relation of technologies and things. This insight is driven by an inquiry of materiality of technological artefacts and toys. On top of that, a qualitative analysis of historic proto-computational objects suggests to regard selected historical artefacts as precedents of contemporary technological gadgets, which can be considered as equally politically effective as the discussed historic political „toys".

An analytical inquiry of past prestigious technology supports the understanding that many of the processes and discourses of present emerging fields of play materiality are charged with political intentions. Aspects of intervention for political purposes can be found in historic technological artefacts, as made by the Catalan monk Raimundus Lullus, also known as Ramon Lull (1232-1316), in the 12th century. He constructed a logical play object, in order to prove the existence of god and to persuade the Muslims about the validity and political dominance of Christianity by means of logical stringency. The aim was to achieve hegemonic power through a dominance of science. These artefacts can be newly interpreted as a tool for political intervention. A technological website describes the political play aspect of the object as follows (http://history-computer.com/Dreamers/Llull.html. Accessed September 12 2010):

> Imagine the strategic play of Lullus, bearing in mind the inscribed words of the Prima Figura. These nine words are none other than the attributes of God. Combined with a table of nine questions, it is possible to construct the skeleton of the so-called Proofs of God. The machine shows all possible statements and declarations on this subject.

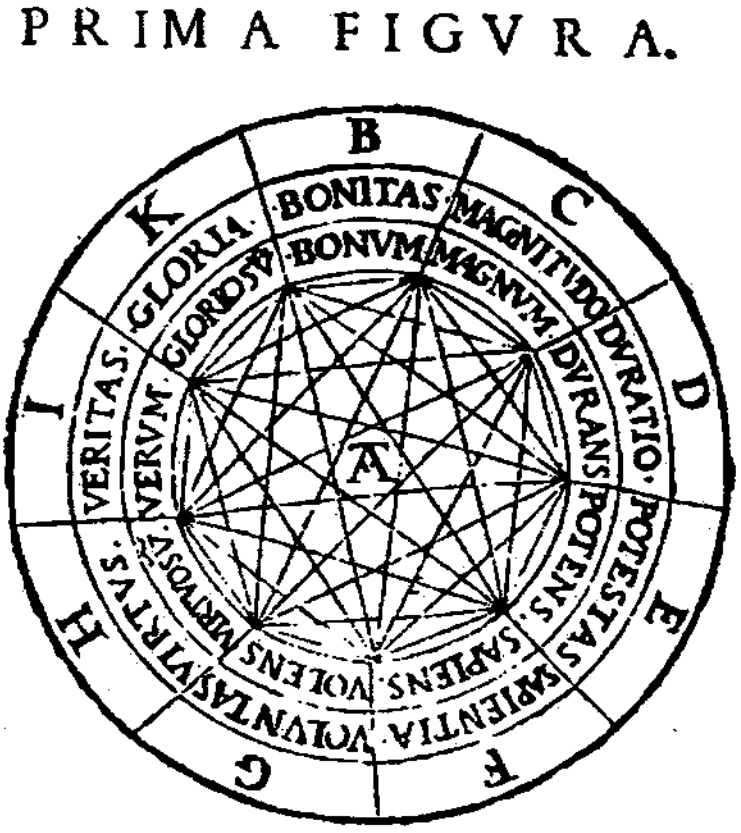

Figure 3.1: *Ars Combinatoria. Combinatory Wheel*, Lull (1232-1315)

According to the literature survey, the artefact can be described as proto-computational 'Thinking Wheel', constructed from rotating wheels. By the construction of the object, a playful logical combination of the wheels to each other was enabled. Werner Künzel (1986) sees this material object as the source of computation, which is rooted in the antique concepts of a logical art named *Ars Combinatoria*. Künzel describes the object (1986: 34):

> Lullus condensed the bible's principles to nine essential key terms (as eternity, magnitude, etc.) and related nine single letters from B to K, excluding J. Five different modes can be used to differentiate the key terms, and to relate the 9 letters in all possible combinations. Lullus[49] painted the nine letters, which contained the deeper hidden meaning

[49] Lulls combinatory is based on nine divine principals, divine inspiration, but more traceably influenced by Kabala. He draws on 13th century Spanish ecstatic Kabala to develop an objective formal-computational system of composing and deriving philosophical-theological statements. In

> and combination possibilities, on two concentric bands and one spinner disc. This mounting around one central axis allowed a counter wise rotation.

Künzel considers this historic play wheel of Ramon Lull as first known object-oriented logical thinking machine of Western culture. In this thesis, these artefacts, due to their inherently playful force to think, are referred to as Thinking Wheels.

The artwork presented in chapter 5.2.5 *Ludic Wheel* tests this theoretical idea of intervention as hypothesis in the contemporary context of new artifice electronic toys. Raimundus Lull's object anticipates the tactical spread of objects that express the belief systems of their producers. From this perspective the Thinking Wheels forced its users to accept a dominant religion as power structure, Comparably, the historic evidence can be seen as a synthesis of the art of logical combination and interpretation, and the effort to make the complex text of the bible universally accessible to all cultures. According to numerous authors, (Künzel 1986; Zielinski 2002) Lull's combinatory wheel was considered a weapon for Christianisation at this time. The objects created to implement a belief system were indeed made with a specific political intention. According to the theoretical discussion, 12th century Thinking Wheels were used for serious political aims.

In the light of this analysis of play objects as carriers of belief systems, it can be seen that the historic Thinking Wheels enabled the construction of a total world. This totality cane compared to the thinking systems of contemporary technology. The statement on the Kroatian exhibition text fort he 2006 show „Device Art" contextualises the artwork discussed in chapter 5.2.2 Ludic Wheel. The director of the gallery publishes online (http://www.kontejner.org/monowheel--and--goape-chindogus-new-bachelormachines-english. Accessed 12 November 2020):

> The Monowheel Reality Engine Device, built for the playing the game - and the reality engine either-way, the Ludic-Society Monowheel straps down a 3-axis micromachined accelerometer for keeping balance

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Hebrew, letters and numbers are mapped into the same notation of the "alefbet". (Cramer 2005: 29)

on the one hand; then again slipping in its spiral-curved printed circuit board layout, it unhinges the player as well as the engine. rotation.

In comparison in with the help of the historic toy-like wheel-objects, the totality of religious beliefs were expressed. The need to publicly express these beliefs, formed the basis for the advent of such think toys. In contrast to the common interpretation of the combinatory objects as proto-computers[50], this section's understanding of these logical proto-computational objects as playful Thinking Wheels explains the long lasting interest and force of conviction attributed to these objects. According to the literature, the combinatory wheel was built as a strategy to convert Pagans to Christianity through the artifice and excellence of technological objects based on algorithms and mathematics. This historic relation also sheds a different light on contemporary game scholar's views on technological gadgets as weapons. Comparable to the historic evidence of the Thinking Wheel, contemporary technological object's artifice and excellence seduces users to accept the capitalist principles of requirements of constant renewal of technological materiality. In the historic example of the crusades, the strategy applied was to change morals through play. Following this observation, the modern Ludic Interfaces can be identified as Thinking Wheels, in the sense of political objects. These new electronic gadgets are used for serious games[51] in its original military meaning. Analogous to the historical evidence, the actual living worlds of augmentation, hybrid reality and pervasive gaming require semi-synthetic play as practice. Most importantly, compared to the tendencies of pervasive games and computing in present times, their functions were

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[50] The enjoyment of ideas by play is almost ignored in the common analysis of these objects. Among others, the contemporary German media-analyst Florian Cramer (2005) talked extensively in his research about algorithmic poetry and literary machines of the 12th century. In his anthology on the combinatory wheels as proto-computers Cramer calls the syntax and code of such machines tools of Computations of Totality (Cramer 2005: 2). To closer identify the relations of the algorithmic artefact culture and its construction motives Cramer hints to principles of Ecstatic Kabala, which were extended by the political intention of the wheels. New in this Christian use of Kabala was the missionary purpose, which is as such unknown in Jewish tradition.

[51] The attribute serious was introduced in 1970 to indicate a strategic military meaning to games as battlefield simulation. According to the U.S. Department of Defence researcher Anne Derryberry (2007), the relation of toys, weapons and simulation was suggested to be considered, with the aim to give a positive impression about clean technologies in warfare. Although nowadays mainly educational and health supporting games are addressed with the term serious games, the U.S. Department of Defence coined the expression serious games in its public communication with the congress. This public communication originally targeted the use of war games, either as recruitment or training tools for the battlefield and interfaces as remote controlled video game like shooters. As evidence see the white paper of Anne Derryberry from 2007. http//www.imserious.net. [Accessed: June 6, 2009].

physically implemented by means of a tangible interface with the aim of tactically convincing opponents in religious questions. The physicality of these objects appears as crucial in this analysis. The embodied artificial intelligence of smart objects implements and executes political issues by algorithms inscribed into materiality. Thus, an analysis of historic logical toys helps to identify a political dimension in contemporary playthings, and these playthings of everyday life can be recognised as political 'things'.

A better understanding of the historical use of technological toys as tools to assert political interests can be achieved by an application of the concept of *Archaeology and Variantology* of Media by the German media philosopher Siegfried Zielinski (2005). The idea of *Variantology* addresses the purposeful variation of media-object in order to affect its meaning in society. By concentrating on what Zielinski calls "deep time of media" (2006: 12), and what a cultural analysis of the history of artefacts means, one can draw conclusions from present network sociologies. An insight on the deep time of media allows for the undertaking of a comparative media study at particular moments of political brisance, as distinct from the comparison of different media systems of one particular period. Accordingly, in the next section the appearances of Thinking Wheels over time in relation to other historic technological objects will be compared to present day artefacts.

In the times of the Baroque period the combinatory wheel was newly interpreted and factually remade. In poetry-communities in the 1700s combinatory wheels were used under the name *Denckring*. In the following, this reassembling is identified as a playful creative project, to result in a distinct process of socio-political execution of art by play, which supports the theory about agency in earlier described contemporary technological playful interfaces, as discussed in the example catalogue of chapter 2.1.2 *Agency through Ludic Interfaces*. Playful processes, supported by the affordances of a physical object, are interpreted in this section's analysis as a political statement for the equality of individuals, in a time of a general political suppression of the individual. According to the media archaeology studies of Zielinski (2005), an Italian philosopher of the 17th century, named Della Portas re-engineered and re-built the logical combinatory wheel of Raimundus Lullus. He distributed the wheel, printed as inlay with two connected wheels, in a publication of 1663. The user could lift the

wheel, which was mounted on a book page. By doing so, the reader became a player, as this chapter suggests, and completed the object. The baroque individual received a three-dimensional ciphering and deciphering machine, in order to think of further possible uses for this technological toy. Zielinski describes (Zielinski 2002: 105):

> Two details of a playful ciphering and deciphering machine by Portas: The centre wheel is movable. It can be lifted with the help of a golden thread. The wheel is mounted via the image of a cloud with the finger of god, to the page of the book. (Author's translation).

When Zielinski speaks in the above quoted playful tone about combinatory wheels, he is one of the rare media-theoreticians to identify a playful aspect as a reason for the growing contemporary fascination for these logic machines. He describes the combinatory wheel not so much as a logical and computational machine, but as an object to be played with. Although he did not call the user a player, he insists that the individual would playfully gain insights about the world by the physical interaction with the wheel as a tangible interface. This viewpoint emphasises the particular quality of experiences gained by the play with the tangible construction and technological use of the object. The shifting of wheels from one to another in a certain manner was the physical instruction of how to combine the databases, which were organised by a formal logic. But this known peculiarity of the wheel objects is now extended by the increasing purpose of creativity. The play is considered as part of a creative act. The prestigious technological object has become a logical toy for private use, but it still has serious effects on belief systems.

The re-print of the Thinking wheel of the 12th century as playful poetic or cryptographic wheel can be understood as a Variantology to its original materiality, which extended and shifted its meaning. In the mediated print publication, the wheel was made from paper and tied together by a golden thread. Conceptually the Thinking wheel appears in a Baroque remake as re-charged with play affordances in order to reflect on creativity, arts and political dimensionality. In order to point out a dimension of further intrinsic elements of play politics in the use of the Thinking wheels, the effects of new classification systems on society will be briefly considered in the following section.

The Thinking wheels offered a new way to classify and organise categories. This aspect can be seen as politically relevant in relation to hierarchical systems in society. The logical toys offer a neutral way of classifying contents by logical structures only. The combinatory principles of the wheel offered an option for knowledge classification, by secularising an originally theological device, the bible, by a rational method. Historic combinatory objects became rationally oriented analogue computers, which organised contents – although often in a contradictory manner. The cultural theorist Florian Cramer (2005) concludes:

> In the 17th century, the joining of opposites became a principle of witty or conceited poetics and poetry. This literature later became historicized as anti-classicist, mannerist or baroque. Wit, or acumen, was a part of rhetoric and poetics since the 16th century. It became systematically taught in Jesuitical academia. (Cramer 2005: 22)

The combinatory poetry concept was played and exercised with the combinatory wheel in Baroque associations, as Cramer reports. Nevertheless, combinatory play as principal was conceived by the clerical educators of the time. This practice of an order determined by logics instead of god – or an emperor - had to be covered as arts or play, and not as a principle, that expresses a possible political order of society.
The Baroque poetry plays with the technological wheels had traceable effects on the thinking system of state and philosophy[52]. Formal strictness appeared at that time as opposed to the sense making of subjective or content wise categorisation.
Classification systems, however, also followed a cosmological order, which was still used, until the advent of encyclopaedias by alphabetic order. The following section will consider how radical shifts in the organisation of knowledge followed, providing evidence for the efficacy of play with combinatory wheels.

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[52] Media Archaeology researchers, such as Zielinski (2002), and from a socio-political angle Senneth (2008), direct towards a political paradigm shift, caused by the materiality of technologies. Empiricism with the radically new concept of research by observation as new leading orientation was based on the interplay of observation and technological artefact. Thinking in rule systems was then declared as obsolete. Observation with the help of the apparatus, was increasingly considered as only valid principle; formulas became empirical devices in order to describe natural phenomena.

The development of the efficacy of play with combinatory objects on systems of hierarchy and politics, found its strongest impact in the late 18th century encyclopaedias, which presented knowledge by following an alphabetic order. In relation to the meaning of the alphabetic encyclopaedia as rule system, Senneth (2008) notes, that the political dimension opened up with the introduction of this new classification system. As a consequence of the newly introduced alphabetic order, a certain anti-hierarchical order was introduced, in contrast to the subjective classification systems of science and power of former times. This chapter identifies this paradigm shift as being introduced by the playing with a Variontology of technological objects.

As identified in this section, this new order of knowledge was introduced before the encyclopaedia; with the appearance of the wheels and combinatory play as its affordance. The play of contradiction as principle was in particular promoted by the use of the combinatory wheel for creative production. The paradox carries explosiveness in terms of political agency. Play is unmasked as a political process, in the moment when the Thinking wheels generate nonsense and useless poetry. The combinatory principals create art and this particular kind of art, which resulted from the play with the technological artefact. The self-sufficiency of agency is the first political aspect of this production principle. The second is a growing dimension of equality, enabled by the vehicle of the toy, because by using the combinatory wheel art production became accessible to everybody. In order to understand this dimension of the political efficacy of play with technological objects more fully, a further investigation of political interventions tied to the objects as tools for creative practice is necessary. According to the literature (Künzel 1990: 65), the playful combinatory objects have been neutrally understood as expert systems, although the wheels were also used for early physical cryptography and as playful creativity enhancers for poetry in the Baroque period. At this time, the very particular use of these objects as poetry tools was common in play affiliations. These historic play societies became associations for poetic and political revolutions, which have put forward the ideas of the enlightenment.

The literature survey demonstrated, that although the practices of play promoted in Baroque associations were focused on poetry, the social configurations around the

think toys were explicitly of political interest. Around the use and creation of algorithmic toys in the 1700s, specialists' associations were founded to discuss and practice the new technologies of the time. The historic brotherhoods formed around the use of Thinking Wheels in the Baroque period stood in stark contrast to harmless poetry. As associations, they followed very distinct political interests under a particular emancipator perspective. However, they formed around technological artefacts of the time, as described below.

Figure 3.2 *Fünffacher Denckring*, Harsdörffer (1617 – 1680)

The Five-fold Thought Ring of the German Language (German: Fünffacher Denckring der teutschen Sprache) was a physical object made by the Baroque poet Harsdörffer. It was mainly used in poetry associations in the 17th century. According to Künzel, it was created under the premises of artists' society of the time, the fruit bearing society, which gathered from 1617 to 1680 in Nürnberg. This is how the *Denckring* was constructed:

> Stem words, one-syllable words, were compressed on to four concentric wheels. In the way they were mounted, all possible combinations of words were offered. The object should permit anyone to generate all existing and potential words of the German language by the combination of syllables. As the German language is based on stems, they could be endlessly combined to new words. (Author's translation of Künzel 1990: 91)

This kind of hardware computer was a play device for inventing word-play poetry. It took shape as a serious game, played with a thing, with the aim to create poetry. The Thinking Wheel had become a creative poetry wheel. As powerful extended combinatory wheel the object was publicly used as a poetry machine. The use of combinatory objects as poetic toys was cultivated in the society gatherings, which meant that everybody could become a poet by playing with the wheel. As this evidence of play politics demonstrates, play was equally valued as method for poetic creation as well as a method for logical research. A separation of methods for research or arts did not exist. The creator of the Baroque German *Denckring* never considered such a separation of play and method. The author broached this idea in correspondence with Cramer:

> For Harsdörffer there was no difference between playing and researching, no difference between linguistics, the scientific study of language and poetics, the artistic use of language, between machine and play, research and play. (Interview with Florian Cramer, 2009)[53]

At the time of the Baroque, the *Denckring* was clearly understood as a logical combinatory toy, with the outcome of art. With the help of a logical toy, everybody could do poetry. Inside the 17th century play association; Harsdörffer was called '*Der Spieler*', which translates from German as 'the player'. This alter ego for the creator of a technological play object expresses that the value of play for creativity was

[53] In June 2009 the author conducted an interview with Florian Cramer. In the interview's progress, issues about insight potential of art and play as method, about immanent politics of play, and the role of historic logical toys, as early computation devices, were broached.

recognised highly, at least at the same level as scientific research. In the Baroque play associations, poetry and creative act were completely based on the playing with a technological object. Its egalitarian political efficacy was made evident by public use in a protected affiliation, a society, where everybody could take the role of the poet and communicate his or her results to the social peer group. Considering the previous section's discussion on the efficacies of these societies, it can be suggested, that a historic democratisation of poetry is exemplified by this equation of arts, technology and creativity. This perspective appears as precondition for the use of contemporary computational toys as acts of political play, as discussed in chapter 4.2 *Evidences of Political Role Play in Activism*, which elaborated in particular the use of technological gadgets in international contemporary artworks in chapter 4.2.2 *Public Intellectuals and Minor Media Operators in Web2.0.*

According to the observations of the shifting appearances and uses of Thinking Wheels over time, it can be argued that they transport an inherent political efficacy. This section expands this idea by putting an emphasis on the social use of the artefact. Informed by the historic evidence it can be argued, that the creative aspect in play is considered as productive category in the moment when the technology is socially re-used with new editions of the object, as it was the case with the Thinking Wheels, which have become poetry wheels in the 17th century. Affiliations served as an organisational form to strengthen the political efficacy of the practice communicated by the object's use. Accordingly, a social knowledge transfer for creativity can be best achieved by play with the technological artefact. This creative and autonomous aspect of use was not intended before, when the technology itself first appeared, neither in the historic evidence, nor in the contemporary artefact, as described in the previous chapters analysis of play affordances of technological gadgets.

As conclusion of a view on these historic evidences of political play with technological things, a drift of cultural meanings of play objects can be observed over time. According to the historic survey of this section, the intentions charged into objects can be altered according to the dimension of enjoyment and play in social use. This shift of meaning of play developed from the 12th century to the 17th century, as expressed in the example of the Thinking wheel. The plaything was used in the beginning for fomenting political goals but moved towards a poetic practice in the

Baroque period. Surprisingly, the less activist attitude towards the use of the object in the 17th century poetic play practice can be identified as more effective on crucial questions of creativeness and social properties. It implied efficacy by the purposeful agitator use of technological objects, which proved the theory of play politics as inherent to technological objects. By extending historic inquiries, this section's analysis combines the historic observation with the insight gained in actual media theories and experiences made in contemporary arts practice. According to the previous historic survey it can be further argued, that, in the moment of the re-building of things, the reverberation of a concept follows. For example in the 17th century, playful method and behaviour were socially accepted. The same practice was not considered as play in the 12th century. It can be concluded that the contemporary requirements of technologies for play as affordance of Ludic Interfaces and as social practice in electronic networks is not the basis for the advent of material objects, but its reverberation in time.

In the context of this practice-based thesis, which refers to nine case studies of the author's artwork in chapter 5.0 *Ludic Practice. Emergence of solutions through art practice*, the evidence of arts practice will necessitate very particular conclusions about the political efficacy of play with contemporary technological objects. This section's analysis of historical evidence leads to contemporary discourses of things that matter and a new theory of „play politics[54] " (Jahrmann 2010). In order to establish this conclusion the materiality of play politics will be analysed in the next section.

3.2 Materiality of Play Politics

Reassembling thing politics in technological materiality

Informed by the appearance of play politics in the previous section's analysis of historical evidences of objects, this subsection suggests a move towards the conceptual analysis of the political efficacy of play with things. The conceptual grounding of play politics in relation to technological objects draws from a new

[54] The concept of Play Politics was published by the author in a chapter in the book on Ludic Interfaces *Coded Cultures*, 2010. (eds.) Supernet, Springer Verlag, Vienna.

understanding of the thing, as distinct from the philosophical idea of thing politics. In this section, this discourse is situated within contemporary ideas of political agency, and detects that these contemporary political theories were informed by earlier concepts of real politics from 18th and 19th centuries.

The understanding of the thing in contemporary everyday life is informed by a technological and pragmatic perspective, which is related to the practice of play. Play as agency factor shifts the meaning of the technological thing from a passive to an activist concept. In the previous chapter, things were already discussed as matters in dispute from the viewpoint of play affordances, which constitute meaning and political consciousness. In this chapter, an inquiry of the material semiotics of 'risky objects' by the cultural philosopher Bruno Latour (2005) helps to substantiate a particular move towards an activist understanding of play, as an intervention method in social conditions. The role of the thing for play can be compared to the idea of risky objects. According to Latour these objects are intermediaries[55] with silent qualities beyond the ostensible. These qualities become operative once they are put into certain networked relations, which recognise the thing as equal to the human actor in terms of agency. The cultural theorist Latour (Latour 1992: 243) argues:

> [All objects] have taken on another quality: (...) The distinction between humans and non-humans, embodied or disembodied skills, impersonation or 'machination', are less interesting than the complete chain along which competences and actions are distributed.

In this chapter the conclusion can be drawn, that also historically spoken play "objects too have agency" (Latour 2005: 63). A counterpart to an idea of the agency factor as a risk for consolidated order in society is recognised in this chapter's analysis by a

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[55] Felix Stalder as scholar of network theories contextualises the meaning of intermediaries the following: "An intermediary is anything that "passes between actors in the course of relatively stable transactions." (Bijker, Law, 1992: 25) It can be a text, a product, a service, or money. Intermediaries are the language of the network. Through intermediaries actors communicate with one another and that is the way actors translate their intentions into other actors. Considering the definition of actors as element "which makes other elements dependent upon itself and translates their will into a language of its own" (Callon, Latour, 1981: 286), the possibility to command intermediaries lies at the heart of action, which is translating an actor's will into other actors." Quote available online from the nettime mailing list: http://amsterdam.nettime.org/Lists-Archives/nettime-l-9709/msg00012.html [Accessed: December 12, 2009].

repeated reference in various contexts to so called *Smartifacts*. These hybrid risky play objects are ubiquitously present and networked in contemporary every day life. This agency-based argument deals with things of contemporary everyday social life, where gathering and meeting is no more conceivable without the use of technological things. In regard of this contemporary meaning of things, Latour primarily reminds us of the original Indo-German meaning of the thing as a gathering place.

> Thing: ORIGIN: Old English, of Germanic origin: related to German Ding. Early senses included meeting and matter, concern as well as inanimate objects. (The Oxford English Dictionary 2005: 244)

A physical gathering circle as the thing is defined by objects, which differentiate its opposing realities. Considering the ineluctability of the thing in contemporary worlds, this reference to the political meaning of the old word thing appears as equally important as the concept synthesis of the term thing. A theoretical framing of a view on thing as concept builds on theories of Martin Heidegger (1951). Heidegger first spoke about a particular nature of the thing. He remarks:

> Thing or dinc becomes the name for an affair or matter of pertinence matters in dispute — taken as so many issues. (Heidegger 1951: 174)

An etymological grounding of the term thing in the sense of Heidegger includes the meaning of the location, the *topos* as communicative setting. Heidegger proceeds to define thing in relation to the Roman meaning of *res*, as matter, which includes an understanding of thing as matter for discourse. This discussion of the thing commences with an obscure fourfold of structural elements of things, of earth, sky, gods, and mortals. The system described, reminds us of a relational network, especially when Heidegger states, "each of the four reflects the others in its own way" (Heidegger 1951: 172). This viewpoint will be key in the critical reflection of current game-like playful environments in electronic networks, as discussed in this chapter's last section. There the thing's fourfold is informed by the meaning of thing beyond physicality in a ubiquitously networked sociology. Drawing on the insights of Heidegger, Latour describes the thing by an emphasis on the expression's philosophical and etymological sources. He emphasises a tradition that considers

politics as operation in the thing. When Latour states, that the Indo-German term thing translates as gathering place, which then can be understood as an early form of a parliament, we are empowered to give new meanings to the contemporary thing which connects people in technological gatherings. The observation of these new practices of a playful collective, which is embodied in the things, requires a new adoption of the term 'thing politics'. Bruno Latour introduced the expression thing politics in the book *Making Things Public* (2005: 40). The term reflected the relation to the problem of the representation of certain conditions by artefacts. In order to go beyond this assumption, Latour identified the importance of the materiality of things for politics. In his analysis, he looked closer to a classical metaphorical image of the state corpus, the Leviathan iconography of Thomas Hobbes. He argues (Latour 2005: 17:

> But in addition to the visual puzzle of assembling composite bodies, another puzzle should strike us in those engravings. A simple look at them clearly proves that body politic is not only made of people! They are thick with things: clothes, a huge sword, immense castles, large cultivated fields, crowns, ships, cities and an immensely complex technology of gathering, meeting, cohabiting, enlarging, reducing, and focusing. In addition to the throng of little people summed up in the crowned head of the Leviathan, there are objects everywhere.)

These metaphors of politics in relation to the meaning of things in society as constituting elements of thing politics, serve as inspiration for the suggestion of this chapter, which is the idea of a politics of 'playthings', as discussed by Castronova (2004). With this turn to an object orientation in mind, it makes sense to compare the playful and joyous trade of objects in synthetic worlds markets, as it is undertaken in chapter 2.3 *Introducing Semi-Synthetic Play*. The artworks related to these theories, as discussed in chapter 5.2.7 *Objects of Desire*, 2008 draw on three categories of Latour:

> a- politics is no longer limited to humans and incorporates the many issues to which they are attached; b- objects become things, that is, when matters of fact give way to their complicated entanglements and become matters of concern; c- assembling is no longer done under the

> already existing globe or dome of some earlier tradition of building virtual parliaments. (Latour 2005: 80)

This listing opens possible comparison to technology and synthetic objects in the context of contemporary play cultures. In view of that, it can be said that objects become things, in the moment when its complex relations replace facts. If thing politics is as well regarded in a relational way, it brings efficacies of things and play into the field of view. This perspective directly results from a shift of focus from an understanding of politics as intentionally organised agency towards an experience of politics as constant intervention inherent to the affordances of technological things. The new contemporary form of ubiquity enforces this dimension of political agency, from nation states towards conceptual forms of social live. By acceptance of the political reality and social efficacy of things, technological objects and play are put to centre stage of a material consciousness, as introduced in chapter 2.0 *Technology, Materiality and Affordances of Play.*

The contemporary discourse of conditions of politics in relation to things helps to substantiate a rhetoric shift from thing to real politics, as main intervention in this chapter. In contrast to Latour this section will show, that real politics is not dissolved by thing politics, but needs to be re-introduced as a crucial consequence of thing politics. Therefore, minor inconsistencies in Latour's theory must be analysed. Firstly, the theoretical intervention of thing politics borrows from the software terminology the expression object-oriented. However this can be considered as a pure rhetorical trope, because the use of the term object-oriented in the context of social analysis misleads the understanding of social relations as a dimension of class, which are still used in object-oriented programming, as categories to be maintained. Conversely, in contemporary technologically defined realities, the real politics effects of an orientation towards things, does not affect the role of the social classes as much, as the role of the individual. This is expressed in an anti-materialist view on the object. In a double bind, the technological object offers viable aspects for a particular use the thing in semi-synthetic play, as it was elaborated in the last chapter. Oriented towards immateriality, the conception relates actual practices of intervention from causal interaction towards unintentional play.

Secondly, Latour's analysis of reality can be critically revised. His emphasis on an understanding of things as constituting elements of a political reality remains limited to the clear definition of the borders between materiality and immateriality. In the perspective of the semi-synthetic play, these technological borders are permeable, which expands constituting dimensions of things for all kinds of realities, virtual, immaterial and social. Nevertheless it must be said, that in this concern the etymological understanding of the thing as gathering place, which is elaborated by Latour, is highly useful in a theory informed arts practice, as presented in 4.2.3 *Bad Subjects and Con-Dividuals in Networks*. From this perspective of investigation, an emphasis can be put on political aspects of the construction process of society, governed by technologies and its representations in the arts field. In a new form of object-orientation, which is understood as political concept, this chapter focuses on the simple idea of the playful manipulation of electronic artefacts as reality constituents, which was earlier introduced in the systems theoretical view on the concept play in relation to games as system in chapter 1.1 *Play as Form. A brief systemic differentiation of playfulness.*

According to the analysis of historic evidences of play politics, those players with technological artefacts, who considered their doing as arts, became educated users, who were increasingly aware of an objects' inherent political brisance, as earlier described by Jahrmann in her article on *Wunderkammer* toys, published in *Technoetics Art Journal* in 2007. This described purposeful use of toys is applicable in present times, considering the observations made in the analysis of technological gadgets in the affordances chapter 2.1 *Introducing a Taxonomy of Play Affordances. Evidences of technological play objects in everyday life*. A critical awareness of the effects of use is burgeoning precisely due to the kind of sophisticated use required by the play objects material affordance. It can be concluded, that the material affordance of play intrigues consciousness, which leads to an intentional politics of play. A consequence is the suggestion to use the passive voice expression *agens* (Latin: acting) in this section, in order to reflect the passive universal principals of play, which result in an active agency. The real politics of play is informed by thing politics and shifts the understanding of play as a politically passive act to an acceptance of play as method for active agency. This agency dimension can be identified as real politics of play. A political efficacy of play for the individual is provoked by

contemporary technological objects at the border between materiality and immateriality, with inherent playful interaction affordances. The idea of the passive voice *agens*, which has effects in active agency, equals the force of a driving *élan*, which is tied to the interaction with an object. The role of the player in relation with this object constitutes the crucial aspect of this theoretical analysis of the politics of play. In the arts practice of others, related to these theories, in particular the idea of live action role play and of concepts of game figures in arts are discussed in chapter 4.2 *Evidences of Political Role Play in Activism. Subversion and pleasure in play with the self as a political strategy.* In order to explain this relation of player, object and the political system in more detail, the particular contemporary cultural theory strand of Actor Network Theories is touched upon in the following section.

Actors Network Theories is abbreviated and referenced in the discourse of cultural theory as ANT as a useful relational explanation model of the player as active participant in the formation of a social network. In ANT a relational explanation model of actors, objects and social networks is introduced. Based on this chapter's historic observations of a shift from materiality to politics, this particular ANT view of relations is adapted in this chapter's intervention on a politics of play, which is further expressed in the practice chapter in the art work on the relation of technological object and subject in chapter 5.2.8 *ToyGenoSonic*, 2009. If analysed in its political dimension, material affordances of play find their place in the critical technologies discourse context of ANT. This section draws on these relations and puts a distinct angle on a new form of object-oriented relational agency found in play practice. The thinking school of Actor-Network-Theory evolved most influentially from the work of Science and Technologies Study scholars, such as Michel Callon (1986), and Bruno Latour (1987), among others. Callon concentrated on moments of translations, introducing four categories of these, as problematizing, interessement, enrolement, and mobilization of allies. According to this classification, networks consist of differing elements, as social groups, artefacts, devices, and entities. The theory's anchor point is not that these network-constituting elements are treated symmetrically but that they are defined relationally. Relations and their representation in things are identified as political dimension, as a process of delegation. Both, humans and non-humans hold assumed identities as actors in this network. Their operative identity qualities are defined during negotiations. In this thinking model the

act is associated with all of its influencing factors. This relation of actor and network accomplishes the term Actor-Network-Theory. According to ANT, subjects or objects may be both, *actants*, which equally designate symbol qualities to entities and objects. This clarification appears as highly relevant for this section's focus on a relational materiality as network constituting element in play politics. According to this theory, objects undergo a process of semiotic hybridisation, as expressed by the cultural theorist and ANT scholar Bernd Frohmann (1995). He points out (Frohmann 1995: 2):

> ANT's rich methodology embraces scientific realism, social constructivism, and discourse analysis in its central concept of hybrids, or quasi-objects, that are simultaneously real, social, and discursive, developed as an analysis of scientific and technological artefacts.

Relational network aspects, as described by Frohmann, provide a fertile theoretical grounding to this chapter's intervention on the hybridisation of technological material and the understanding of semi-synthetic play as practice between the material's semiotic and its social use, as introduced in the last chapter 2.0 *Technology, Materiality and Affordances of Play*. These insights can be applied for the theoretical intervention of a politics of play in regard to the new technological materiality, where electronic things have become social networking devices. The resulting networks link together technical and non-technical elements. In that sense, the social network theory of ANT leads to the contemporary technological theory of networked things., as the artwork 5.2.6 *GoApe Chindogus*, 2006. The actors between these two concepts can apply the practice of play, when it comes to the political. In regard to this interpretation of a relational explanation model of play and materiality towards politics, the question arises of how far practices of play can be applied to suggest a creative re-use of control mechanisms inherent to technologies. As argued in the literature survey in the first section of this chapter in the discussion of historic play societies, social configurations are influenced and shaped by technological materiality. This allows the unravelling of the role of this kind of technological materiality, which requires playfulness from the individual for interaction. The experiences made with technological materiality support a formation of a consciousness about the individual's potentials for agency in relation to the social environment, which informs consequences in real politics.

The analysis of mechanisms of play politics under newly traceable conditions of technologies in everyday life reveals mechanisms of hegemonic power. These political power structures become evident in social network technologies of Web 2.0. The social quality of these networks in their new forms of Web 2.0 is based on play, evenly distributed in the everyday practice of playful use and in the interventionist practice of strategic play with the technologies. Here this relational condition for a contemporary play politics is understood in the following meanings: Firstly the things are functioning as literal gathering places, like in electronic networks, which are accessed by artefacts. Secondly, this viewpoint is informed by the identification of intrinsic affordances of play in technological artefacts, which increasingly affect agency and consciousness dimensions. The identification of such aspects requires a new understanding of what it means to be political in contemporary social networks. A particular new idea of politics as omnipresent activity with effects in the reality, as it is suggested in this chapter by real politics, can be elaborated when it comes to deal with networked play, players, gadgets, and electronic things. This new political understanding of play is introduced in the following, by going back in a full circle to the idea of freedom in relation to real politics in the 19th century. This pragmatic historic understanding of politics will affect the next section's analysis of the present social networks as a seminal field of real politics of play.

3.3 Real Politics of Play

Play as a dimension of agency according to Schiller's concept of freedom

This section's analysis will question which concepts prepared the ground for a real politics by play. Accordingly, the idea of freedom according to Schiller's concept of '*Freiheit*' (Schiller 1795) is analysed and will be revealed as a revolutionary intervention closely related to the practice of play in western society. This concept of freedom was coined as slogan in German times of revolution. Friedrich Schiller (1759-1805) defined the concept under the perspective of play. In his understanding of *Freiheit*, a practical kind of personal freedom of the citizen is shaped by play as new form of agency. Play paved the way to self-determined acts, which would not require the mechanisms of social control by the state. The following analysis will exemplarily demonstrate, how such ideas were developed in a particular moment in

history, when *Freiheit* and play converged. Particular play related historic theoretical reflections about the role of art and playful art education, as discussed in the artworks of the Ealing School of Art in 1.2 *Playfulness in Games studies.* In history educational play was considered as a vehicle to achieve an ideal political state based on freedom.

The description of freedom as *Freiheit* by a revolutionary aesthetic practice of play as the core of society can be found in Schiller's *Letters upon the Esthetical Education of Man* from 1795. In this writing aesthetics is defined as relevant to the education of independent individuals. This appears in itself as a political act of declaring rights - for example to education - of the individual. Once the idea of an individual is put forward, play and art is considered as statement of sovereign freedom. Here Schiller discussed play as strategy for self-education, and derived from educative and arts suggestions, a political concept. Key in this concept is the self-conception of the active player as creator in a network of relations, as artist and political active entity. Schiller states:

> Art, like science, is emancipated from all that is positive, and all that is humanly conventional; both are completely independent of the arbitrary will of men. The political legislator may place their empire under an interdict, but he cannot reign there. He can proscribe the friend of truth, but truth subsists; he can degrade the artist, but he cannot change art. (Schiller 1795: 86)

According to this description, art is like ideal science immune to hegemonic power. In the moment when Schiller equalizes play and arts with science, the artist claims the right and duty to develop programs for society. In order to evaluate methodological principles of play for political intervention, this classification of the artist's role relates the freedom of arts to the freedom of play for everybody. The pragmatic social utopia of Schiller did not focus on play as content, but applied play as a practical principal for the creation of a world in freedom. He introduced arts as a political condition for the evolvement of an enlightened self in a society of free citizens. He then talked about how this state could be achieved and comes to play, in particular to a description, how plays affects creativity and self-awareness. According to these insights, society can only be changed for the better by self-determined life and work,

which is prepared by an aesthetic education that includes play practices. Concerned with a *Sturm und Drang* dictum of freedom, play was considered as method to alter society. This radical political program, taken from Schiller, prepared a new form of democratic mechanisms as part of the movement towards the project of enlightenment. By considering play as practice for arts and education it cleared the way for what is called real politics in the sense of present German pragmatic politics of agency of the individual citizen. It anticipated the understanding of play politics as the contemporary condition of play as cultural practice. This act of play is identified as a basis for real politics in the present era of the electronic thing, in its multifaceted meaning, as introduced in the qualitative analysis of artefacts in chapter 2.2 *Public, Private and Hybrid play in Play Affordances. Factual Play Objects in technological realities.*

The idea of real politics was introduced in a time, when politicians tried to replace the ideas of social revolutions of the 17th century. Although the endeavours to create a free society through revolution were promising, they resulted, contrary to all expectations and hopes, in terror regimes. As consequence, a new pragmatic policy was raised in support of the maintenance of the everyday life. The German statesman Otto von Bismarck (1815-1898) had to deal with naked power relations, which he tried to overcome by introducing instead a certain dimension of social control. He coined the term real politics, which meant a dimension of pragmatism beyond the discourse on ideologies. Latour describes real politics in the following words:

> The German language has provided us with the word *Realpolitik* to describe a positive, materialist, no-nonsense, interest-only, matter of fact, way of dealing with naked power relations. (Latour 2005: 14)

This pragmatism was key for the success of his idea of real politics. In order to understand the positive implications of pragmatism, its double meaning has to be considered. *Pragma* translates from Greek as thing or as act. These etymological implications of the term pragmatism foreshadow the emphasis of this section's analysis of real politics of play in relation to things and agency. Here *pragma* is identified as the agency dimension in the practice of play. It embraces agency and the thing in play. Drawing on the ideas of Bismarck, the pragmatic dimension of play

provides the precondition of politics. Considering the contemporary use of *Funware*, as discussed in this chapter's introduction, even the idea of social control can be found in the pragmatic play in electronic networks. This condition of technologies must be reviewed critically and according to a material consciousness, under a second perspective of play, which is freedom. However, the relation of play and real politics can be further built on a reconsideration of Bismarck's approach of real politics in correspondence to the earlier idea of freedom. This reminds us, that Bismarck suggested oppressions in regard of failed revolutions. In contrast, Schiller addressed political play with impacts on society as practical intervention. He discussed the role of the individual, subjectivity and ideas about autonomous freedom by a reference to the practice of play as revolutionary method to shape the individual.

From the viewpoint of an artist, Schiller emphasised the role of the artefact in order to illustrate a political quality of play in relation to individual freedom. His definition of freedom as the basis of society, allows light to be shed on a certain understanding of play and arts, which demonstrates the issue of agency. This helps to round off the argument about agency. Its trajectory moves the understanding of play from a passive play modality as leisure seduction into a pro-active activist political agency of play. This perspective allows for a new interpretation and the recovering of some under explored dimensions of politics and playing in the writings of Schiller. This political direction of the scholarly Schiller reception is known, but often ignored in the discourse about play, art and politics. Nevertheless, it is identified as key for the idea of play politics. German Idealism departs from Romanticism in a straightforward way by stressing the revolutionary aspects of playfulness. Although these writings, which refer to games and play as educational tools are frequently quoted in the European games studies discourse (Kücklich 2002), these theories rarely discuss the aspect of real politics in relation to play and arts. Schiller identifies this particular '*Interwinedness*'[56] of play and the arts as a necessity in order to prepare political revolutions through aesthetic practices. The idea of *Freiheit* and aesthetic freedom of the individual stood in stark contrast to suppressive state systems of the time. The political power of play in these kinds of arts writings by Schiller provided a critical

[56] Margarete Jahrmann and Christa Schneebauer introduced Intertwinedness, in a book of the same title in 1999. The concept expresses a relational aspect of culture, technologies and network practices.

momentum to trace play as social practice from Baroque to Romanticism towards a contemporary real utopia — a concept of real politics by play. An analysis of Schiller's political writing demonstrated that he preceded the concept of real politics related to play, which are transported by the artefact, as demonstrated in the practice chapter 5.2 *Overview of Arts Practice*. The main challenge of the next chapter will be to recombine these contradictory approaches, of *pragma*, real politics and the idea of play as a self-determined and enjoyed element of freedom.

To ensure substantial resonance of this concept, the dimension of enjoyment in play becomes important. In the following chapter a look at Schiller as a political philosopher who focused on playful practices, helps to compound knowledge and insight toward contemporary developments. In crucial growth areas of technologies, the so-called fun, enjoyment and the concept of *Jouissance* will be considered. Play is here understood as operative political method in relation to desire and fulfilment. Play as erotic dimension and the enjoyment of creative play as a practice of aesthetics will be examined. Joy as driving force in the use of objects in play will open up new political dimensions of free creativity and living. This is identified as the grounding of political play in the dimension of joy, and is the subject of theoretical investigations in the following chapter.

4.0 Playsure Politics

Jouissance as subtle erotic dimension of play politics

This chapter provides the theoretical preparation for the following arts practice chapter. This theoretical foundation for the incorporation of the idea of playsure politics in artworks will be tested in particular in the artworks 5.2.2 Pong Dress, (2006) and 5.2.3 Sema Dress (2009). This chapter supports the bridge between play and political theories, which commonly are considered as antipode to play, through historical examples in the materiality and cultural theories of politics and agency. In a survey of historical sources of a political use of playfulness, combined with an analysis of the current practices of play in art activism, it extends the analysis into the mental conditioning and quality of playfulness in the player. This is where the concept of Jouissance, understood as the political conscious enjoyment as a subversive agency, will inform an emerging politics of play. According to a theoretical clarification of the Jouissance concept in relation to play, this chapter will provide evidence for the intersection of play and joyful activism. The connection of joy and politics will be compared to particular practices in electronic and networked life, which includes the play with Chindogus (Kawakami 1997), the Japanese concept about absurd gadgets, and the absurd technological gadgets of everyday life in Europe. The effects and strategies of agency by play with Chindogus will be subsumed under the term 'Playsure Politics'.

According to the previous chapter's theoretical and historic anchoring, a new concept of pleasure through play can be added as an element of play politics. In the last chapter two dimensions of play politics were unravelled, first the idea of thing politics, the artefact, which brought 'thing politics' to the fore, and second, real politics, which put an emphasis on agency by play. In this chapter the important third dimension of play is described through the concept of 'Jouissance' [57].

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[57] Jouissance is often defined psychoanalytically and culturally: 'The usual English translation, "enjoyment", does not carry the sexually orgasmic connotation of the French term, it does adds to the idea of taking pleasure in something. In Lacanian circles, Jouissance is distinguished from pleasure (plaisir) in that the latter indicates simply the search for psychic balance (homeostasis) through the release of tension, whereas the former is supposed to being in a perpetual state of and in violation of the pleasure principle. There is thus an implicit analogy drawn between demand and desire (see transgression). Julia Kristeva offers a slight development and a bit of wordplay: she uses plaisir for sexual pleasure and Jouissance (or j'ouïs sens, '"I heard meaning"') as total joy due to the presence of

This chapter will combine the theoretical concept of Jouissance with the erotic dimension in play with mobile electronic objects. Originally Jouissance as political idea is informed by the origin French *Jouir*, which means to playfully *enjoy*. According to the Oxford English Dictionary (2009) Jouissance is defined as 'The possession and use of something affording advantage in the sense of enjoyment'. In order to introduce the conceptual entanglement of play and the meaning of Jouissance as 'French for pleasure', the trust of playfulness as a creative drive is used to identify the agency potential of the concept for a new form of play politics.

Lacan (1972) introduced Jouissance in his critique of psychoanalysis as a theoretical concept of agency through enjoyment. This angle seems to be crucial, considering the relational entanglement of subject and technological object, as it is tested in the artworks of the author in chapter 5.0 *Ludic Practice*. In his famous *Seminars XX* at the University of Paris, Lacan (1972) suggested the use of the term for a sophisticated form of pleasure, which was informed by the relationship between objects, subjects and the creation and shifts between different aspects of enjoyment and the desire of the self with its complex appearances. By analysing this form of joy, Lacan constantly refers to Hegelian dialectics of 'a master and a servant' relationship. The 'master and servant relationship' as described in the theoretical object is produced out of the enjoyed or obsessive relationship between subject and object. In contemporary technological networks, this master and servant relation becomes unsharp and has to be critically questioned. The Lacanian desire for '*plus-de-jouir*' (Pfaller 1997: 82) can be understood as a wish for more enjoyment through play, which is tied to the object. Lacan suggested that the object of desire as an '*objet petit a*' (Pfaller 1997: 27). This object of desire, which is also used as title of an artwork of the author, presented in chapter 5.2.7 *Objects of Desire*, 2008, constitutes enjoyment, which nowadays particularly includes the technological object. This is a reminder of the frame of technological materiality, where the bond to materiality is substituted with the surplus of enjoyment by play. Through the analysis of this particular artwork of the author, the enjoyment of technological materiality can be identified as contemporary practice, which overcomes the limitations and rules tied to the relationship between the object

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meaning." http://www.arts.ouc.bc.ca/fina/glossary/j_list.html [Accessed: March 6, 2009].

of desire and enjoyment, by free play with the object. According to Derrida's treatment of freeplay in *Structure, Sign and Play in the Discourse of the Human Sciences* (1978), freeplay appears as associated with insight, desire and pleasure. Drawing on the idea of freeplay, this divide of insight and play can be unmasked as pure construction of hegemonic suppression. The thinking framework of pleasure and play is based on concrete ideas of structural processes in society as dimensions of aesthetic education and enjoyment. In this argument, the anti-thesis of reason and sensuality are dissolved in a practice of identification with a political driven desire for a certain kind of 'freeplay'. Derrida (1978:2) argues:

> And, as always, coherence in contradiction expresses the force of a desire. The concept of centred structure is in fact the concept of a freeplay based on a fundamental ground, a freeplay, which is constituted upon a fundamental immobility and a reassuring certitude, which is itself beyond the reach of the freeplay.

The fundamental force of the desire for freeplay, which Derrida describes, opens up the contemporary discourse into political efficacy of freeplay. Accordingly, play can be identified as the key element in understanding the mental aspects of Jouissance as crucial for political agency. This section considers an idea of enjoyment of the attraction of technological materiality in play for political aims. It draws from a popular orientation of a political theory on enjoyment, also towards a critical dimension of popular play in the 'Funware' (Zichermann 2008) of social media network technologies.

This section's observations of a pragmatic real politics of play and enjoyment in mobile and network technologies are supported by an analysis of the Jouissance concept by the political philosopher Slavoj Žižek (2005), who newly interprets and draws on Lacan. He discusses a conscious form of enjoyment in contemporary mediated real politics. This theory emphasises the pleasures of popular culture and popularity, particularly in how Žižek declares joy and sexual pleasure as political. According to Žižek, the 'other' and 'violation of constraints' and 'limitations' take an important role in Jouissance. In this thesis, the constraint is considered as synonym for „rules" of play. In this particular interpretation of Žižek's thesis, enjoyment

becomes paradoxical if it is combined with the necessary transgression or violation of constraints. Žižek also talks about the obscenity of Jouissance, emphasising the concern of fetish theories in relation to sovereignty. In that sense, he approaches the politics of Jouissance masked in popular culture. This angle allows to draw parallels to the contemporary Jouissance in technologically enhanced play. In present times, comparably, smart objects and the performance of multiple selves in media networks infiltrate popular culture, as this chapter in section 4.2 *Evidences of Political Role Play in Activism* will demonstrate. Corresponding to the observations of political role-play in activism, art activism applies the subtle enjoyments of play with the self. Playful arts practice, as one of the few remaining kinds of self-determined work, is identified in this section as a particular form of enjoyment, based on contemporary concepts of obsession and Jouissance.

Accordingly, a critical reading of Kristeva's discussion of *Jouissance - Feminist And Political Applications Of Jouissance* (1984) suggests, that 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, or 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. However, Kristeva (1984) spurred on the contemporary understanding of Jouissance, as eroticism with political dimensions, in more depth. Her argument investigates the entanglements of politics and popular cultures by personal affection. The concept emphasises individual lust as a vehicle to deal with symbolic order of power. A particular reading of Kristeva's theoretical reflection of Jouissance supports the argument of identifying enjoyment, including, yet going beyond lust, which is normally less subtle and not so politically conscious. The subtle lust-oriented political concept of enjoyment inspired the argument about the joy of play as political dimension of networked creative life. The dimension of pleasure includes the politically most powerful immersive quality of play processes. This particular concept of enjoyment and pleasure, from the perspective of play, has a theoretical, but also a more mind centred psychological grounding. Joy and enjoyment form the socio-political principals for efficacy of the play with technological objects. The observation of its efficacy on the subject is formed by the concept of enjoyment and pleasure as a dimension of a critical consciousness.

According to this section's synthesis of actual cultural definitions of Jouissance, 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 antipodes to the rational demands of utilitarian society, which is usually associated with technologies. The proposed understanding of a playful generation of a political consciousness by enjoyment (Jouissance) of interventions through freeplay with objects of technology, finds a profound grounding in contemporary and historic activist arts practice – which contextualises the author's artwork as reflected in chapter 5.0 *Ludic Practice* as activist work of an emerging „Playsure Politics".

The conclusion drawn from the introduction above of play activism shows that Jouissance appears to constitute a key dimension for a political dimension of play with technologies. This reveals the player consciousness as a process that can be identified as 'acting out agency' through art activism. The next section will show how this quality is not bound to a material functionality but subversively directed toward a subversive worldview, embedded inside the contemporary technological object's absurd materiality. This argument is grounded on a literature survey about useless objects of 20th Century.

4.1 Chindogus as Erotic Toys

Pleasure, play, and politics beyond function

The concept of 'Chindogu' (Kawakami 1995) describes a state of mind that is based on pleasure, attraction and amusement in regard to technological artefacts. It addresses a particular kind of absurd technological objects, which become toys for amusement and joy, only by changing the attitude towards the object's materiality. This particular pleasure is gained only by the existence of the artefact, not by its function. The angle of Jouissance contains a dimension of subversive attraction, which is very much bound to the arts practice of the author, as exemplified in the artwork 5.2.6 *GoApe Chindogus*, 2006. The joyful play with the Chindogu as an artefact is understood as a way to gain a perspective beyond function, which can be identified as crucial for the development of a critical consciousness through play.

The Japanese journalist Kenji Kawakami (1995) coined the term Chindogu. The philosophy of Chindogus is described as a concept in order to reach a particular consciousness in regards to useless objects. In *Ten Tenets of Chindogu* (1995) Kawakami refers to the real satire[58] aspect of contemporary gadget industries. However, he excludes the digital gadget, which is of course most relevant for the author's and other artworks of the present times. This exclusion happened probably, because the concept was coined just at the beginning of the electronic network area. Kawakami (1995: 10) argues:

> Every Chindogu is an almost useless object, but not every almost useless object is a Chindogu. In order to transcend the realms of the merely almost useless, and join the ranks of the really almost useless, certain vital criteria must be met. It is these criteria, a set of ten vital tenets that define the gentle art and philosophy of Chindogu.

The evident uselessness of the object evokes joy and pleasure by their appearance. This means that when looking at a device you cannot imagine its use at the first glance, but enjoy its aesthetic beauty of absurdity. It is obvious that their use is not the main target of invention. These Chindogus are symbolic artefacts, toys between arts and amusement in a social configuration, which ironically mirrors established power structures. The association around the investigation of Chindogus expresses a particular interest in the gadgets used in everyday life for the deliberation of amusement. As part of this amusement by objects, a word play between 'thing' and 'penis' can be identified in the term 'Chindogu'. The association reflects on erotic dimensions of the term 'Chindogu'. This is what the Website of the *International Chindogu Society* states:

> Well, dogu is Japanese for "tool" and chin is Japanese for "weird" (not to be confused with the Japanese for "penis", which is also chin). Thus, a Chindogu is a weird tool. Likewise, chinchin is a weird penis. However,

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[58] The graphic artist Rube Goldberg made created a particular critique on the absurd machinery of everyday public life public. He was a well- known cartoonist of the age of Fordism, which is understood here as the industrialisation period in the first half of the 20th Century. Uselessness kinds of machines were conceptually introduced by the art of Goldberg. The later political cartoonist was originally trained as engineer, which supported the realistic drawing of impossible machines as images of insights on absurdity of reality and its political dimensions.

> under no circumstances is Chindogu ever a penis tool. At least not yet! http://chindogu.com/chindogu/ [Accessed: Jan 12, 2010].

This statement expresses the above-discussed political dimension of Jouissance, of the convergence of the erotic and political consciousness in the player. The inherent dimension of anarchy is identified in the case of Chindogus in the sexual enjoyment combined with uselessness. Kawakami (1995:4) argues in the Chindogu manifesto:

> Well, inherent in every Chindogu is the spirit of anarchy. Chindogu are man-made objects that have broken free from the chains of usefulness.

The aspect of freedom merges in the useless object with the Jouissance of erotic attraction. In the case of the Chindogu, as described by Kawakami, the gaze on useless objects follows a path of '*fetishisation*'. Similar to an erotic toy or a fetish, the joy of the existence of the object replaces its use and function. Nevertheless, the project of the *Chindogu Society* uses means of expressing politics, as it is evident in the style of the manifesto *Ten Tenets of Chindogu* (Kawakami 1995). It claims that Chindogus are not only collected, but also produced. In paragraph two of the manifesto, it states that a Chindogu must exist, that you are not allowed to use a Chindogu, but it must be made. The main quality of the gadget of everyday life is, according to the manifesto, found in its intentional uselessness, when creating the object. Kawakami argues (1995: 12):

> A Chindogu cannot be for real use: It is fundamental to the spirit of Chindogu that inventions claiming Chindogu status must be, from a practical point of view, (almost) completely useless.

Uselessness is defined as a joyful quality in analogue technological gadgetry, according to the manifesto. This attraction of uselessness can be now applied to an emerging contemporary attitude of enjoyment in relation to electronic devices and the machines of technological cultures, which Kawakami (1995) has so far excluded in his collection of more or less useless analogue artefacts; this extension of his original conception is introduced in the following section.

A particular interpretation of the Japanese concept of absurd objects can be found in the

present design schools, which frequently refer to Chindogu in order to inspire surreal artwork. The artist Joseph deLappe (2009: mailing list Empyre, November 28) reports:

> The [Chindogu] project helps to introduce a number of thematic and theoretical constructs from furthering the consideration of Duchamp's concept of the "Readymade" to allowing for a humorous first leap into a critical assessment of over consumption and object fetishism.

In contrast to the Asian interpretation of Chindogu, the artists group *Critical Art Ensemble* (1994) spoke about *The Technology Of Uselessness*[59], addressing an activist program against technological dominance by publishing newspaper advertisements about useless technologies. Critical Art Ensemble (1994: 72) argued:

> The expectation that technology will one day exist as pure utility is an assumption that frequently surfaces in collective thought on the development of society and social relations. (...) Having once left the production table, the technology that lives the godly life of state-of-the-art uselessness has no further interaction with humans as users or as inventors; rather, humans serve only as a means to maintain its uselessness. The location of the most complex pure technology is no mystery. Deep in the core of the war machine!

Most importantly, the artists introduced uselessness and erotic attraction to technological fetish objects connected to play, as a subversive quality to critique hegemonic power conditions. In the technological dominance by the production chain of objects, the idea supports this section's suggestion of a „Ludic Chindogu"[60] with a clear political interest, in contrast to the Japanese understanding of naive amusement. By a critical analysis of the phenomenon of Chindogu, a contemporary European

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[59] The whole essay of the critical Art Ensemble on Useless Technology was originally published in the electronic journal Ctheory. It is accessible online from: http://www.critical-art.net/books/ecd/ecd5.pdf [Accessed: January 10, 2010]

[60] „Chindogu has been a mainstay of my Digital Media I classes for several years now - each student conceptualizes, creates and documents the creation of Chindogu useless invention. (...) This term I updated the project to include a second step which involves each student producing and infomercial for their inventions (lends well to a critical consideration of the nature of TV advertising, etc.)." Joseph DeLappe, 2009, 28. November, posted in "Empyre mailing list"".

philosophical strand of playfulness and enjoyment can be touched, which is – again not surprisingly – embracing the dimension of playful Jouissance, sexual enjoyment and politics. The idea of a „funny" Chindogu is inherently juxtaposed with a radical philosophical position on Jouissance and uselessness, which is taken from political scholars such as the philosopher Robert Pfaller (2003). He coined the term *Interpassivity* (Pfaller 2000: 3) to describe the uselessness of the imperative interactions of certain technological interfaces relating it to the erotic attraction of technological objects. Interpassive consumption machines and the placeholder function of technology for enjoyment form the anchor points of his analysis The subtitle of his study *Distributed Enjoyment*, refers to the delegation of Jouissance in objects, which substitute sublime sexuality into technologies. The motive of substitution and enjoyment is further elaborated in Pfaller's declaration of a rising emphasis on pleasure reached by technology's cultural domination as a fetishisation process (Pfaller 2002: 160). Summing up, this philosophy supports the understanding of erotic pleasure in play caused by the appearance of technological objects, which appear increasingly useless, according to market mechanisms. This directs this section's focus towards the aspects and relevance of politically conscious subversive erotic joy and pleasure. In short, Jouissance is related to the immaterial qualities of attraction regarding the technological object. Playful enjoyment in the interaction with the technological object can be identified as subtle erotic dimension of being political.

As conclusion of this section on the idea of Chindogu it can be said, that the erotic pleasure gained by a look on hermetic machines appears as optional experience of every day life. It is an optional affordance of the objects in technologically determined life in industrial culture, which is a particular form of subversive user's agency. Enjoyment and amusement, caused by the absurdity of technological objects of everyday life, are identified as key element in agency. The understanding of Jouissance as dimension of play is supported by the conception of the absurd artefact as tool for critical enjoyment by play. The Chindogu is identified in this analysis as crucial vehicle of Jouissance practices. The element of pleasure by the presence of uselessness gives the individual the ability to feel free to play with the technological object and to critically take position. By subversion of functionality, certain useless objects offer a solution to circumvent the materialist imperative of capitalist society. In a simple role-play between the technological object and the subject the master-

servant relation is abandoned. This enables a more profound political activism that goes beyond pre-defined boundaries of subject-object relationships. That relationship does not drive on consumption of technology but on the erotic attraction in the purposeful activist role-playing as practice of playful agency in arts.

4.2 Evidences of Political Role Play in Art Activism

Subversion and pleasure in play with the media self as a political strategy

In the course of this section, Jouissance is tested by an analysis of practices in art activism, as for example fake role-play. These tactical interventions and its historic sources will be discussed as the most effective and powerful strategies for intervention in electronic networks. This analysis gives an overview on various approaches to play related to activist art in relation to media technologies and its criticisms, political activism, in particular the play with fictional identities. The pleasurable enjoyment of the play coupled with the self is analysed in this section in order to demonstrate how it transcends materiality of play affordances.

Considering the observation of contemporary practices of play with technological materiality, fake role-play can be newly interpreted. Practices of political role-play demonstrate how to become active and conscious by using a dimension of play and lust, gained in the inter-play of the self, the object, and the other. The pleasure gained by play with the self is important as a motivation for agency. According to the following case studies, the political practice of the activist's role-play is driven by enjoyment of the new meaning introduced in regards to agency. According to the literature survey on activism, Umberto Eco (1967) coins the expression 'semiological guerrilla' (1967: 3) to describe this shift of meaning in communication. This term describes a practice of inter-play of objects, meaning and subjects. Eco (1967: 142) argues:

> The battle for the survival of man as a responsible being in the communications era is not to be won where the communication originates, but where it arrives.

Semiological guerrilla tactics invert the communicated messages; in the moment, they

arrive at a public audience and are enjoyed by role-play practices. In these cases, fictional identities are invented as a cover or a mask for political and activist purposes. The following evidence will display how political role-playing, as an Avant-garde arts practice, allows one to develop an understanding of the joyful agency mechanisms of play politics. The art practice discussed in the following supports the experimental approach of the arts practice found in artworks as 5.2.2 *Pong Dress*, 2006, which can be seen as experimental setups informed by practices of political intervention in Neoism and Punk.

4.2.1 The Joy of Playfare in Neoism and Punk

This chapter's first example of playful art activism will be analysed according to Jouissance as an observed side effect of political role-playing. Particularly, the Punk culture as emerging arts-avant-garde out of the 1970's supported the understanding of political agency as achieved by the lust in the inter-play of fictional identities and technologies. A particular form of interventionist arts practice beyond painting was developed in Neoism[61]. As described by the *Neoist* figure Cantsin (1984) Neoist activists performed role-plays and used the technologies of publishing media for political aims. Neoism formed itself as a genre out of the Punk culture in the 1980s. As social net workers, which we can see nowadays reverberated in social networks online, the *Neoists* applied means as performances and role-playing, as well as publishing under Alter Egos. Cantsin (1984: 6) reports:

> In the performance of Neoism actual performance pieces play an important role because in Neoism we have chosen to perform a late twentieth century movement whose precursors are Situations and Fluxes, it logically follows that the artistic substance of Neoism will be performance and text, especially manifestos, rather than painting which characterizes nineteenth century art movements.

These manifestos, which were published as fanzines and in sub cultural networks

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[61] Compare *Anthologies of Neoism*, as shown on this repository, guerrilla Playfare: unusual interactions &/or interventions in environments where such incidents are unexpected - see #s 39, 40, 41, 43, 44, 49, 50 - 53, 55, 57, 59, 63, 65, 66, 67, 99, 103, 108, 109, 113, 114, 135, 142, 143. (Cantsin 1984: 4)

played an important role to make these fictional identities public. Role-playing and Alter Egos are seen here as popular culture practices in creating identities. The magazine SMILE, for example, publishes this as part of a Neoist manifesto. Cantsin (1984: 12), a fictional name, is mentioned as publisher of this manifesto:

> The Neoist projects her desires onto herself. She defines identity through never specified business. Her desire is commoditised. In her longing for man-woman-machine-hybrids, wish machines, she destroys her property and ends up in self-containment.

Serious interventions, flavoured by playful practices, enjoyment and irony are identified in this quote. Its fictional intent by the author is to describe how societies in general and identity in particular are constructed by desire and enjoyment. It is key to emphasise the double structure described by the particular Neoist methods of the enjoyment of a confused identity and a serious political intervention can be compared to Jouissance and play. The according practice is found in real life role-play of *Neoists* as artistic form of play with sexual, political and technological identity and media. Although labelled as art, these interventions carry a clear political interest. In the *Anthologies of Neoism*, Stewart Homes (1991) edited and reprinted texts of such performances in order to prove that these writings are far beyond dry theory. They are an ironic format of pop-encoded arts for activist intervention. As poetic and equally political texts, they stem from the serious background of arts manifestos. The writers developed a playful modification of manifests, which became a tool to describe rules of interventionist play. Neoist original pamphlet text style applies a fomenting irony of an identified constitutive relation of subject, object, technology and the main vehicles of sexual desire and play. The interventionist efficacy of Neoist role-playing practices can be evaluated much higher, in retrospect, considering their presence in contemporary popular culture. Particular contemporary practices correspond to Neoism in terms of the use of role-playing in mobile and social media networks as a form of protest.

For example, the self-organised gathering of mobile phone users in certain 'roles' appear as tactical enjoyment strategy in so called 'Flash Mobs', which were described systematically by the cultural analyst Howard Rheingold (2002). He coined the

expression of 'Smart Mobs'[62] in order to describe the self-organisation of players in public spaces. This appears as crucial for the qualification of such playful interventions as statement-tools in arts and politics. Through the participatory re-use of the commercially shaped materiality of technologies, parallels can be detected to an almost forgotten self-determined craftsmanship, which dives through in the hybrid practices of play and arts with technological objects and networks. Today, contemporary technologies materiality is used in performances of *Flash Mobs*[63], which are organised by mobile phones text messaging and online functions connected to social media networks as Facebook, Twitter, Foursquare, My space, and Google. A new agenda of performance as tool of agency is expressed by poetic texts, drawing on the attraction of the machine and the electronic network as latest apparatuses of control. Flash Mob can be understood as a self-mobilising mass, in which each individual plays a certain role similar to that of an actor. Such an example is provided in the case of *Frozen Grand Central*[64] in 2008, where hundreds of self-organised and networked peoples do not move at all for three minutes, whereas all other people on the railway station in New York are in a constant hurry. A Flash Mob acts like a swarm, which uses the pseudo intelligence of mobile, ubiquitous electronic gadgetry and network abilities for social organisation and for protest or intervention. Strategically applied elements of play and enjoyment synthesise in these activist role-play practices, which intentionally use play with no identities for politics. From the effects of play within the concepts of subjectivity, further contemporary practices of playful agency in contemporary electronic networks come into sight.

4.2.2 Public Intellectuals and Minor Media Operators in Web 2.0

The political theorist Hermes Spiegel (1997) describes play and joy as method enacted by 'public intellectuals'. This section's analysis suggests identifying public

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[62] „The people who make up smart mobs cooperate in ways never before possible because they carry devices that possess both communication and computing capabilities (...) microprocessors embedded in everything (...) are beginning to permeate (...) with invisible intercommunicating Smartifacts." This is a summary of Rheingold's book. http://www.smartmobs.com [Accessed: June 3, 2009].

[63] Compare the analysis of technologically supported self-organised contemporary playful societies, which only gather temporarily in Rheingold, Howard 2002. Smart Mobs: The Next Social Revolution.

[64] The Flash Mob *Frozen Grand Central* is described on a participant's blog: "On a cold Saturday in New York City, the world's largest train station came to a sudden halt. Over 200 Agents froze in place at the exact same second for five minutes in the main concourse of Grand Central Station." http://improveverywhere.com/2008/01/31/frozen-grand-central/ [Accessed: January 30, 2008]

intellectuals as a particular form of role-playing. This is relevant for the contemporary arts practice in electronic networks, as identified in this section in contemporary artworks. These are comparable to the artworks of the Ludic Society by the author, as exemplified in chapter 5.2.9 *Ludic Society*, 2006-2008. This concept of a figure, which enacts playful politics, is discussed in the following in relation to the new appearances of fictional identities in Web 2.0 (the participatory form of the Web on social platforms). If we take a perspective, drawing on literature survey (Spiegel 1997), the practice of using a political play figure for a particular means of intervention or sabotage is no more understood as arts but as activism. Drawing on conceptions of discourse from political theory of the 1980s, the idea of an organic public intellectual comes to the fore. Spiegel (1997) described a new form of public discourse inspired by thoughts about public political figures of the 20th century such as Italian Marxist Antonio Gramsci (1891 - 1937). He tried to establish the necessity of a public figure, capable of articulating themselves within a wider social and political field, beyond personal interests and the confines of academia. Such a public intellectual translates the work of academia for a larger public by his particular performance of ideas and attraction. Gramsci's historic concept of hegemony resisted the domination of certain forms of cultural expression, which we would call today high culture or the mass media production. He suggests particular practices of minor interventions[65] in smaller media forms, and of a different use of technologies for the public communication of ideas.

Considering the contemporary role-play of the artist in the electronic realm, requests for minor interventions can be redefined in the context of networked arts. The curator Andreas Brockmann (2001) introduced the term 'minor media operator'[66] in relation to the phenomenon of „net art" of the 1990's. He describe an artist as an activist figure, similar to this section's discussion of a political role-player. In that sense, performing playful arts in electronic networks has its effects. With the start of the

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[65] The cultural studies scholar John Fiske (1989) was one of the first theoreticians to combine the political ideas of Gramsci, with the knowledge of techniques of behaviour, in an agency focus. By applying these political lines of thinking with the investigation of consumer practices, Fiske called the results 'micro politics of everyday life' (Fiske 1989: 132).

[66] As described by Brockmann electronic network were earlier considered to be as suspicious by the net art scene itself, especially in Europe. This critical middle-European condition still can provide some advantages in contrast to techno positivist's views under the angle of a Californian ideology, as Brockmann and others publicly called the technology driven euphoria. This, which was noticed at the

network arts scene in the mid 1990's, the term minor media operator was inspired by a trust in the efficacy of minor interventions on power structures generally inherent in technologies. As a method of role-play, the concept of minor media operator introduces the artist as equivalent to the attractive public intellectual. In reference to the description of the role of the artist as an activist player in the media, the 1990s genre of net art can be compared to actual playful arts practices in game arts and interventionist fine arts, as exemplified in the authors artwork *Nybble-engine-toolZ*, 2004, described in chapter 5.2.8. In very recent forms of art such as Web 2.0, similarities can be observed towards interventions in real-life social systems and in activist role-playing. According to observations of role-playing in popular electronic social networks, a subversive dimension of role-play activism can be identified in Web 2.0. Critical but joyful art can be increasingly found in these platforms, which represent a contemporary form of role-playing. Contemporary artwork serves as evidence to test the ways of how practices of play inform potential revolutions, as described in chapter 3.0 *The Politics of Play*. For example, the ironic Web 2.0 *Suicide Machine*[67] of the art group *Moddr* (2010) exploits the enjoyment of destruction and intervention of big company structures in social web services. The service deletes individual Web 2.0[68] accounts and calls this script based action suicide of the online self. It draws its brisance from the relational structure of standardised social online environments and the double bind of such artwork. It only gains content if it is communicated through further reporting in the realm of the mass media. In this case, play and pleasure, the role-play of the artist as liberator from the suppression of big companies of social intercourse merge with the capitalisation of friendship and love.

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beginning of WWW in the early 90s of the 20th century.

[67] Moddr describes the Web 2.0 suicide mission online. It describes it in an ironic joyful, playful and with a subversive ion attitude the following: '„We believe everyone should be able to commit suicide in social networks! We are doing our best to expand possibilities of erasing your entire presence, however it is a work in progress. Please note, that we are not deleting your account! Our aim is rather to remove your private content and friend relationships than just deactivating/deleting the account!' http://suicidemachine.org/ [Accessed: January 21, 2010]

[68] The Web 2.0 worlds of playful social enjoyment can be critically discussed as a tool to capitalize on friendships. In present political media theories, Geoff Cox (2009) unravels the capitalising of the self in electronic social networks.. Cox expressed in the online curatorial text of project Arnolfini 2008,: "By "'anti-social'", I do not mean (to be) unfriendly but to highlight that social networking platforms are already anti-social in as much as they display contradictory tendencies (both connecting and disconnecting socialites). (...) Instead, the emphasis in these notes is to draw attention to how the production of non-antagonistic social relations has become central to economic production and social control. To take a typical target, the politics of Facebook, with its 59 million users, reveals how social exchanges are mediated by the wider culture and political economy".
http://project.arnolfini.org.uk/projects/2008/antisocial/notes.php [Accessed: May 12, 2009]

This does not mean that the artists who created the Web 2.0 suicide machine disappeared from the social web for the required publicity machinery of arts. By contrast, they exploited the communication in Blogs and news feeds for publicity into the extreme. This section identifies such contemporary interventions as practices of role-play, which adapt existing consumer technologies for political intervention, like classical net art of the 1990s did before in more subtle minor media operations.

4.2.3 Bad Subjects and Con-Dividuals in Networks

This section suggests to theoretically ground the minor media operations of the practical play with the self in network art as a joyful play practice of intervention. In a particular activist intellectual discourse of the 1990's, the author's best practice examples of theories of net arts interventions, are elaborated in chapter 5.2.8, in particular the *Nybble-engine-toolZ*, 2004. In the particular moment in time, the beginning of the net art in the 1990's, the critical expression switched from the academic canon to the inner knowledge of a social group in arts, literate in particular technologies. In this way the coinage of „Bad Subjects" was frequently heard in this arts context. The concept was derived from the work of Louis Althusser (1918 - 1990) on repressions of the individual by the state apparatus. The literature survey in the alumni magazine 'Bad Subjects' [69], Berkeley, California, shows, that networked role-play is claimed in arts as intrinsically political. The magazine of these Berkley intellectuals opposed the contemporary Californian ideologies of techno positivism, and was entitled *Bad Subjects*. The author Sartelle (1992:1) claims in the magazine:

> Bad subjects (...) on occasion provoke the intervention of the detachments of the (repressive) State apparatus. But the vast majority of (good) subjects work all right 'all by themselves,' i.e. by ideology.

By this notion, the idea of public intellectuals can be transferred in this section's analysis to the collective joy of using 'Con-Dividuals'[70] in networked environments.

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[69] Bad Subjects is still published online, borrowing from Public Intellectuals, as described by Sartelle (1992). (Issue 1, ed. Newitz and Sartelle) http://bad.eserver.org/ [Accessed: June 12, 2009]

[70] Blissett coined as Con-Dividual in the writing of M. Jahrmann (1999) is referenced in academic research, as published by Susan Müller (2001), Net: Art/Activism; Geniekult vs. Kollektiv; In: Seminar

A Con-Dividual has to be understood in opposition to an avatar. An avatar means, in a common sense of the networked age, a representation of a single self in a play environment. In contrast to this, the Con-Dividual represents many and applies Jouissance, joyful practices of play, prank, fake, hoax in the networks of media, by any means, electronic and in real life performances. The idea of embracing the physical and the virtual worlds, the individual and the multitude, is the historic dimension of the collective Con-Dividual. This practice was used in Germany by the so-called '*Kommunikations-Guerilla*' (1997) for political activism, which applied arts practices of performance, instead of militant interventions. However, this expression was not coined by this group, but introduced by the author in the books *Interwinedness* (eds. Jahrmann, Schneebauer 1999) and *Biophilista Congress* (ed. Feuerstein 2000)in order to describe these activities.

A practical example for the use of a Con-Dividual can be found in the project Luther Blissett (1992). This name is frequently used by a number of individuals, in real life as well as online. Blissett is referenced for political interventions and for art projects on an equal level. But Blissett is far more than a *nom de plume*. He is a political activist; he holds speeches and publishes handbooks for activist interventions (*Handbuch der Kommunikationsguerilla* 1997) and supports servers for activist material (contrast.org since 1997). Also the commercially successful Italian novel entitled *Q* was published under the name of Luther Blissett in 1999. This concept differs from the introduced practice of "alter-ego" in literature, because Blissett usually involves more than one individual, it is a collective alter-ego, often used for agency. In the case of the book *Q*, a collective of four authors from Bologna, Italy, „committed" the writing of the conspiracy Novel[71], after the first rush of success.

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of the Johann Wolfgang Goethe-Universität, Prof. Dr. Birgit Richard. Frankfurt am Main. http://web.uni-frankfurt.de/fb09/kunstpaed/indexweb/frankfurt/referate/blissett/Luther%20Blissett.html [Accessed: September 1, 2010]

[71] "We are Roberto Bui, Giovanni Cattabriga, Luca di Meo und Federico Guglielmi. All you are going to know about us is that we are based in Bologna. We are from 26 up to 35 years old. Some of us work as bouncers at night clubs [...] We have been active in the Luther Blissett Project since its beginnings, and integral parts of the Bologna scene since the late Eighties. We had and keep having problems with the Law. Our names are far from being important. Our biographies are even less relevant. We are the team that actually wrote "Q", and yet we are less than the 0.04% of the LBP. The fact that we are coming out does not comprise our self-spectacularization, we do not intend to give up our privacy to become (moderately) "young" fashionable novelists and talk show guests, which would be a very dishonourable end. If that ever happens we hope that other Blissetts will finish us off like wounded horses. Quite the contrary, our move is aimed at showing that we are a collective entity, not a single

According to this section's evidences of the net art context of the 1990's, Con-Dividuals appeared as concept out of an activist movement of creative writing and intervention. By adopting an attitude of fun, irony, enjoyment, pleasure, intellectual and art activity, it can be understood as political and play can be one of its valences. But the phenomenon of Con-Dividuals appeared even before, under different names over the history of capitalist societies for political action and agency. The following section's survey in activism enacted by „masked" identities, commences from an example of a more serious Con-Dividual who has become a necessity in distinct political resistances.

4.2.4 El Sub Commandante Marcos, Unmasked

A Con-Dividual as entity shape stands for particular ways of interventions but protects the real identity of a person. This becomes particularly important in moments and regions of political and social crisis. In such zones of transition, the play with identity is recognised as a critical practice contradicting the seriousness of suppression and power. The example of a contemporary political activist, El Sub, the masked Zapatista leader in South America is unmasked in this section as a playful Con-Dividual, which is determined by its properties, its particular „fashion". The fashion as activist Con-Dividual property is tested in its principles? in chapter 5.2.3 *Sema Dress*, 2009.

The investigation of the political figure *El Sub Commandante Marcos* demonstrates how the principles of role-play can be used effectively for real politics interventions. According to a survey on media reports, El Sub's identity is unknown. All images published in the press media and in online networks, show a person wearing a black racing mask often accompanied by a pipe and uniform cap. As proof of evidence, that El Sub is a Con-Dividual, the multiple photographs online show female El Subs as well as male activists or children, who since the 1990's fight for the rights of the indigenous population in South America, all wearing the same properties, and stating

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"Author". Behind Luther Blissett (and behind 'Q' as well) there is no boss, no mysterious scholar, nor have we been the only Blissetts who contributed. It is the network the future of creative writing" (In: http://www.wumingfoundation.com). [Accessed: September 1, 2010]

that they are El Sub[72].

The appearance of El Sub, his properties: cap, mask, pipe remind us of the context of games of player properties in a role play, which equally enables the play figure, the activist and the political leader to become immortal. Everybody becomes El Sub by wearing the mask. In the political fight, this masking of 'faciality' is recognized as crucial. Compared to the appearance of other revolutionist leaders, having one clear identity, such as Che Guevara, the absence of an icon-like face is the condition for an eternal survival of the political figure. By contrast Che Guevara was killed and the photograph of his dead face was published. In this particular moment, the ideas and movement of real politics could be affected. This is impossible for the empty faciality of El Sub. He could never die, because the activist El Sub has no face, only game like properties. This appearance is marked by the means of costume role-play. The joy of masquerading becomes vital and serious, a form of Jouissance. This activity of a Con-Dividual is understood as agency and a driving force for a political consciousness. The positive energy of the enjoyment of wearing the revolutionary properties can be seen in contemporary public events, such as press conferences, where multiple El Subs perform like models of resistance.

El Sub can be understood as a serious although joyful role-play – play for real politics purposes, as a kind of activist game-fashion, which will be later discussed in the artworks in chapters 5.2.2 *Pong Dress*, 2006 and 5.2.3 *Sema Dress*, 2009. This serious activist Con-Dividual is not defined by its faciality, the physiognomy of an individual, but by its possibility of action. Although this particular Con-Dividual appears in reality and gives a significant political commentary by his actions in real life, he is collectively constructed in a playful way as a subject with numerous abilities.

This section's analysis concludes that the strategy of a Con-Dividual offers an 'entity shape' to be used by an arbitrary number of individuals in situations of political urgency, as is the case of El Sub in the contemporary Latin American resistance to social conditions. In order to historically trace back the emergence of the concept of

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[72] The leader is communicated as an indigene identification figure, becoming a universal symbol for a tactic of deliberation by his statements and actions against suppression and colonial exploitation. http://chiapas.indymedia.org/display.php3?article_id=116929 [Accessed: April 12, 2009]

the Con-Dividual as a Jouissance practice, one of the first historic public play figures for political means of protest, General Ludd is introduced in the following section.

4.2.5 General Ludd, Smashed Up

In this section, Con-Dividuals are traced back to their first appearance at the beginning of mechanisation. Joseph-Marie Jacquard (1752-1834) developed the punch card driven Jacquard-weaving machine, which was revolutionary into fostering mechanical production. Historic analysis shows that the development of the punch card driven weaving machine entailed an important step towards computerisation (Wurster 2001). This historic source is introduced, as it is crucial in order to establish the link of playful practices of agency with the precedents of electronic objects and computers, as it is exemplified in the artwork in chapter 5.2.5 *Ludic Wheel*, 2007.

During the 18th century, the new mechanic looms dramatically changed conditions of labour and life. In England, under situations of radical industrialisation, the playful strategies of the incorporation of fictional revolution leaders as activist role-playing evolved as a necessity due to very oppressive social conditions of mechanisation. 'General Ludd'[73] was invented as revolutionary leader of a 'run against the machine'. The frames of weaving machines expressed the repression of individual creation. Therefore, the mechanical loom became the target of destruction by weavers in and around Nottingham. The movement was called 'Luddism' after Ludd's namesake. According to newspaper reports of the time, the phenomenon of General Ludd that is identified in this section as Con-Dividual role-play became the very distinct vehicle for political action. The Nottingham Review reported on the 20th of December in the year 1811 that "... an apprentice named Ned Ludd smashed a master's machine near Leicester and hence gave his name to the action". According to the literature survey of the historian Sale (1999) the historic analysis of such activities shows us that these desperate aggressions were performed by self-organised groups of weavers, who feared to be replaced by machines, but were never led by an individual. As a political

[73] "That, at any rate, was the first attack on textile machines by men who called themselves followers of General Ludd, who would convulse the countryside of the English Midlands for the next 14 months - and would go down in history, and into the English language, as the first opponents of the Industrial Revolution and the quintessential naysayer to odious and intrusive technology."

play figure, General Ludd became a placeholder for a community of empowered individuals, who felt the need to become an interventionist political leader for the duration of the intervention. Ludd enacted an identity play for the performance of a forcibly desperate run of weavers against the punch card driven weaving machines in 18th century England.

Since the beginning of the industrial revolution, the phenomenon to mobilise suppressed masses appeared unexpectedly to come out of nowhere. During the time when the phenomenon appeared, the only acceptable explanation was that one individual led the massive interventions. Further investigations by the historian Sale (1999) clarified, in retrospect that the existence of a person named Ludd cannot be traced. The historian Sale (1999:29) argues:

> In one sense, it could be said that Luddism began on the night of 4th November 1811, in the little village of Bulwell, some four miles north of Nottingham: When a small band of men gathered in the darkness, counted off in military style, hoisted their hammers and axes and pistols, and marched to the home of a 'master weaver' named Hollingsworth.

It is most likely that the local Nottingham speech was expressed similarly to the one in Cornwall, where 'sent all of a lud' meant 'struck all of a heap, or smashed' (Sale 1999: 2). This figure was invented for use by anyone for the purpose of protest, only by repeated appearance and public enactment. The joy of play was, in Ludd's case, the joy of empowerment by the destruction of technology. This was driven by vital necessities and was seriously life risking. According to the media historian Fox (2002), the growing presence and distribution of print media technologies was the reason for the public use of the figure General Ludd for the race against the machine[74]. In newspaper reports, Ludd had an increasing presence and appeared as almost romantic figure. Newspapers reported on spectacular protests, ignoring that it

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http://www.mindfully.org/Reform/Luddite-History.htm [Accessed: December 12, 2009]

[74] For a detailed study on the race against the machine, led by the fictional political play figure General Ludd who obviously was incorporated by a number of people, refer to Nicols Fox's book of 2002. She describes the movement of frame breakers and reactions in intellectual and literature milieus of the

was self-organised. They preferred to report on a fantastic leader, which they named General Ludd. Only as backlash, the protestors found courage and support by a number of self-declared General Ludds. The idea of a collective identity as a role, which can be played out in political agency, was formed by the urgency to survive against mechanisation. However, it was not to the enjoyment of the workers, who loved to play under an Alter Ego, but for the efforts of media representatives to suppress the idea of empowerment by self-organisation, who made Ludd as Con-Dividual ubiquitous. According to the analysis by Fox (2002) Ludd expressed the wish and materialisation of a political leading figure. The culmination of political facts and historically based cultural interpretations lead to the political role-playing practices of General Ludd. This fostered the creation of anonymous characters, such as Ludd. A Con-Dividual could offer the most efficacies in supporting the individual's feeling of joy in regards to empowerment and to the rising public awareness of the effects of new technologies – including the media technology of newspapers and weaving machines as precedent of the computer.

As identified in this section's analysis, the arts practice of networked Con-Dividuals, as discussed in section 4.2.1 *The Joy of Play in Neoism and Punk* and 4.2.2 *Public Intellectuals and Minor Media Operators in Web2.0* can be compared to the historic precedents of media based Con-Dividuals, as General Ludd. The fact that Ludd's identity was never clarified was a precondition, in which he could be constructed as political figure similar to that of El Sub in present times. Further historically based evidence of role-playing in favour of the problematic labour and working conditions in relation to the rise of technologies and creative responses to these conditions of mechanisation will be discussed in the next example.

4.2.6 Parlour Games and Con-Dividual Jouissance

Following the critical time of mechanisation, a new form of role-play in parlour games addressed the problems of rising technologies that influenced and changed the liveliness of craftsmanship in Berlin salons in the 19th century. The cultural theorist Richard Senneth (2008) theoretically investigated the attraction of the playful

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time of the industrial revolution in England.

incorporation of craftsmen as a common practice during this era. He described these Bourgeois plays with an identity as political act. This section aims to draw parallels on this historic example of an amusing Jouissance play, charged with erotic attraction of playing a role to the contemporary practices of erotic attractive artworks, as exemplified in the work *Pong Dress*, 2006, discussed in chapter 5.2.2. According to Senneth (2008), role-playing a craftsman during one evening generated awareness with regards to the disappearance of the self-determined worker as an individual. Role-playing was introduced in the Bourgeois salons because of individual disparity and the inability to morally deal with the social consequences of industrialisation. Senneth (2008) describes how the play with identity, its diffusion and loss were experienced similarly to ecstatic enjoyment. The effort to 'stay in character' of the worker or craftsman throughout a soirée, caused an emotional appeal among the participating communities. Caused by the individuals play qualities, even sexual attraction and the enjoyment of the embodiment of a figure became a form of politically inspired play. The role-plays caused empathic reactions from the players and sympathy from other players in the parlour.

The player's self-identification with a role and its empathic dimension demonstrates the convergence of erotic attraction and political awareness with play, which was addressed as Jouissance earlier in this chapter. The power of Jouissance and sympathy on the consciousness of the players is the most directly effected by the practice of role-playing in parlour games, which is tested in the scientific society play of the art work *Ludic Society*, 2006 -2008 presented in chapter 5.2.9. In contrast to the contemporary incorporation of the role of the artist as researcher, the particular case of the historic Berlin Salons, where the playful incorporation of a vanishing craftsmen was seen as an ethical touchstone against social effects of mechanisation. Senneth (2008: 81) draws parallels to the effects of pervasive computing:

> Weavers, bakers, and steelworkers have all embraced tools that eventually turned against them. Today the advent of microelectronics means that intelligent machines can invade realms of white-collar labour like medical diagnosis or financial services once reserved for human judgement.

The play affordance of present day materiality, permanently requires to take the role of a playful interaction, which means the contemporary parlour is identified everywhere in the world of ubiquitous computing. Following this section's conclusion, the erotic attraction in contemporary parlour games of role-playing addresses both the object and subject including the technological gadgetry of mobile devices with its playful spheres of electronics as well as live role-playing as a symmetrical tool of the arts and political agency. In that sense the simulation researcher Fishwick (1994:2) argues:

> The use of simulation is an activity that is as natural as a child who role-plays with toy objects. To understand reality and all of its complexity, we must build artificial objects and dynamically act out roles with them. Computer simulation is the electronic equivalent of this type of role-playing.

Simulations embrace the fields of subjectivity and electronically invented selves in the play with identity. A comparative analysis of contemporary strategies of the production of identity and multiple selves by role-playing and of historic sources of political Alter Egos supports the introduction of the concept of Jouissance as strategic dimension in play. This reminds us to consider playfulness as a political tool, where the enjoyment and erotic attraction dimension needs to be seen as a core driver of political activism. Summing up this section's examples of role-play in activism, it can be said, that the trajectory goes from a political concept of entangled playfulness and enjoyment to the more subversive interpretation of activist role-playing as politically conscious Jouissance. The inquiry demonstrates that the concepts are, particularly in activism, communicated in individual role-playing, which includes attraction and eroticism as a means to an end – politics.

Out of the entanglements of politics and pleasure, coined as „Playsure Politics" in this chapter, a new methodological framework can evolve, which will be discussed in the final chapter of this thesis. In the next chapter the author's arts practice provides the basis for a Ludic methodology of insight through arts and theory as equal epistemological dimensions.

5.0 Ludic Practice

The emergence of research methods through art practice

This chapter introduces nine case studies of the author's practice, which draws on the last chapter's theoretical grounding of the Ludic artworks in Jouissance and political role-play in social media networks as activist interventions. The arts evidences connect the theoretical and philosophical framework of Con-Dividuality and play affordances in relation to mobile technological objects and networks with the practical evidences and efficacy of arts. The hypothesis of the thesis of play as motivation for agency is tested in the nine case studies and put into context of others and the author's own art. Publications and reviews of others about the nine case studies are added in the showcase of each artwork. The complete bibliography is also added at the end of the thesis.

The concept of Ludics was tested and took shape as category in the author's art practice, of which a selection will be presented in this chapter. It identifies arts practice as a discrete field of research by presenting nine selected examples of internationally exhibited artworks of the author. Each description of an art piece is followed by a critical discussion and interpretation of the piece's research question, through the filter of this thesis. The sections following the arts evidences reflect upon the author's altered understanding of Ludics through a synthesis of practice and conceptual approaches in this thesis. Both are considered as key for an emerging arts research practice[75]. The emergence of a methodology within the art work and its theoretical analysis, which is viable for social design and theories beyond gaming is supported by a DVD documentation that accompanies this thesis, which includes a fuller view on the art works in documentary videos.

[75] In order to provide more contexts for this approach, related documents in .pdf format of the Ludic Society magazines are added on the enclosed DVD.

5.0.1 Theories of Playsure Politics in arts practice

On the testing of the Ludic hypothesis of agency

Through a systematic analysis of substantial arts practice, this chapter tests the concept of political agency by play. The presented analysis is understood as case study of the Ludic methodology that provides insight through arts and theory as equal epistemological dimensions.

According to the effects of play on the users' agency, the suggested categories for reviewing artworks in this chapter draw on Henri Lefebvre's (1991) Trialectics[76] of common social spaces. In the Ludic categories of agency suggested in this chapter's analysis, his concept of space is replaced by the idea of agency. According to Lefebvre (1991), social spaces are gradually perceived, conceived and lived. In his theory, spaces are understood as a cultural history of changes.

Reviewed from the perspective of agency potentials in play with technologies, the theoretical framework of Trialectics can be applied to an analysis of art works, which are consequently produced as a reaction to a social history of technological changes. According to this logic, the art-pieces in this chapter are categorised into three distinct types of Ludic agency. They are constituted as perceived applications of concepts of agency in category I Perceived Agency, which means that mainly the model of agency is demonstrated by the art work, in order to make agency perceivable to the public. Conceived conceptual work in category II as Conceived Agency, transport the invention of concept of agency through the functioning of art works. Lived interventions of principles a fully experienced by the artists and the audiences in category III Lived Agency.

One of the theoretical concepts is anthropological play as introduced in chapter 1.0

[76] According to Henri Lefebvre's Trialectics common social spaces are simultaneously perceived, conceived and lived. "The bourgeoisie and the capitalist system thus experience great difficulty in mastering what is at once their product and the tool of their mastery, namely space. They find themselves unable to reduce practice (the practice sensory realm, the body, socio-spatial practice) to their abstract space, and hence new, spatial, contradictions arise and make themselves felt." (Lefebvre

Anthology of Playfulness, which is tested in the artworks discussed in *Ludic Category I Perceived Agency* of this chapter. The theoretical intervention of play affordances as elaborated in chapter 2.0 *Technology, Materiality and Affordances of Play* is tested in this chapter's *Ludic Category II Conceived Agency*. The theoretical reflections on play politics and materiality as introduced in chapter 3.0 *The Politics of Play* and the concept of Jouissance in relation to technologies, as discussed in chapter 4.0 *Playsure Politics* are exemplified in the arts practice presented in *Ludic Category III Lived Agency*. In the arts evidences of this chapter arts practice is identified as form of research, through the methods of categorisation and contextual analysis. To consider arts practice as research practice is a consequence of each example, and results in agency as described in the summary. Consequential reflections upon the contextualisation of arts practice in theories support this thesis' core intervention, which is the introduction of Ludics. The following selection identifies Ludic art pieces that apply and test the theories of this dissertation about agency and play.

5.1 Introducing Ludics

The practical convergence of theoretical interventions

Ludics in its full potential can be understood as a new concept, which was strategically tested as hypothesis of agency by the invention of the Ludic Society in 2006, as part of the research practice undertaken for this thesis[77]. The Society was used as a label for the development of a series of works of art as presented in this chapter, which were accompanied by a corresponding series of theoretical publications. In its core the concept is informed by approaches to agency, which were coined as *semi-synthetic play* in chapter 2.3.3 *Semi-Synthetic Play*. The theoretical intervention of this chapter included the idea of an emerging politics of play by activist play, which will be tested in the following arts practice.

In chapter 4.2 *Evidences of Political Role Play in Art Activism* the theoretical concept of the joyful political intervention on surveillance technologies, is elaborated. This

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1991: 63)

[77] The practice overview sections introduce substantial practical work, which was developed since subscription for this thesis; with one exception of a seminal game art work, which was developed the year before, but serves to support a main thrust of political agency most precisely, which is seminal for

concept is tested by arts evidence in chapter 5.1.1 *Ludic Society magazines*, 2006-2008. The magazine's methodological approach of associative arts texts instead of pure analytical texts paves the route for Ludics as emerging discipline. The term's etymological root *ludus* embraces game and play in the sense that *ludus*[78] translates, according to Lewis (1994) from Latin as both, game and play. Ludics converges game and play, to gain a clearer understanding of the involved connections to agency and materiality. Accordingly, Ludic artwork exemplarily embraces a political dimension by offering practices of resistance to technological domination and regulation, which are socially established and practically enabled by a new ubiquitous electronic realm.

The author's personal arts practice informed all theoretical interventions of this thesis, but the arts practice shown in the Ludic Society works demonstrate in the opposite way that interventionist arts in electronic networks can be shaped by theoretical interventions. This is relevant for the new emerging Ludic societies[79] of the future.

5.2 Overview of Arts Practice

Contextualising Ludic art works

The *Ludic Society* (2006-2008) artwork embraces play, technologies and discourse critique. The art pieces published under the label of the Ludic Society are understood as experimental setups for testing the hypothesis of play as vehicle of political agency, when it comes to deal with technologically determined realities and its constituting things. As such, the *Ludic Society* pieces cover the range of absurd objects, as discussed in 4.1 *Chindogus as Erotic Toys*, and the agency that is triggered by absurdity of electronic objects and social networks. In this art piece, by inversion of introduced orders of technology and power structures, the theoretical concepts are

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the doctoral thesis.

[78] Ludus: a play, game, diversion. In gen., a play, game, diversion, pastime: "*ad pilam se aut ad talos, aut ad tessaras conferunt, aut etiam novum sibi aliquem excogitant in otio ludum*," Cic. de Or. 3, 15, 58: "*datur concessu omnium huic aliqui ludus aetati*," id. Cael. 12, 28: "*campestris*," id. ib. 5, 11: "*nec lusisse pudet, sed non incidere ludum*," Hor. Ep. 1, 14, 36.— B. In partic.1. Ludi, public games, plays, spectacles, shows, exhibitions, which were given in honour of the gods, etc. Source: Charlton T. Lewis, *A Latin Dictionary* (1879)

[79] In this sentence Ludic is written with an upper case letter, because Ludics is coined as term in this thesis. The term society is written in lower case in this instance, in order to address society as social construct in general, as opposed to Ludic Society as arts project, which will be introduced further on in the art practice.

examined for its general viability for agency. Anthropological play as introduced in chapter 1.0 *Anthology of Playfulness*, is tested in the first project, discussed under the *Ludic Category I Perceived Agency.*

5.2.1 Project 1: *Ludic Society*, 2006-2008

Classification: *Ludic Category I Perceived Agency*, Gay Science.
Date/ Collaborators: 2006-2008. Eds. Margarete Jahrmann and Max Moswitzer; 49 international authors, who discuss Ludic theories and Ludic art, both of the author and others. Pdf-documents of the magazines are enclosed as appendix on the DVD.
Technique: Printed Magazines, black and white and one extra colour on cover, 500-1500 pieces. 16 - 32 pages.
URL: http://www.ludic-society.net
Exhibitions of this Ludic art piece: 2005 *Postmedial Condition*, Neue Galerie Graz, Austria. 2006 *Salon transmediale*, Haus der Kulturen der Welt, Berlin, Germany. 2007 *I Love Social Hacking*, Plymouth Art Centre, Plymouth, United Kingdom. 2008 *Homo Ludens Ludens*, Laboral Centro de Arte y Creacion, Gijon, Spain. 2009 *Enter Act*, Kunstmuseum Aros, Aarhus, Denmark.
Published discussion of this Ludic art piece: Grönberg, C. and Magnusson, J. (eds.) (2010), „Reprint of *Ludic Society* Magazine, issue 1." In *OEI. Swedish poetry, art and philosophy magazine*, Stockholm. Ludovico, A. (ed.) (2008), "Dangerous Games." In *Neural Italy*, issue 30, Bari. Jahrmann, M. (2008), "Ludics. A New Discipline in Games Studies." In *FROG. Future and Reality of Gaming*, conference proceedings, Vienna. Charmante, M. (2007), "Ludic Society Manifesto." In Sudmann, A. (ed.), *Eludamos. 01/01. European Journal for Computer Game Culture*, MIT Gamebit lab, Cambridge. Charmante, M. (2006), "Ludics, a Nascent Art Research." In Santorineos, M. (ed.), *Gaming Realities: A Challenge for Digital Culture*. Fournos Athens, pp. 253- 259. Ludic Society, issue #1, 2005. *Ludics. New Bachelor Machines*, Graz, Madrid. Ludic Society, issue # 2, 2006. *Real Players. Ludic Interfaces*, Vienna, Zurich. Ludic Society, issue # 3, 2007. *Tagging the City, Plymouth*, Zurich. Ludic Society, issue # 4, 2007. *Metaverse and World3*, Zurich, Vienna. Ludic Society, issue # 5, 2008. *Objects of Desire*, Bari/Vienna.

The Italian art critic and media theorist Alessandro Ludovico (2008: 2) published a seminal discussion of the Ludic art project *Ludic Society* (2006-2008) in *Neural* 29:

> 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.

Consequently, he added an interview with Jahrmann on this art project about *Dangerous Games* (2009), published in the magazine *Neural media art hacktivism emusic*, issue 30 (Ludovico 2009). The full article is available online from http://www.neural.it/nnews/ludic_society_magazine_e.htm [Accessed: May 12, 2009]. Isssue 30 was published with a cover featuring the Ludic society art pieces:

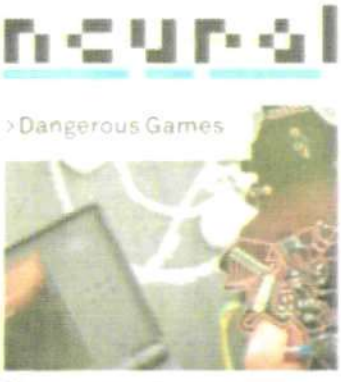

Figure 5.1 *neural* Magazine cover, featuring Ludic art, 2008

The cover of the magazine shows an art piece with an absurd interface. This peer-reviewed publication provides evidence of the public media echo on this absurd piece.

The attention given to the artefacts demonstrate the viability of the thesis of 4.1 *Chindogus as Erotic Toys*. The Ludic Society Chindogus caused public attraction by the absurdness of electronic artefacts, as published in *neural* (2008). The Ludic Society magazines were featuring such art pieces, which worked as first media evidence, published by the artists themselves. The issues were exhibited like artefacts in museums vitrines or suitcases, as it was the case in the first Ludic society exhibition in *Neue Galerie Graz* 2005: "In the display case the *Ludic Society* magazine is exhibited next to electronic circuit board objects." (Weibel 2006: 12). Therefore, the aesthetically appealing magazines with graphical art direction by Max Moswitzer became collectors' items. Evidence of such understanding can be seen in the fact that the Italian publisher of *neural magazine for Arts and Hacktivism*, Alessandro Ludovico, decided to add issue three as present to the subscribers of his internationally distributed magazine. In 2010, a reprint of *Ludic Society* issue 1 is published in the Swedish media theory journal *OIE*, which identifies the Ludic method developed in the collective writing project of Ludic magazines.

Drawing from *Ludic Society* magazine excerpts, from 2006- 2008, the project can be described by the following: The Ludic Society, as an international association of currently 45 members, exists to provoke an artistic research discipline best addressed as Ludics. According to Friedrich Nietzsche's dictum of the gay science, it is prescribing laughter when talking about serious games studies. Inspired by Nietzschean tropes, lived Ludic practice leads to a fully gay science. As an *ouvroir* (French: garage) for contingency and imaginative solutions, its methods are what the French would call *ludique*, which is to say playful, amusing and, by extension, really rather puzzling. The foundation of an arts research association as arts project test the hypothesis of the anthropological play on social hierarchies as introduced in chapter 1.0 *Anthology of Playfulness*. The society was founded as unbloody status play, as discussed in chapter 1.3 Playfulness in Anthropologies. The affiliation was built systematically as an analogue social network structure of peers in a particular field of excellence around play. It was launched in opposition to electronic social networks with a magazine in print, real life meetings, and chapters. The *Ludic Society* magazine is published as a periodical with articles from international authors, on tendencies of Jouissance and playful interventions in arts and theory. The black and white print in

the style of a fanzine and the particularly chosen quality of recycled natural paper expressed a critical activist position. As aesthetic artefact, the magazine was made strategically public along with joyful performances. Ludic research anticipates action research methods, because many members are active in game development, theory and arts, and see no problem in defining their work as play investigation. The Ludic Society's mission is to provide a playful theoretical starting point for a methodology around the act of play as state of transformation towards an activist consciousness. The main argument builds on the observed nascence of an experience-based emotional reflection, which is achieved by playing through game systems as looking glass into everyday life.

Figure 5.2 *Ludic Society* Magazines, issues 1-5, 2006 - 2008.

5.2.1.1 Reflections upon Project 1

The Ludic art works of the *Ludic Society* (2006-2008) consisted of live urban plays and stage performances. These evidences tested the social status play as anthropological play, as introduced in chapter 1.0 *Anthology of Playfulness*. The Ludic Society provides evidence for an artwork according to the category of 'perceived agency', as testified at a major event at *the Dutch Electronic Arts Festival, Evening of the Ludic Society* 2007. A documentation of the audience reaction, which

became active players who tricked surveillance systems in a networked social play and gained agency through this activity, is published in the V2 archives online[80]. The invitation to this peer-reviewed arts event demonstrated that the status play of the Ludic Society project was successful in the sense of gained agency. It proofed that audiences follow the invitation to a social status play, but start to question it after a critical arts intervention. The press text of DEAF (2007:1) argues:

> Usually for members only, on this night anyone can gamble for membership through a tagging play moving from the city into the transient zone of Rotterdam's harbour. SMS 'play tag!'

The Society launched club evenings at this major media and game arts events with performance lectures in selected games studies circles. The Ludic Society as arts project was considered as ironic commentary on existing social power structures in academia and arts. In a strategic derivé from the practices of networking, the participants of the project borrowed from introduced practices of personal networking and social engineering. By establishing a peer group via the vehicles of public attention in conferences and scientific magazines in an emerging field, the Ludic Society club regulations asked for the development and application of playful texts. In that sense, the Ludic Society magazines can be seen as proof of evidence of the success of the theories discussed in 1.3 *Playfulness in Anthropologies*. Most members relished the invitation to associative creative writing with metaphors inspired by the idea of a gay science by Nietzsche (1882). Additionally, principals of role-playing were adapted with pleasure by many of the providing authors, who invented numerous Alter Egos and Fake identities, as discussed in chapter 4.2 *Evidences of Political Role Play in Art Activism*. The Ludic Society magazine suggested a solution of creative writing in theory as conceptual collectively written art piece. As a consequence the mainly well established writers felt free to play with actual strains of discourse rooted in hacking arts and social critique, which appeared in the *Ludic Society* magazine, displayed in conceptual colours of a 'perceived agency', in a

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[80] Special guest curators, artists and theorists who have developed unique positions in art and culture are invited to create their own à la Carte 'Evening of ...', as a platform to expose, showcase and question today's state of unstable media. Compare the peer-reviewed documentation online, http://www.v2.nl/events/the-evening-of-the-ludic-society [Accessed: June 3, 2010].

distortion-mirror of mutually exchanged theory and arts.

The first case study for the introduction of the *Ludic Category I Perceived Agency* subsumes the foundation of an arts association with its own series of art works and publications as an art piece. Such assemblage of constituting elements in the *Ludic Society* as project, most strongly influenced the idea of *Perceived Agency* as category of significantintervention by joyous play. Founding an association as piece of art can be classified as effective intervention, if its efficacy in the arts system, as demonstrated with the exhibition examples above, is considered. The *Ludic Society* project (2006-2008) was conceived in particular to demonstrate the principle of play as investigation method in social configurations of creative work, in an anthropological status play, as theoretical introduced in 1.3 *Playfulness in Anthropologies* in order to develop new ways of tactical interventions. Much of this evidence of free collaboration under the mantle of the *Ludic Society* can be understood as proof of concept for play as strategy of public agency. The agency perceived in this social network of creation and intervention indicates solutions for a new methodology of fully conscious collective political agency in social networks. According to the presented events and exhibitions, the proof of concept of Jouissance as aspect of individual, but shared agency in relation to play with the technological object was given by this Ludic art piece.

5.2.2 Project 2: *Pong Dress*, 2006

Classification: *Ludic Category I Perceived Agency*, Con-Dividuality performance.
Date/ Collaborators: 2006-2007, Havard Moen, Hakon Hjortland, Gordan Savicic.
Technique: Electronic Little Black Dress, printed circuit board, C-code compiled under debian2.4 with atmel stk-500, LED-grid, fabric, Nintendo Controllers.
URL: http://www.ludic.priv.at
Exhibitions of this Ludic art piece: 2006 *Game Console and Nudity*, Filmfestival/ Mediaforum Moscow, Russia. 2006 *Pong Mythos*, Kornhaus Forum, Bern, Switzerland. 2007 *Pong Mythos*, Games Convention, Leipzig, Germany. 2008 *Kunst und Politik der Spiele*, Kunsthalle Projectspace, Wien, Austria. 2009 *5days off*, NFMK Netherlands Media Institute, Amsterdam, Netherlands.

2009 *I-machine*. Edith-Russ Haus. Oldenburg. Germany.

2010 *Fractal Midsummer night's Dream*. Opera Schloss Werdenberg. Switzerland.

Published discussion of this Ludic art piece:

Lange. A. (ed.). (2007). *Mythos Pong*. Computerspielemuseum Berlin. pp. 36.

Strouhal. E. and Fuchs. M. (eds.). (2008). *Kunst und Politik der Spiele*. Kunsthalle Wien. Wien. pp 16.

Numerous Blog-posts. as

Debatty. Régine (2006). The Pong Dress. Online available at http://we-make-money-not-art.com/archives/2006/08/apparently-vali.php [Accessed: January 3. 2010]

Technovelgy (2006). Online available at http://www.technovelgy.com/ct/Science-Fiction-News.asp?NewsNum=719 [Accessed: January 3. 2010]

Play Pong in your clothes. Online available at http://www.trendhunter.com/trends/the-pong-dress-play-pong-in-your-clothes [Accessed: January 3. 2010].

The author's focus in this piece tested the concept of Jouissance in performances in public space as mean for agency, as introduced theoretically in chapter 4.0 *Playsure Politics*. The theoretical chapter's 4.0 subtitle *Introducing Jouissance as a dimension of play politics* was testified in performances in the Vienna Prater[81] (2006). The dress functions as electronic object as follows: White LED's shine through the black front of the dress. At hip level, two retro-game consoles are offered to players to play Mini-Pong on a 5x7 LED screen worked into the dress. Two pixels move up and down as rackets to the left and right along the waist. With every achieved point, the green score display blinks at chest level and indicate the score of points.

In most reviews, the dress is technically described, although some of the critics understood the power of Jouissance found in this art piece by noticing the self-ironic enjoyment of exposure in relation to play and electronics in the performances. The

[81] Technovelgy Blog Update 22-Dec-2009 provides a live video of the performance at Prater Vienna, 2006. http://www.youtube.com/watch?v=2SDnKO6fbKo&feature=player_embedded [Accessed: June 3, 2010].

high reputation art Blogger Régine Debatty, who founded the art Blog *We make Money not Art* featured the Pong Dress (2006), when it was exhibited at the Games Convention Leipzig, at a peer-reviewed exhibition, curated by the German Computer Spiele Museum founder Andreas Lange. The public exhibition of the piece took place in gaming and arts contexts. Debatty (2006:1) argues about the art piece:

> Max Moswitzer and Margarete Jahrmann alias Marguerite Charmante of the Ludic Society (and of the Nybble Engine fame) have crafted a Pong Dress to dissolute the boundaries between body and screen. The dress was inspired by Valie Export's Tap and Touch Cinema, 1968, in which the artist, a box attached to her naked chest, invited pedestrians in several European cities to "visit the cinema". Check it at the Pong Mythos exhibition that just opened in Leipzig.

The audience players experience a form of agency of the performer, who appears passive, but controls the player behaviour. Pong is displayed as archetype of games made by male technicians on a minimal LED grid, which is sewed and soldered into the dress. Particularly in the way it is played as an interactive art work, namely that the player has to stare directly at the breasts of a female wearer, to be able to play the game, and that the performer, who wears the dress is not able to see what happens on the display, which is mounted on her body. This condition of invisibility entails a typical slave and master relation among technology and user. The exposure to such a corresponding extremist situation by free will is suggested as strategy of empowerment to the female wearer, who wears the electronic fetish. The Swiss writer Beat Suter (2006:online) writes about the artwork's erotic attraction:

> The little black dress as erotic real playground for Pong? When Marguerite Charmante wears her new halter-neck top and offers the game controllers, attached at waist height, we cannot resist being seduced into playing! A charming seduction for playing, since it is possible to play the stylish plastic LED-grid, which covers chest and stomach area of the dress. From underneath the electric circuit tracks shine through. They are bundled on the side of the heart. Pong is the

> name of the game: hit the dot back and forth with two sticks - this time all new on a 3D playing field, that is moving, chatting and laughing. We hit the dot with some spin from the height of the belly button and aim at the left nipple.

In its affordance of an elegant and erotic little black dress, that is also an electronic object, *Pong Dress* (2006) equally tests the idea of play affordances, as discussed in 2.2 *Introducing Play Affordances*, and of Jouissance. As discussed in 4.0 *Playsure Politics*. This Ludic art piece's function supports the aim of seducing the players in order to gain insight on technologically induced social power relations among sexes. The players accord to the category of perceived Agency. The cultural studies scholar Maier (2006:online) argues:

> The Apparently, Valie Export's <Tap and Touch Cinema> is surfacing as the obvious analogue pop-art-cultural-referenee to Marguerite Charmantes <Ludic *Pong Dress*>. Whilst the games at display vary to some extent, the symbiotic dedication and obsession for the playground's finesse remain the same. Both experience-based-designs build on the following contention. A timely mediatisation of current societies' desires (transgressing sexual and Ludic boundaries) builds on a convincing front wall. (...) In its contemporary variety, the game will become a play with nothing but the products of one's associative power. While the 'touch and feel' quality of Export's predecessor has been paved away by the 'iconographic ardour of Charmante's L.E.D.IS_PLAY.

According to observations made in the series of *Pong Dress* performances (e.g. Projectspace Kunsthalle Vienna 2007), the dress had a certain erotic attraction, as introduced in chapter 4.2.2 *Public Intellectuals and Minor Media Operators in Web2.0*. Due to the flow of play, the female wearer is perceived as faceless and anonymous, as described in the theoretical discussion of chapter 4.2.4 *El Sub Commandante Marcos, Unmasked*. The poster of the Kunsthalle Vienna gives evidence of the public reputation of the art piece worn by a faceless public intellectual

in the contexts of arts.

Figure 5.3 *Games*, poster for the Kunsthalle Vienna exhibition 2008.

5.2.2.1 Reflections upon Project 2

In the Ludic art piece *Pong Dress* (2006), socially trained borders are soaked by the

technologically enhanced play. According to the Blog reports (We make money not art 2006: online) the performance situation leaves no space for moral doubt, if the private sphere is touched. The absurd perception of agency by the audience of the situation communicates critical aspects of technologies. A political dimension of agency is suggested by the absurd arts performance, which over exaggerates established slave and master conditions. Role-play and costume-play are perceived as solutions, by observing players who ignore the wearer's sex and entity. Players are forced to participate in a public performance, electronically touching the body of the other, which makes the strategy of role-play, as discussed in chapter 4.2.6 *Parlour Games, Political Role-Play and Erotic Attraction*.

The second example for the Ludic category of *Perceived Agency* can be theoretically understood as application of the concept of *Con-Dividuality* of chapter 4.2.3 *Bad Subjects and Con-Dividuals in Networks*, which is tested with the help of the piece *Pong Dress*. This work builds on the concept of Jouissance, the enjoyment of strategic playful seduction. A physical intervention to existing suppressive conditions of gender specific relations of technologies and self-representation is expressed by fashion as vehicle. According to this understanding of the art piece the female wearer incorporates certain conceptions of subtle erotic playfulness, but over exaggerates it in a highly absurd situation of exposure and voyeurism[82].

Allowing such associations and thoughts the *Pong Dress* is displayed after the live performance in a suitcase with an accompanying video clip. This is not understood as trace of a performance, but as instruction for a politically conscious use of technologies to invert gender and social hierarchies by practices of enjoyment. The arts practice identifies Jouissance and role-play as political category of the artist as game figure.

5.2.3 Project 3: *Plymouth Play*, 2007

Classification: *Ludic Category I Perceived Agency*, Urban Game, RFID Judgement

[82] The exhibition of Pong Dress in a suitcase gives a commentary to a political situation of surrealist combinations of technology and life. The suitcase can be seen as reference to Dada, where artefacts of everyday gave a significant commentary on technologically shaped living conditions. (La Boîte-en-Valise, Box in a Suitcase, 1935 – 1941, by Marcel Duchamp.

Day for 1st Life Game Figures
Date/ Collaborators: 2007. Max Moswitzer. Duncan Shingleton.
Technique: Radio Frequency Identification Tags. custom designed circuit boards. RFID syringe kits. Java-application for Googlemaps. Plymouth Thunderbird Cars.
URL: http://www.ludic-society.net/tagged/
Exhibitions of this Ludic art piece: 2007 I Love Social Hacking. Plymouth Art Centre. Plymouth. United Kingdom. 2007 Drake Circus Shopping Mall. Plymouth. United Kingdom.
Published discussion of this Ludic art piece: Kurator.org (eds.). (2007). *I Love Social Hacking*. DVD. kurator. Plymouth. DEAF Festival (ed.). (2007). *Evening of the Ludic Society. Festival Flyer DEAF 07*. V2 lab. Rotterdam. pp. 2-6. Dreher. T. (2009). *Sammeltipp 2: Spiele im Stadtraum*. Teil 4. Online available under http://iasl.uni-muenchen.de/links/TippSammel2D.html [Accessed: November 1. 2010] Entries as http://es.wikipedia.org/wiki/Ludic_Society [Accessed: November 1. 2010].

The Ludic art work Plymouth Play (2007) made use of popular culture elements, as introduced in the theoretical concepts of chapter 4.2.1 *The Joy of Playfare in Neoism and Punk*. The piece consisted of an electronic tagging and an implant session, a Googlemaps Game and a performance with a sport scar, named Plymouth. The project mission text of the Ludic Society (2007) reads as follows:

> This *Tagged City Play* for *Real Players in Real Cities* uses a Plymouth [car] for the Plymouth Play. A local shop serves as a pit stop/workshop location: Being Tagged! Tagging! To tag the city, real world objects, subjectively chosen things, are tagged with working but useless RFID-Tags, so called ZeroNull Tags. To achieve that, Real Players get a flexible tool-kit suitcase, containing spray cans, stencils, stickers, which are part of each Real Player's inventory. Each Real Player is personally tagged by a RFID implant, to generate an individual street art graph, displayed over a satellite online map. The goal is to find and overwrite tags with zero information. A specially designed toy gadget sniffs and alters the state of RFID-Tags, the ether refreshing electronic

little tree. Tagging The City is played in the real cities with RFID over-clocked Plymouth cars in Plymouth, equipped with self designed and etched electronic *Wunderbaeumchens*.

The car was only an absurd vehicle, which transported the perceived agency of this art piece to the public. The car as absurd vehicle tested the fetish dimension of machines and slave and master relations as explained in chapter 4.1 *Chindogus as Erotic Toys*. As proof of evidence for the public erotic attraction of the machine fetish serves the media coverage in the Guardian reported under the title: A reason to go to Plymouth[83] (The Guardian March 2007: online).

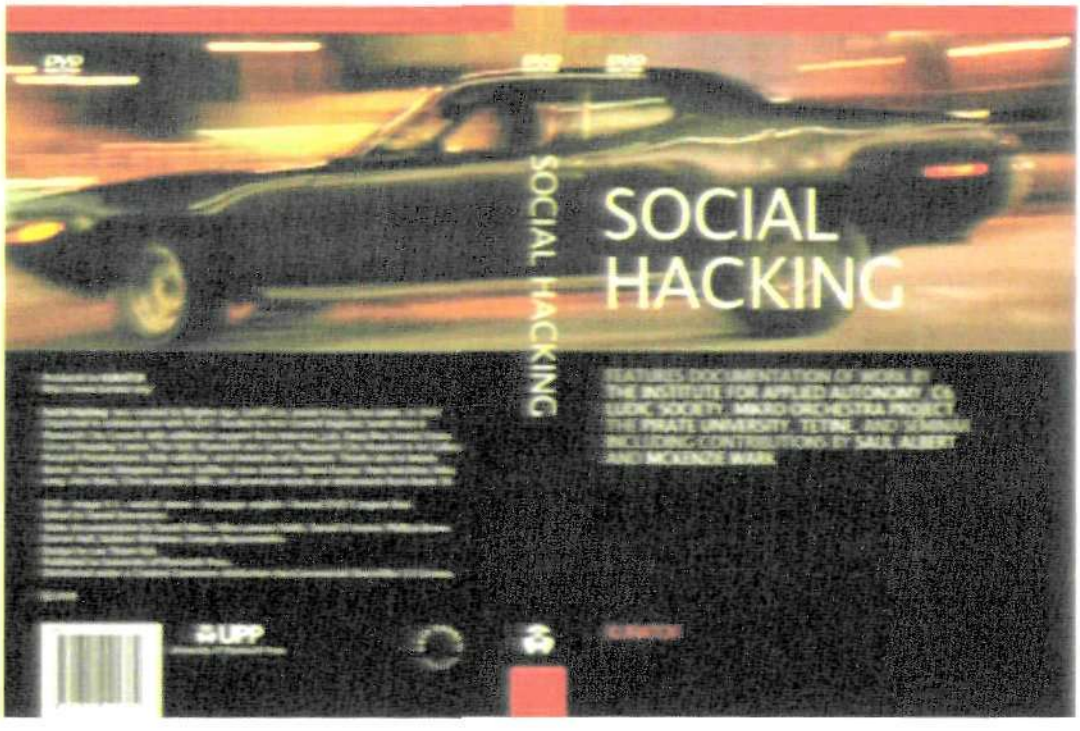

Figure 5.4 *Social Hacking*, cover of the festival DVD, Plymouth, 2007.

The vehicle was printed on the cover of the DVD of the festival, where the piece was

[83] "Well, it is a Plymouth Superbird and it is being used by the Ludic Society to create a 'total conversion' of Gran Turismo in the streets of the city. I am not sure what this entails and has left a message with the organiser, Kurator. I will update when they get back to me. Sounds fascinating, though - and reminds me of recent attempts to create real-world versions of Pac-Man in New York and Singapore." http: www.guardian.co.uk technology gamesblog 2007 feb 20 plymouthgetsg [Accessed: Feb 6, 2010]

commissioned by the kurator.org collective. Plymouth. UK. March 2007. As a strategy to develop a practice of agency, this Ludic art piece allowed, by means of its technical features, the publishing of deviant behaviour of players.

By the process of collective participation in an electronic street art piece, each player was able to experience the dangers and joy of semi-material play, as introduced in chapter 2.3.3 *Semi-Synthetic Play*. The piece's outcome is a map, made of the human implant RFID numbers. The piece uses individual RFID ciphers in a subversive way, which was introduced and contextualised with other art works in chapter 2.1 *Factual Play Objects in Public, Private and Hybrid Play*. Anonymity no longer exists, if the individual is marked under the skin, and becomes a permanent emitter of electromagnetic waves. Accordingly, each player's number is rendered in an individual graph online. Such a squiggle is displayed on the individual map of every player as additional layer over Googlemaps. The Online Game interface shows a score of each player depending on objects tagged and de-tagged and different layers of tagging routes can be cycled through by an online version of the map. All player uploads are layered and cycled through in an online map-movie.

Figure 5.5 *Plymouth Play*. Online Interface, map of RFID implants, 2007.

5.2.3.1 Reflections upon Project 3

In the art piece *Plymouth Play* (2007), the participating player and the performing artist perceived the humiliating process of having no control over permitting online data via electronic objects, which emitted waves. In order to participate and play the urban game, the individual experienced the absurdity of being put on the same level as a semi-synthetic play object, as theoretically discussed in chapter 2.3.3 *Semi-Synthetic Play*. After becoming a numbered and filed entity, critical questions can be posed by the participants, which the media coverage demonstrates (Guardian 2007, kurator DVD) as mentioned above in the framed description of the artwork. All interpretation is completely left to the media: media coverage was used as method, as well as workshops at the *Plymouth Art Centre*, which is documented online[84]. In the

[84] Ludic workshop, Wednesday 21-24 March 2007, from 10.00 daily Plymouth Art Centre, (for 10

workshops, the artists solely communicate the joy of play, the more extreme and offensive the situation gets. With the help of this perception trope a minimal resistance seed is put into the enjoyment of play. In that sense key elements of chapter 3.0 *Politics of Play*, were tested as the perverse enjoyment of surveillance by play in this piece.

With public workshops (Plymouth Art Centre 2007) as experimental setup, behavioural patterns in public space could be tested. Such playful activism derived from observations of players in computer-games, but it implies that public performance is a tool to communicate critical statements. With respect to the assumption of agency, which activist playful intervention in arts provoke in public space, the art work counted on the application of a historically introduced concept of communications Guerrilla, as discussed in chapters 3.3 *Real Politics of Play*. Tagged City Play involved spectacles, with the aim of creating public awareness about political dimensions immanent in rising ubiquitous computing technologies. The perception level of an arts audience was heightened by an intentionally spectacularly presented performance of live implanting sessions of Radio Frequency Identification tags into the arm of the two artists, who developed the work conceptually. An anonymous doctor demanded from the artists to sign a waiver before he undertook the implant. The implant session took place in a the gallery space of the Plymouth Arts Centre. This act of self-injury could be read as statement of the ubiquity of pervasive technologies and the common understanding of artists as 'objects' to be traded on the arts market. The audience could perceive the concept of a change of status of the

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participants players) at the local sweatshop, Plymouth Arts Centre, UK. The LS Every participant can become a game figure with an implant and be prepared for the Judgement Day. Real Play holds a Pit Stop workshop for "Real Play". As an option the tag can be swallowed in an initiation ceremony. Workshop topics: Capture the flag, tag teams, game play development, last man standing, tool kit box, being tagged, tagging cities. Workshop exercises: Tag and de-valuate objects, re-programme tags and toy gadgets, adding the value Zero. The conceptual disjunction of play and game is elaborated in an exemplary Ludic way. The rule of play (necessary for a game, but not to play), the bondage, the constraint, is intentionally chosen to evolve a Ludic poetics. Each Real Player gets a special Quest. First: tag the city with stencil graffiti to achieve a Full City Tag (=the complete city is systematically tagged). Fully subjectively and collectively, every player can pass judgement by tagging objects, buildings, vehicles, persons and is judged by wearing a RFID Tag under the skin. Second: scan tags with the Wunderbäumchens and change the Internet of things into the value Zero. Third: take souvenir photographs of Plymouth tags and the Plymouth. The Real Play extends the game zone into a situated locative play in a real city. Come and judge with your tag! DISCLAIMER: Every participant becoming a 3rd Life Game figure has to bear the consequences by using the Reality Engine in the PLAY. Ludic Society is not responsible for any physical or mental damage during and afterwards the PLAY. http: www2.kurator.org wiki main read workshops [Accessed: January 5, 2010]]

individual by technologies, which are applied to the body in a very direct way, when watching this provocative act of public harm of the private sphere. The experiences, which players and artists achieved in equal measure, as it was reported through interviews published on the *Social Hacking* DVD (kurator 2007), revealed the fact that the theoretical concept of *semi-material play* became perceivable in this work. It caused public awareness for hybrid technologies as invaders of privacy, even of the most intimate space of the body.

In the case of the *Plymouth Play (2007)*, the concept of affordances embraced the new media field, as it was introduced with the term play affordances in 2.0 *Technology, Materiality and Affordances of Play*. The implant of an electronic tag as crucial element of the artwork exemplified claims to transcend materiality and subject-object relation, who was demonstrated through the above mentioned public workshops (Social Hacking at Plymouth Art Centre, March 2007). Through the method of workshops as empiric observation of user behaviour, which showed that user only move within a certain range of private knowledge (Jahrmann 2007), the specific contemporary appearance of a technology of electronic tagging offered a chance to make transparent the hybrid worlds of semi-material play between electronic objects and the subject's virtualisation.

The work, by means of such effects of agency on the player, substantially represents the necessary emergence of the next Ludic category of *Conceived Agency*. The *Ludic Category II Conceived Agency* is best exemplified by examples of Urban Plays under the label Ludic Society. Being part of a conceived intervention through electronic artefacts, as introduced in chapter 2.1 *Factual Play Objects in Public, Private and Hybrid Play* enables players to discover the invisible network and surveillance dimension of common objects in urban space, by playfully opening their black boxes and reaching the mystery hidden in the tools of our daily life. Observations of the relation of the object and the player desire in urban play, are published in a conference paper named *Objects of Desire* by Jahrmann (2008) in the *Homo Ludens Ludens* book, which accompanied the exhibition in Laboral, Gijon in 2008, as described in the following case study.

5.2.4 Project 4: *Objects of Desire*, 2008

Classification: *Ludic Category II Conceived Agency*, Urban Game, exhibition game.
Date/ Collaborators: 2008, René Bauer, Max Moswitzer, Gordan Savicic, Simon Bühlmann.
Technique: Nintendo game consoles, cartridges, custom designed Radio Frequency Identification readers, printed circuit boards, electronic elements, tagged and sprayed play boxes, floor paintings, six WIFI hubs.
URL: http://www.ludic-society.net/desire
Exhibitions of this Ludic art piece: 2008 Commissioned work for Homo Ludens Ludens, Laboral Centro de Arte y Creacion Industrial, Gijon, Spain.
Published discussion of this Ludic art piece: Jahrmann, M. (2009), *Objects of Desire*, In *Homo Ludens Ludens*, Laboral, Gijon, pp. 348-352. Debatty, R. (2008), *Homo Ludens Ludens – Desire*, In *we make money not art*, Blog, Available from: http://www.we-make-money-not-art.com/archives/2008/05/-i-lived-the-uncanny.php [Accessed: February 12, 2010].
The Ludic artwork *Objects of Desire* (2008) most radically tested the use of game consoles in accordance with, and in certain moments in opposition to, the category of private play, which was introduced as theoretical concept in chapter 2.3.1 *Anthropomorphosis through Smartifacts*. The reception of the artwork by the users was directly opened to public discussion through a presentation at the games theory conference *Homo Ludens Ludens* (2008) at the University of Gijon. The discussion published in the conference book deals with the conceived realities of hybrid physical interfaces from everyday gadgetry, on which the artwork built. The „Ilinx quality of hybrid reality play" (Jahrmann 2008), as discussed in chapter 2.0 on affordances, corresponds to the arts practice, which the public reception of the artwork confirmed. These artefacts express their desires. One of the Interfaces was printed as cover to the Laboral program 2008.

Figure 5.6 *Object of Desire Interface*. cover of Laboral programme. 2008.

In the program folder of Laboral. Gijon of spring 2008 Jahrmann (2008:12) argued:

> Ludic objects guide a Neo-Situationist walk. through an invisible city of electromagnetic waves. Ludic Interfaces make the user's desire readable. A SM (Standard Model) game console serves as portable *Wunder*-Toy to indicate the electromagnetic desires of networks. as well as desires emitted by tagged objects. Players must obey the object's command in order to successfully play the game. Art players track tagged objects that wish to be moved. The objects contain stories. desires and obsessions. The play mission states: Follow the object's desire. read Situationist quotes!

The exhibition game. which was conceived as lived intervention into a contemporary reality of control by technological objects. consisted of the following elements: in the exhibition space each player was located through built-in electronic login functions of game consoles. which were handed out to visitors. Each player could be located. The names of wireless access points of the city of Gijon were painted on the floor of the

exhibition space and were understood as a play map of the exhibition. The playfield crossed the exhibition architecture and ignored local physical borders. Play-boxes tagged with RFID chips emitted commandos for players. If read with the firmware flashed and circuit bent game console reader, the object's desire was displayed on the console's screen. In general, each individual participating in the exhibition game was guided by the desires of an object. Technically the exhibition game transferred an urban topography of electronic access points into a limited controllable space. The assemblage of game art works in the exhibition was transformed back into play material for an overall game. This absurd backlash of using game art works as objects of a game. This Ludic art piece applied the principles of *play affordances*, as discussed theoretically in examples of objects of everyday life in chapter 2.3.2 *Agency through Ludic Interfaces*. It introduced a conceived agency dimension into the exhibition system of arts in museums.

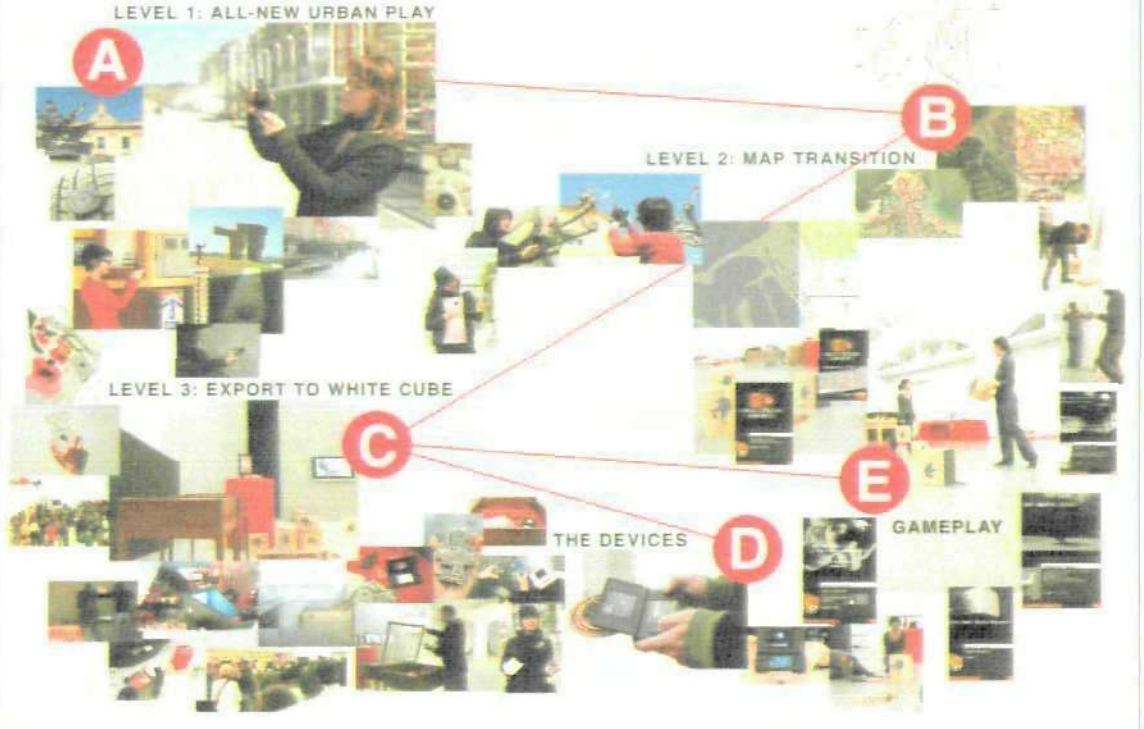

Figure 5.7 *Objects of Desire*, urban and exhibition game, 2008

5.2.4.1 Reflections upon Project 4

The online reviews of this Ludic art piece demonstrates that the concept of fetishisation could be tested as dimension of electronic play objects of contemporary everyday life, as discussed in chapter 2.3.1 *Anthropomorphosis through Smartifacts*. With the technological impact used in a creative way, objects express their own

desires, for example to be stolen, destroyed or moved to another location. Such absurd reality became the reality of players, which was questioned in the arts installation. Both desires, those for possible worlds of control and those for upcoming technological realities of surveillance are conceived as playground in a minor version in the Objects of Desire exhibition game. The world of modern ubiquitous and pervasive technologies is turned perversely around, which is sensed as reality of social relations between subjects and objects by the participants. According to observations made in the exhibition situation of Objects of Desire, mainly those players who expected arts as professional context and who perceived playful popular game technologies as constituting element of the work of art, fully lived a new 'spatialization' of structures of social power and control in technologies. Desires of objects became a determining realm of social relations, and made a slave and master decline between the individual and technologies perceivable. While playing the exhibition game, developments, mechanics and rules of an experimental urban game were understood as a matter of lived interventions of common present principles of domination. The work established a contemporary absurd order of electronically shaped urban space, simulated in extremes, moulding in the exhibition space over a short time, for which observations of visitors at the opening day gave evidence[85].

Figure 5.8 *Objects of Desire*, absurd behaviour of players, Gijon 2008

[85] The young photographer Simon Brühlmann who also put some of the images of visitor behaviour online took the photos of user behaviour. He stated on the Objects of Desire experience: Well, I participated in a Ludic Society project shown at the "Laboral – Centro de Arte y Creación Industrial" in Gijon, Spain. The piece "Objects of Desire" is concerned with technical objects that impose their will on users (i.e. the exhibition visitors). For example, they will force visitors to carry them (the objects) to a different part of the exhibition, or to pray to the objects. A good interview on the topic can be found on "We Make Money not Art", http://imonym.com [Accessed: Feb 6, 2010]

Through observations on the exhibition site, "being controlled" in this context can be understood as hybrid of enjoyment and obsession by technologies in the "uncanny situation of being bossed around by wooden boxes" (Debatty 2008: Online). The fetish playground was built by an uncontrolled world of objects, which was constituted by technological features of the new smart objects.

By a pleasurable aesthetic experience, new methods of agency in the interplay with electronic realities are tested, while Real Players generate a street concert by play, which unfolds as public demonstration about surveillance technologies. Players take part in plays that develop out of agency by spontaneous and Ludic exercises of becoming aware of the invisible electromagnetic dimension of present daily life – as perceived agency. According to the curator Tatiana Bazzichelli (2009: 90), such works of art "imply the liberation of desires and the exploding of our subjectivity into imaginative toys".

5.2.5 Project 5: *ToyGenoSonic*, 2009

Classification: *Ludic Category II Conceived Agency*, Urban Game, invisible city.
Date/ Collaborators: 2009, Phillip Lammer, Gordan Savicic.
Technique: C-Code/ Audio software for NDS, Curved Vinyl shield, map print, RFID tags, custom designed circuit boards, video.
URL: http://www.ludic.priv.at/toygenosonic/
Exhibitions of this Ludic art piece: 2009 *Enter Act*, Kunstmuseum Aros, Aarhus, Denmark. 2009 *Video Juegos*, ATA Alta Technologia Andina, Lima, Peru. 2010 *Coded Cultures*, Ovalhalle MuQua/ Museum of Modern Art, Vienna, Austria.
Published discussions of this Ludic art piece: Bazzichelli, T. (2009). *ToyGenoSonic: A Ludic urban experience of smart objects in a fetish world*. In *EnterAct*, Kunstmuseum Aros, Aarhus, pp. 86-93. Dragona, D. (2009). *Curatorial Statement*. In *VideoJuegos. Tales of Play*, ATA Alta Technologia Andina, Lima, pp. 12-15. Jahrmann, M. (2009). *Metamorphosis of Contemporary Electronic Toys*. In *Coded Cultures. Exploring Creative Emergences*, MUMOK Vienna, Vienna, pp 23-27.

The Ludic art piece *ToyGenoSonic* (2009) tested *Conceived Agency* in the use of physical interfaces, by using everyday gadgetry for arts and intervention, as discussed in the theoretical analysis of the efficacy of interfaces in chapter 3.1 *Evidences of Play Politics: Historic Ludic Interfaces and real politics*. The cultural studies scholar and curator Bazzichelli (2009: 86) reviewed the efficacy of the conceived interfaces of this Ludic art piece. She described the piece at the exhibition in Aaros:

> In the weekend of the exhibition opening, the city of Aarhus becomes a game board in which the players can navigate and develop the game by themselves. ToyGenoSonic, is constructed as urban play, which is not concentrated in one single location, but dispersed in the urban space and open to the participation of the citizens! Beside the urban intervention, the Ludic Society proposes a playable installation in the exhibition space, which features a simulation interface of the urban play. It enlightens the invisible architecture of WIFI waves transmitted by common objects in the urban space, marked previously by Ludic players with RFID tags (Radio Frequency Identification Tags). The subliminal urban waves emitted by the RFID-tag are converted into sounds thanks to a Theremin antenna, the *ammunition*, inserted into the console, which becomes a playable instrument. The exhibition visitors can directly play with the audio-interface of these *genosonic toys*, scanning a Ludic psychoactive sonic map, mounted in the exhibition, which shows a *coded reality topography* - a tagged network of play-objects

This installation connects to a relational explanation model of actors, objects and social networks, as introduced in chapter 3.2 *Materiality of Play Politics*. Based on the previous chapter's historic observations of a shift from materiality to politics, a particular view of relations between Actors and Networks can be adapted in the understanding of a politics of play. The arts practice further expresses the relation of technological objects and subjects. If analysed in its political dimension, material affordances of play find their place in the critical technologies discourse. This case study draws on these relations and puts a distinct angle on a new form of object-

oriented relational agency found in play practice.

ToyGenoSonic helps to transfer moving patterns of players and unique numbers of objects of the Internet of Things into a critical aesthetic experience. The map as constituting element of the installation represents the electronic and logic topography of conceived conceptual space in everyday life. Electronic elements culminate in a sound pattern, performed by each player, which integrates the collective audience as active producer of the work. Players were featured as producers in a remake of the work, at the *Coded culture exhibition 2010* in Vienna. The Austrian TV broadcasting reported about the social dimension of the play in *Newton* (ORF1).

This Ludic art piece tested *play affordances* of the technological materiality of the invisible electronic topography of urban space, as described in chapter 2.0 *Technology, Materiality and Affordances of Play*. The piece ToyGenoSonic stems from poetic concepts about an invisible city, which opens up new ways of social interaction. Technically, it puts emphasis on a metamorphosis of contemporary electronic toys and unique identification codes attributed to objects and subjects into a new second nature of social life. Radio Frequency identification numbers of commodities were treated as a sort of Genotype to generate sounds. By interaction of all its constituting elements of play and technical data, sound was expressed as its Phenotype. In the exhibition, players scan tags, which are mounted on a semi-transparent curved map, which looks like a front shield of a huge car. It serves as installation artefact and as keyboard, because with each scan of an electronic tag, sound and visuals are simultaneously generated. Such a neo-psycho-geographic map was designed with graphical elements of circuit board blueprints of the artisan styled electromagnetic antennas, morphed with monitored urban pathways of players, which were understood and presented as Ludic strategy of intervention in public space.

As a consequence, a heightened awareness about the everyday electronic topography of the city and its social dimension of control was achieved. By means of an artistic representation of the invisible topography layered over the existing visible city, plus the additional layer of social interaction represented on the map, the new ubiquitous dimension of social networking was made clear. A side effect of political

explosiveness was found in every play with professional realms. Such a lesson could be learned with relish in the installation based on interventions in public space. Solutions were suggested by the installation as in a toolbox. Individual visitors were allowed to touch electronic artist's toys and try them out on objects of everyday life. Items such as passports or ID cards, which could, as the markers on the map, equally become sources, or genotypes, for *sonification*. Electromagnetic frequency fields, which are emitted by electronically marked objects of the present consumer world, became manageable by play. Firstly it was made visible, and audible that these objects emit information and later, that this information could be manipulated by playing with frequencies emitted by commodities of everyday life, as for example, in the museum shop. This aesthetic experience was considered as a suggestion to the audience, how to find individual ways to deal with electronically marked objects of the present time. ToyGenoSonic was exhibited as an exemplary tool for a semi-material toolbox, to be completed by further works of art in order to cope with modern living conditions. The addressed culture expressed in technological DIY, Do It Yourself practice, was discussed in chapter 2.2 *Factual Play Objects*.

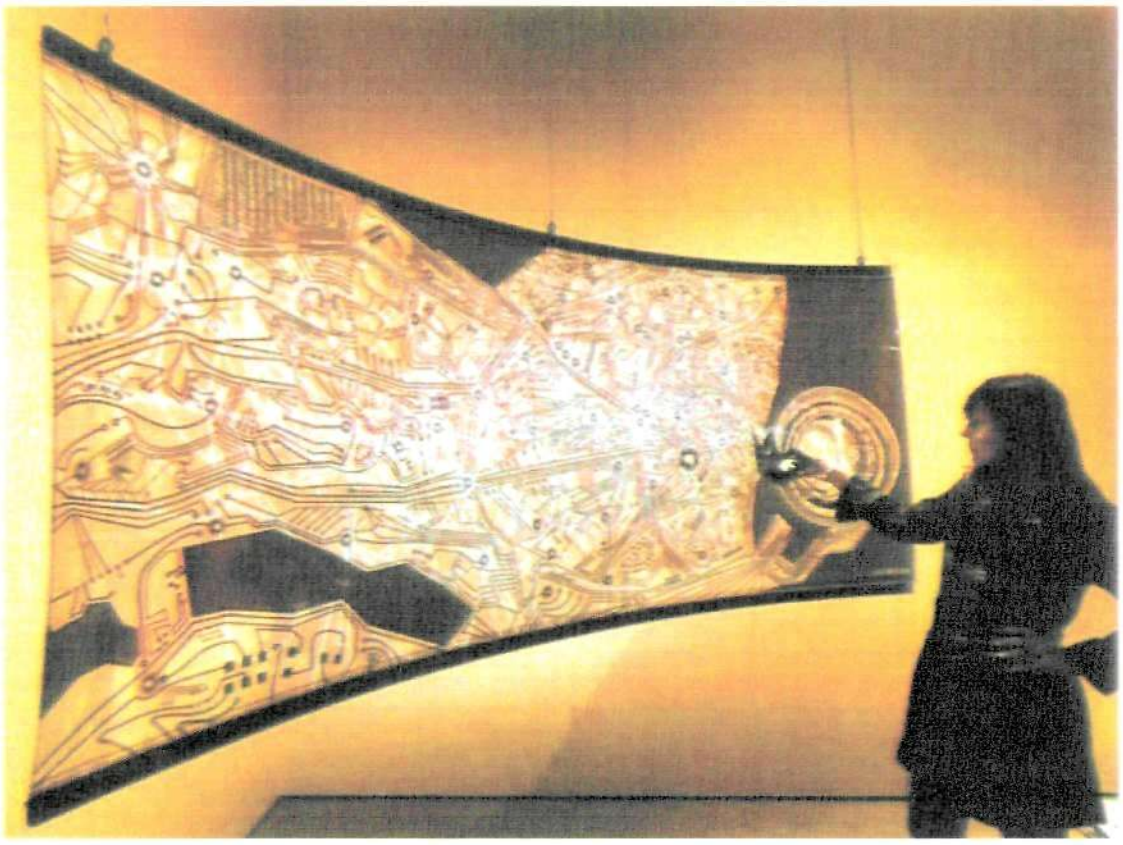

Figure 5.9 *ToyGenoSonic*, interactive installation, Aros, Aarhus, 2009.

5.2.5.1 Reflections upon Project 5

According to the video documentation[86] of the Aarhus installation and urban play, which is available online, users were playing the *Ludic Society* art game as testing playground for an aesthetic experience of a conceived narrative, electromagnetic and urban space. The comparison of systems of play could be publicly experienced and was tested as concept of *system play*, where play was *form* for intervention. The collectively conceived space of this free play of creation emerges out of a rule based starting set of an urban Alternate Reality Game. This is then developed into a Ludic playfield of political intervention by the transfer of this play from gaming industries, into an art context. As such, it enters the professional and theoretically conceived space of cartographers and high-end museums. Urban Plays are tested in this exhibition installation as source for a collective participatory work as system. This view was introduced in the theoretical intervention of this thesis in chapter 1.1 *Play as Form*. The system of play consists of the exhibition interface and the surveillance dimension of electromagnetic topographies in contemporary urban space. The invisible city (Calvino 1974) of electromagnetic topographies is the system, which appears in the piece as a narrative conceived play system.

The institution, which hosted this *Ludic artwork*, offered the space for workshops, which were announced on the museum's webpage. These workshops served as the method to gain direct input and feedback from the players. Public places, which offer workshops for audiences in order to give visitors the chance to participate, provoke the unexpected side effect of political education, as discussed in reference to Schiller in chapter 3.3 *Real Politics of Play*. The complex Ludic artwork necessitates workshops to educate the audience in a particular use of technologies for play, which stems from activist strategies of education as condition for political resistance. This necessity and solution was proven in the Aros museum (2008). The workshop as

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[86] ToyGenoSonic focuses on a metamorphosis of contemporary electronic toys, of unique codes attributed to objects and subjects, similar to a Genotype, and a Sonification of the Interaction of all its constituting elements as its Phenotype. ToyGenoSonic's notation consists of the mathematical representation of player movements and objects or locations of RFID numbers.
http://vimeo.com/4135914 [Accessed: January 3, 2010]

educational format enabled the author to test DIY attitudes evolving around the Smartifacts of everyday life, as detailed in chapter 2.1.1 *Introducing Smart Materiality*. It opened up the possibilities for change of the electronic objects as expressed in the following evidence. The following art piece tested the concept of persuasion through the artifice and logical stringency of playful objects, according to chapter 3.1 *Evidences of Play Politics. Historic Ludic Interfaces and real politics.*

5.2.6 Project 6: *Ludic Wheel*, 2007

Classification: *Ludic Category II Conceived Agency*, Ludic Interface
Date/ Collaborators: 2006, Gordan Savicic, Inoc Vienna, Max Moswitzer.
Technique: Hand etched electronic printed circuit board, Atmega8 microcontroller, 3.3Volt max887 voltage regulator, 3-axis XYZ micro machine accelerator, 9600Baud wireless communication, grey-scale encoder, and 140 steel balls.
URL: http://www.ludic.priv.at/ludicwheel
Exhibitions of this Ludic art piece: 2006 *Device Art*, Conteiner Gallery, Zagreb, Croatia. 2006 *Perguntas sobre Arte, Consciência e Tecnologia*, SESC, São Paulo, Brazil. 2007 *Game Worlds*, inaugural exhibition Laboral, Gijon, Spain. 2008 *Dada Machinima*, Planet Art, Amsterdam, Netherlands. 2009 *Goghot Festival*, Enschede, Netherlands.
Published discussions of this Ludic art piece: Jahrmann, M. (2008). *Morales du Joujou*. In Roy Ascott (ed.), *Technoetic Arts. A Journal of Speculative Research*, vol. 6/2, Intellect Books, Bristol, pp. 149-162. Jahrmann, M. (2008). *The Ludic Mono Wheel as 'Pataphysical Play and Snowballmachine*. In Pfruender, G. (ed.), *Schnee bis zur Neige. The Symposium for the Leap Year*, Snowball Association and Ecole Cantonale d'Art du Valais, Chateau Mercier, Sierre, pp. 28-34.
The *Ludic Wheel's* (2007) shape can be identified as reference to the historic combinatory wheels, as shown in chapter 3.1 *Evidences of Play Politics*. With the wheel in public forums, the seducing quality of a technological artefact was tested. Live demonstrations of the Ludic Wheel's functions, which are the control of any software and navigation through virtual 3D spaces, it's technological quality as

Smartifact was introduced. The wheel allowed exemplifying the empowerment of the individual on stage, if equipped with a convincing electronic object, which was presented in the survey of chapter 3.2 *Materiality of Play Politics*. A particular feedback from the audience, which confirmed the impact of the argument developed in this thesis, was gained in the live panel discussion after the presentation at SESC[87], Avenida Paulista, and São Paulo in 2006. The panel was announced under the title *Ilinx e Risco: Logro e Blêfe: a frivolidade do jogo*, which translates as *Risk, Ilinx and Speed: The Frivolity of Play*.

Figure 5.10 *Ludic Wheel*, performance SESC São Paulo, 2006

A renewal of absurd methods as grotesque coupling practices to gain insight was achieved by the demonstration of the *Ludic Wheel* object on stage, in combination with a video by the author, named *Parcour Ready Played* (2005), which presented the life risking play of Parcour in the style of an absurd game of Super Mario in real life. Parcour and street riots in Paris Banlieues were at the timecovered in mass media as

[87] The anthropologist Stephane Malysse moderated the discussion panel about the art piece, in Sau Paolo, http: www.sescsp.org.br sesc conferencias_new subindex.cfm?Referencia=4586&ParamEnd=2 [Accessed: January 3, 2010]

desperate protests against urban and social grievance in European suburbs in autumn 2005. Such public play with serious topics on stage can be seen in the context of an European tradition of resistance, as introduced on scenes of 'Pataphysics by Alfred Jarry (1873-1907) as science of imaginative solutions, a playful discipline of protest.

A live demonstration of the Ludic Wheel as 'Pataphysical object in 2008 was well documented in the catalogue *The Symposium for the Leap Year* (2008) in Sierre, Switzerland. The following description explains how the attractiveness of the Ludic interface was achieved by its technological materiality, according to the theories of chapter 3.2 *Materiality of Play Politics*.

If used in a public performance as instrument on stage, the *Ludic Wheel* works as technological interface to connect to visual or audio samples, but conceptually it remains Chindogu, in the sense of useless object, because it does not support or produce anything specific or new. According to the arts evidence discussed in chapter 4.1 *Chindogus as Erotic Toys*, the *Ludic Wheel* can be classified as useless, but symbolically rooted in European cultures of protest and amusement by technological shenanigans. Similar to a new bachelor machine it rotates like a millwheel for audiovisual noise. It is useless as game interface, but at the same time, it is a working technological tool, but more importantly, it is beautifully designed and styled in copper and black visible circuits. The self-etched circuit board and its intrinsic 'Patapyhsical design provide rides on the wild side of electric copper currents. The wheel is considered in its design in the shape and by displaying the motive of a spiral as homage to Marcel Duchamp. Its circuitry includes a roto-relief, a spiral curved pattern, which is introduced as Ludic symbol for the transgression of theory by social inter-play and joy in live stage performances.

As artisan expressive object of semi-material play the Ludic wheel is a conceived conceptual object, which is perceived as live performance instrument. It is conceived as a transport vehicle for principles against productiveness and efficiency. According to the live panel discussions (SESC 2006 and Sierre 2008), it appears as self-sufficient aesthetic object, which communicates ideas of aesthetic appeal as resistance tool against superimposed social orders. It symbolically shifts contemporary

technologically entailed limitations of one-directional usefulness.

Figure 5.11 *Ludic Wheel*. New Bachelor Machine Poster 2007

5.2.6.1 Reflections upon Project 6

The Ludic Wheel as absurd object demonstrated through the empiric method of panel discussions that the poetic use of absurd electronic objects can function as a counterstrategy to given discrete conditions in technologically determined societies. Applied uselessness was introduced exemplarily by this Ludic art piece as category of Conceived Agency. Paradoxically the object's futility emerged with its growing degree of technological artifice, which can be read as evidence for Chindogu. The effect of agency in social discourse is achieved by a surplus of unnecessary technological features, driven to the extent of ludicrous interactions, as performed live on stage. Under conditions of Conceived Agency the object exemplifies strategies of thing politics, as discussed in chapter 3.2 *Materiality of Play Politics*. Such kind of arts practice is intended to overcome the dictate of technologies' professionalism in the temporary autonomous zone (Bey 1991) of a live performance stage. The positive

audience feedback to the Ludic wheel performance was published in the „Snowball-Machine 29th February 20008" symposium in Sierre, in the catalogue edited by Georges Pfründner (Pfründner 2008). The performance presented the Ludic Wheel as toy against a dictate of efficacy in technologies.

Correspondingly, the concept of *Chindogu* was applied in the development of the arts research piece *GoApe Chindogus*. These works apply the idea of *free play* (Derrida 1978), and the related concept of social hierarchies as introduced in chapter 1.3 *Playfulness in Anthropologies*. The following case study describes an art piece that tested art production in a science research lab as *anthropological play*. Its evidence in the following art piece introduces the Ludic Category III Lived Agency.

5.2.7 Project 7: *GoApe Chindogus*, 2006

Classification: Ludic Category III Lived Agency, artist in labs experiment.
Date/ Collaborators: 2006. Artificial Intelligence Lab, ailab University Zurich. Max Moswitzer, Daniel Bisig, Jonas Bösch.
Technique: 3D game engine, Simulation software, Printed circuit boards, electronic elements, LEDs, black/ blue circuit board material, copper/ tin-plated circuit boards.
URL: http://www.ludic-society.net/play/objects.php
Exhibitions of this Ludic art piece: 2005 *Postmedial Condition*, Neue Galerie Graz, Austria. 2005 *Processes of Inquiry*, Kultur- und Kongresszentrum Luzern, Switzerland. 2006 *Postmedial Condition*, Arco Electronico, Centro Conde Duque, Madrid, Spain. 2006 *transmediale*, Haus der Kulturen der Welt, Berlin, Germany.
Published discussions of this Ludic art piece: Daniel B., Bösch, J. (2005). *GoApe: an Interactive Multi-Agent Simulation Tool for Art and Science. Cognition, Brain, Behaviour*. Special Issue on Studying Communication in Animals, Romanian Association for Cognitive Science, p 575-582. Daniel B., Bösch, J. (2005). *GoApe: an Interactive Multi-Agent Simulation Tool for Art and Science*. In Rusu A. S. (Ed.), Studying Communication in Animals, ASCR Press, 143-151. Bösch, J. (2005) *Design and Implementation of a Scriptable Agent-Based Multiplatform Simulation Engine*. Diploma Thesis, University of Zurich, Artificial

Intelligence lab.

Tsuyoshi Ito (2005). *Integration einer Benutzerschnittstelle und Entwicklung eines Spieles in GOACORE*. Diploma Thesis. University of Zurich. . Artificial Intelligence lab/ ETH Zurich.

Eigensatz M., Erni, D. (2005) *The Cellgrid Project*. Semester Thesis. Swiss Federal Institute of Technology, ETH Zurich.

Weder, M. (2004). *Game Art unter Laborbedingungen*. In Tages-Anzeiger. Page 59. 01.09.2004

Gallery of the project evaluation in the Artificial Intelligence lab Zurich Online available under http://www.ifi.uzh.ch/ailab/people/dbtsig/goape.html [Accessed: January 3, 2010]

Scott, J. (ed.) (2006). "The project GoApe." In *Artists in Labs*: Processes of Inquiry, the Artists in Labs Programme. Springer. Wien New York. pp. 114-118.

Jahrmann, M. (2008). "The Portable Prison: Nutzlose Spielzeuge als Kontingente Spiel-Fetische." In Huber, J., Stoellger, P., (eds.). *Gestalten der Kontingenz*. Institut für Theorie Zürich. Edition Voldemeer Zürich. Springer. Wien. New York. pp. 87-99.

The director of the Artificial Intelligence Lab University Zurich Rolf Pfeiffer highly evaluated the collaboration of artists and scientists in the GoApe project (2005). On the artists in labs DVD (Scott 2006) he argues (the interview with Pfeiffer is also available on this thesis' DVD):

> The project GoApe is an interesting mixture between agent simulation and social interaction platform. These are not like in most computer games where you can actually determine what the agents have to do but the agents have a certain degree of autonomy. Also, some of the agents are autonomous in the situation, other agents are representatives of human users and yet other agents are representatives of robots. So, you can connect different kinds of users, developers, autonomous agents in the simulation and robots of various types in this platform. And then we are looking for what is going to emerge here. From an artistic but also from a scientific perspective certain types of abstractions are being made. We do not always show the agent as gorilla or as a particular figure, but as an abstract thing that does not

have a clear identity any more. When we have these abstractions may be we can recognise pattern that we may not see otherwise.

This work was made possible through a grant awarded to the author by the Swiss artists-in-labs programme in 2005. The project produced in this period dealt with a simulation of a primate society of Macacus apes compared to social rules of dominance and hierarchy in open source societies. In the artificial intelligence lab of the University of Zurich, studies of Macacus Ape societies served as model for simulations of social intelligence. Inspired by such concepts in the sciences, the project GoApe was planned as strategic Ludic intervention into social systems of scientific communities by an artists-in- labs experiment. The scientific survey of an ape population became the general inspiration for the project called GoApe. It consisted of a modular engine based on embedded neural networks and exemplary cognitive science features. The simulation aimed for at least four forms of interaction: modifications of the source code of the open source core engine, modifications and additions of python scripts which wrap the core engines functionality, modifications of all simulation parameters through a graphical user interface, and a interface hardware kit to affect any simulation parameter. This diversity of modification and interaction possibilities was designed in order to overcome the socially predefined roles of programmers, scientists, artists, and players in the development and usage of a research platform. A semi-structured approach for analysis was chosen to combine interests, the aesthetically driven idea, and the interest of scientists in measurable results in social interaction. The game-like 3 D simulation of a social system with autonomous agents as software stood in exchange with a „zoo" of connected hardware (the artefacts and robots produced in the artificial intelligence lab Zurich) that was addressed by the software. As test version, adequate fort he arts context a series of artisan hardware objects were developed by the artists Jahrmann and Moswitzer (2004-2005). The artists named these aesthetic objects GoApe Chindogus (2004). In an experimental setup, the hardware artefacts were connected to the simulation software, developed by Bönsch and Bisig (2004), which included artificial intelligence elements and a model for social interaction. GoApe as combinatory *interface of simulation and absurd objects -in the sense that these technological things* had no proper function in the research lab - was meant as playful way to produce a

conceived space of Ludic agency in high-end embodied artificial intelligence research.

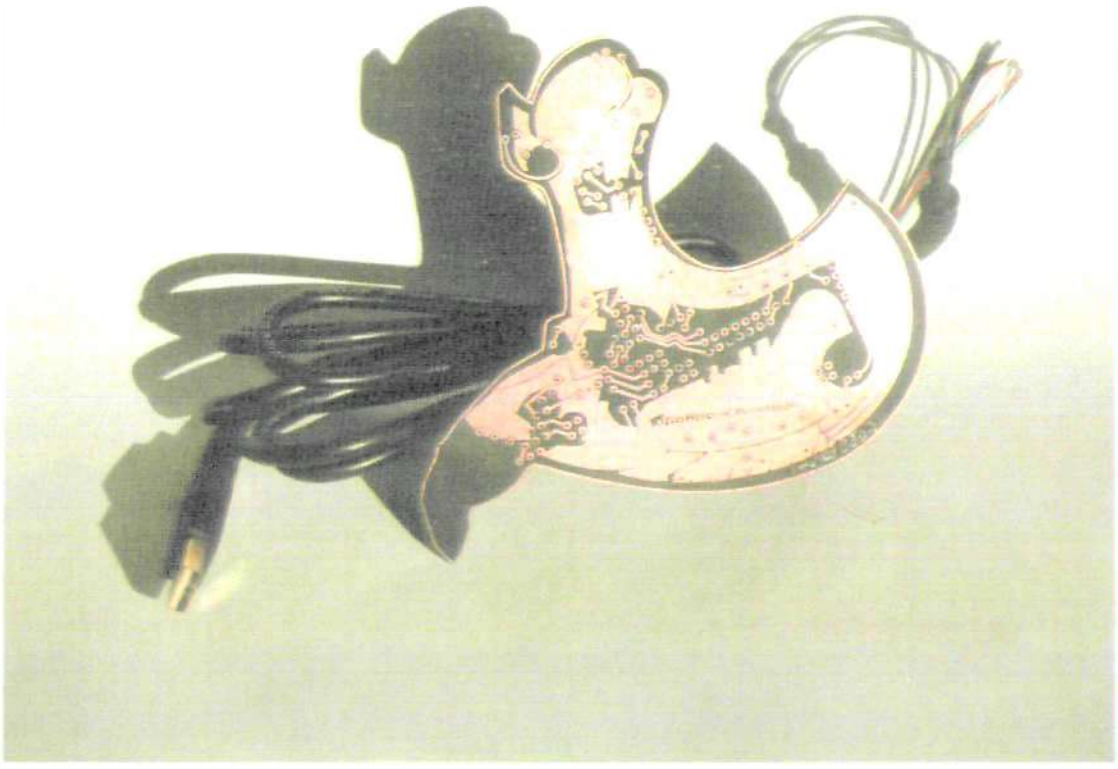

Figure 5.12 *GoApe Chindogu*. Artificial Intelligence Lab Zurich 2005

5.2.7.1 Reflections upon Project 7

This project gives evidence to show that conceived concepts of social behaviour manifest also in scientific investigations. The official representative of the ailab Zurich, Daniel Bisig argued about the efficacy of the GoApe project in the online statement of the ailab Webpage (2005:online):

> The project goApe is an experiment in transdisciplinary activity. It started as collaboration between the University of Art and Design Zürich and the Artificial Intelligence Laboratory of the University of Zürich. The project is inspired by the art projects of Margarete Jahrmann and Max Moswitzer who work with total conversions of game engines. For example the "nybble engine" is a modification of

> Unreal Tournament. In this modified version the visuals as well as the bot behaviour was completely reworked. Another important source of inspiration is the Dom-World system invented by Charlotte Hemelrijk and extended by Jan Wantia. This system simulates the emergence of hierarchical structures in primate societies. In the period of time, which was funded by the "Artists in Labs" initiative, the conceptual basis of the project was defined and an early software prototype developed. The initial project team consisted of Daniel Bisig, Jonas Bösch, Margarete Jahrmann and Max Moswitzer. Throughout this initial project period the number of people contributing to the project has steadily increased and currently involves scientists from Biology, Psychology, Ethololgy and Developmental Robotics, artists from New Media and Industrial Design.

The double request of exploration and representation provided the necessity for creating interfaces as aesthetic play objects, which were not required to be useful in the sense of productivity but inspired by the idea of a „material intelligence" which was frequently communicated in the ailab in 2004/2005. In this way the concept of playful materiality, as introduced in chapter 2.0 *Technology, Materiality and Affordances of Play* was practically prepared by the art piece. These electronic artefacts were only considered to correspond as expression of an artist-in-lab experiment, to a situation of control and dominance of discourse structures, altering between art and science. This experience led to the foundation of the Ludic Society as arts project, described in 5.2.1 *Project 1: Ludic Society*, 2006-2008. As outcome of the observations, a diploma student (Bösch 2005) and a doctoral candidate (Ito 2005) of the ailab and ETH Zurich artificial intelligence lab[88] tested a synopsis of scientific agency potentials related to the art work. The artificial intelligence researchers Bönsch (2005) and Bisig (2005) discussed The Ludic art piece GoApe as vehicle for social intervention into systems of power. The artistic play experiment is defined as social experiment, in stark contrast to the understanding of an experiment in natural

[88] Tsuyoshi Ito (2005), Integration einer Benutzerschnittstelle und Entwicklung eines Spieles in GOACORE. Diploma Thesis, University of Zurich, . Artificial Intelligence lab. ETH Zurich. Bösch Jonas (2005) Design and Implementation of a Scriptable Agent-Based Multiplatform Simulation Engine. Diploma Thesis, University of Zurich, Artificial Intelligence lab.

sciences. The time span as artist in residence allowed to test the concept of lived agency through *Ludic Interface* through the art work as playful experiment, and as discussed in chapter 2.3.2 *Agency through Ludic Interfaces*. The experiment was consequently transferred into exhibition spaces (Neue Galerie Graz 2005) and has given an account of the use of aesthetically designed electronic objects as catalyst for the development of a playful methodology of research. A scientific, repeatable, experimental setup is undermined by the Ludic strategy of lived Ludic agency as experiment in arts. The Ludic experiment deals with experimental setup in unpredictable social conditions. It is performed in public (Neue Galerie Graz 2005) and plays with the unexpected element of participation. Artists' experimental setups are fundamentally distinct in this concern from quantitative research. It puts an emphasis on the creative act and experiment as valuable trans-disciplinary episteme. The creative cultural practice of manipulation, as discussed in chapter 2.2 *Factual Play Objects*, reclaims artistic experiments as socio-political research episteme, which is demonstrated in the following arts work.

5.2.8 Project 8: *Nybble-engine-toolZ*, 2004

Classification: Ludic Category III Lived Agency, game modification.
Date/ Collaborators: 2003-2004. Max Moswitzer, V2lab Rotterdam, Evolutie Evo, F. E. Rakuschan.
Technique: Laser sintered objects, Styrofoam exhibition architecture, c++ code, Linux, Unreal Tournament Game Engine Conversion.
URL: http://www.climax.at
Exhibitions of this Ludic art piece: 2003 *Metadata*, V2lab, Dutch Electronic Arts Festival, Las Palmas, Rotterdam. 2003 *DEAF Emerging Artists*, Mama Gallery, Rotterdam, Netherlands. 2003 *Interactive Arts Exhibition of Prix Ars Electronica*, O.K Centrum für Gegenwartskunst, Linz, Austria. 2004 *Software arts award transmediale*, Haus der Kulturen d. Welt, Berlin, Germany.
Published discussions of this Ludic art piece: Leopoldseder, H., Schöpf, C. (eds.) (2003). "Award of Distinction for Nybble Engine.

" In *Prix Ars Electronica*. catalogue and DVD. ORF Landesstudio. Linz. pp. 86.
Jahrmann. M. and Moswitzer M. (2003) *Nybble Engine Magazine and DVD*. Jahrmann Moswitzer. Vienna.
Broeckmann. A. (2004). "Software Arts Award - Nybble Engine." In *transmediale Katalog*. transmediale. Berlin.
Prix Ars Electronica 2003. Interactive Arts award. statement of the jury. Available from http://www.aec.at/en/prix_updates/article.asp?iNewsID=309&iTypeID=6 [Accessed: March 12. 2009].

Drawing on chapter 2.2 *Factual Play Objects*. this Ludic art piece demonstrates in its combinatory hybrid structure. that technologically ambitious works of art can be built by modification of consumer technologies. Thus introducing the principle of modification of existing technological gadgets as Ludic practice gives evidence how to induce new meanings into a given media apparatus.

The interactive arts jury referees of Prix Ars Electronica 2004 identified the Ludic art piece *Nybble-Engine* (2003) as „second order system of investigation". which testifies in an arts experiment the theoretical concept of *systemic play* introduced in chapter 1.1 *Play as Form. a brief systemic differentiation of playfulness*. The Jury statement was published by Leopoldseder and Schöpf (2003: 12):

> The re-engineering of existing. commercial systems (such as game engines) or their inversion and subversion have also increased. although this territory arguably remains under-explored. Considering the potential of the digital medium. still relatively few works create open systems by allowing users a sophisticated reconfiguration or rewriting of the system itself or by relying on networked communication processes in challenging ways.

On a technical level the Nybble-Engine software is a total conversion of a Game Engine. It converts network-processes into three-dimensional abstract movies and projects these onto a 180 degrees circular screen in an interactive cinematic situation. The view of the machine - concretely the processes - running on a multi-user server.

are shown in an aesthetically transformed spectator-mode. In the opto-acoustique centre of the physical installation, participants are seated on a sofa, as in a living room. Under a glass-vitrine a laser sintered physical three-dimensional printout of the displayed 3D architecture is exhibited, similar to such a piece of art, which is used as decoration in a living room. On a table, two game pads are placed. By a single press on any button, players log onto the installation network and enter the Jump 'n run shooting environment, where representations of interactive processes, expressed in abstract data-objectiles, artificial intelligences called action bots and other gamers are flying about. By navigating, players co-generate the displayed server-movie. With each bump into a data-object a networks-process is started, emails are sent out of the visual environment. Shooting in the game environment starts scripts, Linux commandos are embedded into a game-engine. Depending on user-bot actions in the installation on line, and on site, ping requests to several government servers were started. With each shoot, a number of peace messages were sent out to the actual e-mail address president@whitehouse.gov.

Figure 5.13 *Nybble Engine Toolz*, anti-war shooter Game Modification, 2003

This Ludic artwork was first installed at the exhibition *Metadata* at the Dutch Electronic Arts Festival 2003, in the Las Palmas exhibition space. Simultaneously, a console with the work was exhibited in the gallery *Mama* in the centre of Rotterdam. The simultaneous exhibition of the work on two sites built on the works network abilities, which connected visitors of both sites. As total conversion of a game engine – both in meaning (anti-war shooter) and in technologies (networked Linux commandos in a game engine) was developed during a residency at V2_lab Rotterdam in 2003. Each step of the experiment with a game engine was peer reviewed by Anne Nighten as director of the V2 lab residency programme. The experiment informed the chapter 3.0 *The Politics of Play: How practices of play inform potential revolutions*. The invasion of Iraq by United States military forces was the systemic frame for this *play politics* intervention. According to the referees press text (DEAF catalogue 2003: 2) the piece illustrates how content, as the activist mail-out of a protest mail against war ,can be fully integrated in a playful experience.

5.2.8.1 Reflections upon Project 8

This Ludic piece of art, which was informed by conceptual approaches and activism, can be considered key to further theoretical and practical interventions about play as method of political agency, in a genre that is called game arts today. Evidence for this impact has been recognised through the award of the *software arts transmediale* 2004 and *Prix Ars Electronica distinction in interactive arts* in 2003. The work combined proprietary and non-proprietary software as a statement on the critical ownership situation of software based arts and industries. It applied playfulness as tool for intervention into lived realties and even anticipated the not yet fulfilled requirements of activist art as joyful intervention.

As *Lived Ludic Agency* the modification of a shooter game engine (Unreal Tournament) helped to create a completely different machine out of an existing engine, which tested systemic conditions of play through the method of arts installations at major media events, both in terms of aesthetics and content. On a symbolic level of playing, the piece tested a viable setup for lived agency in numerous worlds, those of arts and exhibitions and those of networked online games and real

polities, as discussed in chapter 3.3 *Real Politics of Play*.

As example of a very direct intervention into a political situation the critical game art piece *Nybble Engine* was built as political agency tool to intervene into real life. By offering Ludic agency, the piece could alter the art recipient's position into those of an active player who publicly demonstrates agency, because every user sent out e-mails by pressing the shoot button.

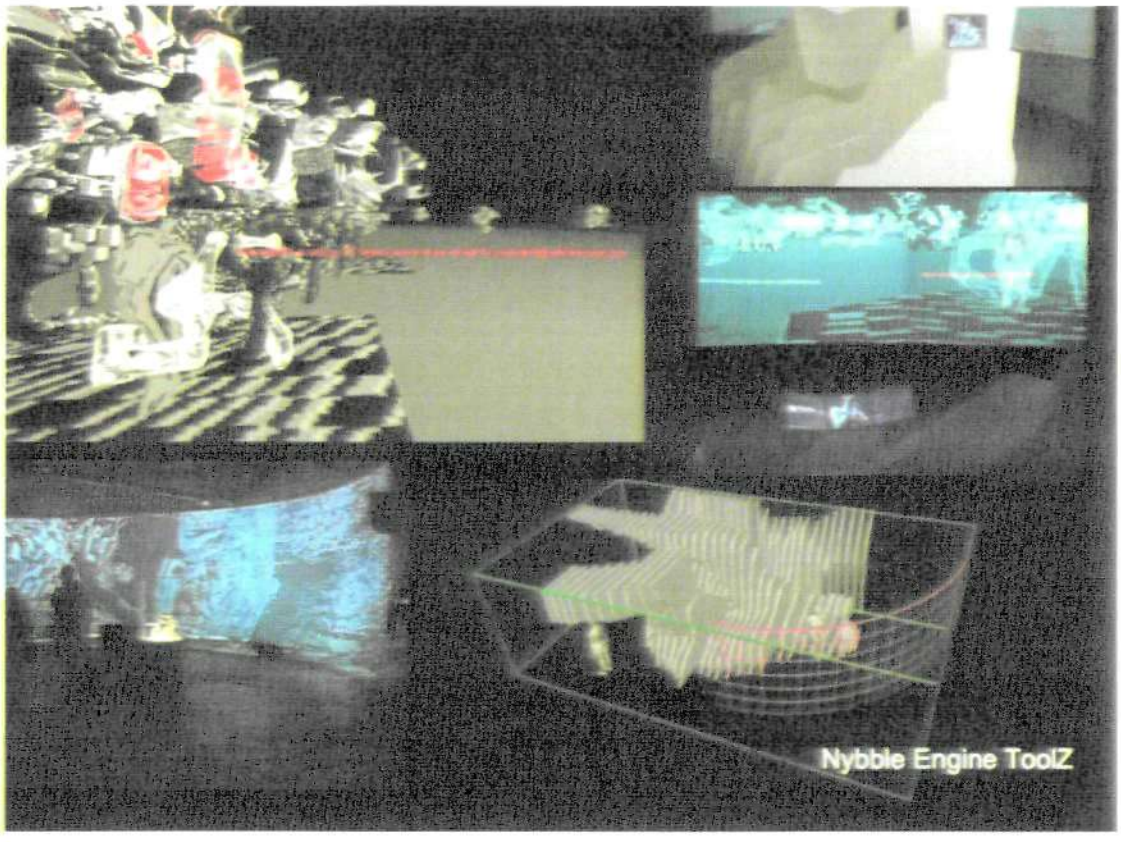

Figure 5.14 *Nybble Engine*, installation view Prix Ars Electronica 2003

According to the public reception at media arts festivals (Ars 2003, transmediale 2004) the art piece *Nybble Engine* (2003) identifies modification as most relevant for the conscious handling of lived agency in the play with technologies and social interaction. This work of art embraced political activism and arts. The public presentation of an arts software piece as a tool for agency marks the starting point of re-emerging solutions of *Lived Agency*. Playful arts pieces alter technologies. This aspect of *Lived Agency* has been further tested in the next case study.

5.2.9 Project 9: *Sema Dress*, 2009

Classification: Ludic Category III Lived Agency, Con-Dividuality .
Date/ Collaborators: 2008-2009, Christoph Sieghart.
Technique: One colour all over-print on linen and silk, mobile phone software, Java application for MIDP 1.0 and Free Android 1.5 App "QR Fashion".
URL: http://www.ludic-society.net/sema/
Exhibitions of this Ludic art piece: 2009 *5days off*, NEMK Netherlands Media Institute, Amsterdam, Netherlands. 2009 *I-machine*, Edith-Russ Haus, Oldenburg, Germany. 2009 *e-mobile arts*, State museum, Biennial Thessalonica, Greece.
Published discussions of this Ludic art piece: Felderer, B. (2009), "Intelligente Kleidung, Entschuldigung Ihr Mantel bellt!" In *Die Presse*, 18th August, Wien, pp.18-19. Weiß, M. (2009), *Kunstjahr 2009*, Kunstverlag, Berlin, pp. 256-259. Weiß, M. (2009), "Sema Dress", In *Kunstzeitung*, September issues, Kunstverlag Regensburg, pp. 12-13. Himmelsbach, S. (ed.), (2009), *I-machine*, Edith-Russ Haus, Oldenburg, Germany Jahrmann, M. (2009), "The Third Woman Costume and Performance." In *e-mobile art*, Biennale2, Thessalonica, Krakow, pp.76-83.
The graphical two-dimensional codes named *Sema codes*[89] (1994) serve as basis for this fashion design. The graphical patterns are visual 2D codes, which are de-codable by particular software on mobile phones. In the case of *Sema Dress* (2009) each code contains a certain fractal image. The project website *Sema Dress* (2009) claims: The QR-nymphet // game fashion 2.0, quick-read-code camouflage collection // the naked city – voyeur surveillance! A virtually transparent dress: hold your phone over patterns of cloth - and see the naked skin of Venus on your mobile phone display.

[89] Sema codes are also subsumed as Quickread codes, which are in use since 1994 in Japan. The technology was developed by the company Denso Wave and was released as ISO IEC18004 standard, named Quick response. http: semacode.com [Accessed: January 3, 2010]

Technically it requires Sema code reader software, which was developed for the project and was downloadable from the Android store. Once installed on the mobile phone it redirects the photographed pattern to a database, which feeds an image back on the displays. It puts a tile of Botticelli's Venus on display, instead of each black and white printed pattern tile scanned. The information associated to the patterns is changed, in order to understand the potential of the technology for intended use. The mobile phone software associated with this piece demonstrates how information is constructed by software. Accordingly, such software for play with graphical codes integrates *free play*, as introduced in chapter 1.3 *Playfulness in Anthropologies*, in order to handle and give further new meaning to everyday life technologies.

The fact that graphical Quickread Code is open in the sense that the technical specification is disclosed and that the patent right owned by the developer company is not exercised, facilitates creative use and offers options for re-coding the technology, as demonstrated in this art work. It suggests a critical attitude towards increasing ubiquitous encoding of the physical world as basis for agency. The concept of Con-Dividuality was tested in this art piece, as the mission text published in the I-machine catalogue (Himmelsbach 2009: 10) demonstrates:

> Similar to El Sub Commandante Marco's wool-mask, this piece of clothing makes the wearer invisible for electronic cameras of mobile gadgetry, as phones, which are increasingly used for surveillance purposes. Bloggers upload *dress-code* images taken with their phone. An absurd database of body parts will grow. Qickread-Garments can be worn as modern camouflage battle dress.

Sema Dress addresses the method of role-play as technologically coded figurine in urban space. As expressed in this piece of art, software can be perceived in a pop-coded way. Audiences are involved into vague agency in everyday life situations, in order to comment on inherent political dimensions of technologies. The idea that the garment makes the wearer feel safer in front of mobile phone cameras, offers future options for this method. Instead of hiding from technology, performing with

technology is demonstrated as resistance and solution to surveillance in urban space.

Figure 5.15 *Sema Dress* Performance featured in *Die Presse*, 18th August 2009.

5.2.9.1 Reflections upon Project 9

The Urban camouflage dress introduces particular Sema code-fashion-patterns as urban dress code, which makes the wearer invisible for digital eyes. The fashion piece conceptually aims to trickster mobile phones and surveillance cameras. Popular cultures of design, particularly of fashion design, are tested in this piece as vehicles for the evolvement of intervention. It gives evidence to the hypothesis of joyful political intervention through creatively changed technologies, as introduced in the chapter 4.0 *Playsure Politics.*

This practical work tests the concept of *play affordances*, as introduced in chapter *2.0 Technology, Materiality and Affordances of Play.* It draws on the concept of 'affordances' in design studies and the peculiar materiality of technological objects affordances (Miller 1998) onto critical play principals in the *Lived Agency* found in an urban performance. The public reception of this work in the Austrian quality newspaper *Die Presse* (18th August 2009: 18-19) reported on users, who were seduced to take photos, because they recognised code-patterns on the performer. The coverage of this piece as „fashion" was intended as method in order to achieve public attention and feedback in media, in order to test the concept of *Minor Media Intervention*, as introduced in chapter 4.2.2 *Public Intellectuals and Minor Media Operators in Web2.0.* Published as fashion piece, this work of art suggests a popular culture vehicle, fashion, to transport a subversive use of an existing common technology of everyday life by the act of wearing the technology ironically.

In each of the previous case studies new solutions are suggested for interventions into everyday life. The above discussed evidence shows that it is useful to synthesize agency potentials according to categories, which refer to concepts of play and agency, as introduced in the line of the previous chapters. By such evidence the concept of Ludics is identified as a relevant practical research outcome of this thesis, which is synthesised from the analysis of art work, providing the largest set of significant clusters of play aspects for a contemporary politically active life. As the case studies demonstrated, Ludics is theoretically grounded, but experienced and realised practically by pleasure and enjoyment as strategy. Ludic arts as interventionist

practice Ludics as an emerging practice based method of arts research.

6.0 Summary and Conclusion

The emergence of Ludics as methodological intervention

This summary and conclusion proposes to treat the issue of agency as unavoidable category of play through references to the methodologies, theories and practice of play and arts, as elaborated in this dissertation. The theory chapters one to four, 1.0 *Anthology of Playfulness* to 4.0 *Playsure Politics,* posed as leading research question how far playful interventions can result in agency. The arts practice of the author in chapter five, 5.0 *Ludic Practice,* demonstrated the relation of playfulness to technological artefacts and activist arts, which resulted in the emergence of Ludics as arts research method. This final chapter will reflect on the Ludic method, which emerged as synthesis of practice and theory.

6.0.1 The contextualisation of Ludic theories and arts practice

This summary synthesises arts research and theories of agency and play. According to the last chapter's evidence Ludic art works, apply playfulness as principal to critically question technologies and their implications of domination and power. It offers an overview on the analysis of Ludic interventions as performance works, which embraces principals of role-play and modification of technologies in arts in order to subvert the social dimensions of technological ubiquity and surveillance. Mantled in arts, fashion design and public play, public interventions in theories and practice provoke responses in contemporary discourses and arts. The observations of the use of everyday technologies and the critical discussion of these observations through practical experiments in arts pieces, which test the various hypothesises of the thesis, are understood as suggestions towards an emerging method of research and agency through play. The practical strategies of play result in the user's interaction, stimulated by electronic artefacts. The purpose of the analysis of evidences of the use of technologies in everyday life and of selected exemplary art works, throughout all chapters, was to understand their methodological concepts. Its political effects were social interventions and to make technologies transparent as professionally conceived materiality constituents of a capitalist design of society. Different aspects and methods of play and intervention were discussed according to the following trajectory, towards the emergence of a consistent Ludic method.

Chapter 1.0 *Anthology of Playfulness* introduced the concepts of games and play in relation to technologies, social efficacy and political agency. The inquiry of concepts of game and play in chapter 1.0 *Anthology of Playfulness* led to a deeper understanding of the necessity of an anthropological angle on the phenomenon of play as factor of social status and means of intervention in technologies. In its emphasis on the analysis of an anthropological view on playfulness as practice to generate social status, this chapter pointed out the emerging focus on agency in social play with technologies. This chapter synthesised the qualitative analysis of culturally established techniques of intervention in play with the knowledge about Ludic art works in the contemporary field of electronic social media networks. The analysis of chapter one also revealed a lack of study of the technological play object in the contemporary discourse of playfulness, in particular in games studies.

Chapter 2.0 *Technology, Materiality and Affordances of Play* introduced a new understanding of materiality in relation to electronic artefacts and play. It started from an analysis of the concept of affordances in relation to play. The contextualisation of arts practices and creative forms of playful interaction with electronic artefacts in everyday life were understood from this angle through evidences from every day life technologies. The synthesis of evidences and theoretical understanding of particular aspects of technological materiality led to the identification of play in social media networks as emerging form of subversive subtle resistance. On top of the analysis of evidences of artefacts of every day life, the convergence of the theories and practice prepared the grounding for methods of agency through play. This chapter has been based upon the apparent affordances of technological materiality, that engages with an increasingly radicalised importance of play, and of playfulness, as a cultural phenomenon in the entire digital culture.

The suggestion of a new category of play affordances in chapter two stood in response to the increasing requirements of play as established by consumer technologies. The particular perspective of case studies on enjoyment of play with technologies and its exploitation in seductive economic strategies, led to a more in-depth questioning of the impact of play affordances, and technological materiality, on the player's consciousness in relation to the material conditions of ubiquitous technologies.

Evidences of everyday life in chapter 2.1 *Factual Play Objects in Public, Private and Hybrid Play* identified the increasing anthropomorphisation of the technological object. This analysis exposed the appearance of industries and their Smartifacts in opposition to a rising, technologically informed, play culture in everyday life, where arts evidence offers solutions. The arts evidence of other artists in social media networks addressed the question of an unavoidable play affordance in technological materiality. Hybrid artefacts increasingly emerge in the interface culture of ubiquitous computing and social networks, as elaborated in chapter 2.3.1 *Anthropomorphosis through Smartifacts,* located between symbolic object and technological toy.

Chapter 3.0 *The Politics of Play* examined in historical examples of arts, poetics and play with Ludic objects how the efficacy of play was achieved in technologies. In chapter 3.1 *Evidences of Play Politics* observations of the creative use of proto-computational devices identified play with technologies as tactical means for poetics and politics. An exemplary survey of practices in the history of technology, such as the use of proto-computational devices was woven together with the reflection on the theoretical concepts of thing politics in relation to artefacts. The discussion culminated in a focal point on politics, real politics and play. The investigation of case studies of political activism included examples since the advent of 'Thinking Wheels' in the time of Raimundus Lullus, and its reverberation in playful arts societies in the Baroque period until the beginning of mechanisation. This analysis involved radical methods of role-playing as means for political intervention, driven by the enjoyment of technologies and agency. This chapter discussed the theoretical dimensions of tactical Jouissance, as method for political intervention. By drawing on evidences from art-practice, as Ludic Interfaces, particular aspects of play in real politics and agency led to a new methodological focus on the political dimension in play.

The artefacts presented in chapter 4.0 *Playsure Politics* built on the attraction of futility and irony as agency dimensions. The objects discussed in 4.1 *Chindogus as Erotic Toys* consist of a series of absurd technological things, which radically express resistance to paradigms of functionality in opposition to the professional dogma of usefulness as a requirement of object design. Correspondingly, chapter 4.2 *Evidences of Political Role Play in Art Activism* analysed contemporary activist arts and historic

references. The analysis of political theories in relation to object theories detected the common ignorance towards the crucial concept of Jouissance as form of political awareness. By revealing evidence of the mutual attractions between technological objects and players, this chapter demonstrated how political agency, play, and pleasure are inextricably related. As an answer to the lack of understanding of Jouissance, the critical interrogation of contemporary cultural concepts of fetishism in relation to machines provided a model for new forms of agency. This form was subsumed under the chapter's theoretical coinage of *Playsure Politics*. The suggested form of agency built on practices of activist play with the contemporary objects of surveillance technologies. It revealed the issues of agency in play through the observation of the use of Ludic Interfaces as political artefacts. In contrast to the common understanding of Ludic Interfaces[90] as being produced for the art world, new perspectives on art practice as inherently political dimension were unravelled. As elaborated in this chapter, Ludics as emerging form of art agency draws on the convergence of the concept of Jouissance with activist arts. This supports an emerging understanding of Ludics in the following practice chapter.

Chapter 5.0 *Ludic Practice* explored the author's own practice in relation to play with technologies as method of arts, research and activism. Drawing from the previous chapters' conceptual interventions, play has been identified in *Ludic* art practice as main strategy of investigation and agency in technologically determined societies. The nine case studies of artworks by the author demonstrated distinct forms of perceived, conceived and lived agency in order to offer different grades of intervention to contemporary technologically enhanced society. The case studies were designed to determine the effect of the dialogue between theoretical practice and practical theory through juxtaposing text segments of reflection and the description of the arts practice. These case studies can be seen as mutually informed by theories and arts, where certain methods of intervention in theory and practice have emerged, based on politically conscious and enjoyed play. The evaluation of the case studies requires a reflection of the synthesis of the arts evidence and theories of this thesis.

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[90] The author is invited to participate as consultant and project partner at the newly accepted bid for a *Joint European Masters Programme in Ludic Interfaces*, led by Mathias Fuchs, Salford University, UK, in collaboration with Christa Sommerer, UfG Linz/Austria, Moisés Mañas Universidad Politécnica de Valencia/ Spain, and University of Potsdam/ Germany. Detailed information available

The practice chapter introduced the coinage of the term '*Ludics*', which emerged from a combination of the arts practice of the author, with the activist and political methods analysed in the previous chapters. The culmination of the thesis' general theme of agency in chapter five had exercised methods toward the development of *Ludics* as new playful arts-research method. Evidences of everyday life and arts practice were given over history throughout the complete thesis. The theories addressed social status play in arts practices, as tested in the *Ludic* art works in chapter 5.2.1 *Project 1: Ludic Society*, 2006-2008. The arts practice identified problems within activism and play in particular moments in the history of technological materiality. The evidences informed a methodology of intervention in the arts of political play, which was tested in the arts practice, in particular in 5.2.8 *Project 8: Nybble-engine-toolZ*, 2004. This and the other case studies gave evidence for the potential impact of *Ludics* as method for future applications in political and social intervention, arts-research, social design, and cultural and technological studies.

Drawing from the author's arts practice, Ludics is conceived as a method, heuristics, and epistemology rather than an outcome-driven practice, which the process oriented arts examples suggested in chapter 5.2.1 Project 1: *Ludic Society*, 2006-2008 to chapter 5.2.9 Project 9: *Sema Dress*, 2009. The research methods used in Ludics are epistemologically and heuristically grounded, as the published discussions of the artworks proved, which were listed in each subchapter of arts practice. A key theme of the Ludic kind of approach is the serious intervention into the powerful agency of playfulness in order to leave a trace in the player's consciousness, as it was tested in particular in chapter 5.2.4 Project 4: *Objects of Desire*, 2008. This arts practice opens up the methodological approach found in arts as research, to be applied as practice against certain conditions of electronic social design in everyday life.

The Ludic method, which emerges from the synthesis of the theoretical investigation and the practice in this thesis, draws on the political understanding of hybrid artefacts, as found in everyday life and in artwork. The insights on play as process of agency were gained through this convergence of the theoretical intervention and arts practice, both of which emphasise the political effects of play agency, which is applied in the

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from: http://creativegames.org.uk/LudicInterfaces/, [Accessed: March 12, 2010]

Ludics method. Such Ludic practice is intertwined with both theory and arts, and vice versa. The purposes and principles of the cultural studies of playfulness informed Ludics as emerging method.

Ludically informed creative practice overarches the intentional application of conceptual approaches and political agency. According to the public reception, Ludic art works express in a joint act of Jouissance of antagonism, as *pure joie de vivre*. The density and quality of response to Ludic interventions was demonstrated by the selected case studies in chapter 5, as well as in the published public discussions of Ludic art works, which are mentioned in each case study. The editors of the contemporary European games studies magazine Westecott and Jahn-Sudmann (2007:2) argue in this regard on the method, which emerges from a theoretically informed practice of art, Ludics:

> Ludics tantalisingly offers a new approach to understanding play through the process of play itself. Here we find play used as a conceptual catalyst for theoretical thought. In drawing on the 'Pataphysical, it presents a parody of scientific and philosophical conceptions, or a science of emerging solutions, that functions as playfulness itself.

The entanglement of rational reflection and playful incorporation of the perception reality of technologies are literally applied in current technologies. Such approaches were mainly worked out in modifications, either of game engines or of social techniques. The Ludic practice of lived intervention was established by the establishment of a Ludic research society in order to de-code dominant social and political orders of thought. In this class of works no directional difference is found between concepts, conceived professional techniques, and perceived popular technological and social reality. These categories culminate in the description of an emerging arts-research method, Ludics. A conclusion drawn from the analysis of Ludic theories and art works in order to understand an emerging methodology of arts research as outcome of this thesis, provides the largest set of significant clusters of play aspects for a contemporary politically active life.

The convergence of theory and practice as presented in this thesis has led to an emerging arts-research methodology, which understands the artwork as form of dissemination of knowledge. It supports the development of playful interventions that involve technologies. Each of the introduced categories of Ludic art works test Ludic principles of joyous intervention that allow the individual activity to be synthesised with the activities of a collective intervention. The related works demonstrate forms of arts through playfulness that exist only in a frame in which performative intervention and subverted technologies are intrinsically connected. Practices of Punk, Neoist art, radical interventions of historic and contemporary role-play supplemented with practical evidence of play activism and play politics provided the theoretical grounding of Ludics as arts informed method of intervention to technologies. Ludics facilitates this requirement as a platform for intervention through political playfulness, which is discussed in a social network, as the Ludic Society, as presented in the first case study of chapter 5.2.1 *Project 1: Ludic Society, 2006-2008.* In this way, Ludics supports arts practice as research method.

The Ludic Society association[91] as experiment and social platform to develop new methods of arts-research began to demonstrate the qualities of a socially constituted repository workshop for creative interventions to institutional arts and science conference frameworks, as listed in the 5.2.1 *Project 1 section about published discussions of this Ludic artwork.* Arts-research, games studies, cultural theory, anthropology, and art history give a broad basis for a cutting edge to the established cultural studies of play and arts in relation to an applied play politics, which this thesis suggests as strategy. Cultural history and different strands of interventions in arts and technology complete these background disciplines of the Ludics method. The author considers the critical convergences of disciplines as surplus of a practice based theoretical research of this particular kind, which implements a dimension of play and pleasure for the artist-researcher and the ludically armoured research-reader. This thesis opens the perspective towards a practical theory. Through the emergence of a methodological approach in Ludics, this thesis intends to provide a valuable

[91] The whole range of the Ludic Society as arts-research affiliation proceeds in *Ouvroirs* (French: workshops), which physically locate an emerging discipline to touch strands of 'object theory'. *Ouvrouir* as term has been used for the Ludic Society project to indicate parallel real life sites of the association and was inspired by the 'Pataphysician Alfred Jarry (1896) and his followers in the playful

contribution to the existing arts-research. In this sense, this thesis intends to open up new fields of investigation in the study of playfulness, and expresses a profound research desideratum in Ludics as a new research method. Enfin, Ludics proposes a hybrid method as potential in particular kinds of poetic writing, which integrates the arts practice as knowledge practice to use and gain insights. It contributes to the existing academic research in the humanities, arts and sciences and opens up the potential for developing further radical positions of arts-research and Playsure Politics in present Ludic Society — and future Ludic societies!

The following final section concludes the thesis by reflecting upon the emerging method of Ludics, indicating how it is affecting current work, conclusive with research principles in arts-research, and how it might best be used by others. It focuses on a series of current and near future projects through which the author is extending this research and applying this method. It draws attention to the use of play in technologies and contributes Ludics as a further potential to the different ends of the spectrum of play and political intervention in social media networks.

The methods emerging from the practice and theory include viral seeding, social media networking, identity theft, privacy invasion, publicity, mobile tagging, and curatorial practice, gaming and arts production. The Ludic method fosters a discussion on the efficacy, the "Play/sure" and dangers of electronic artefacts and social networks as reputation substitutes in arts and research. A crucial Ludic method of arts research includes live intervention in the form of Augmented Reality performance, as it is suggested as frame for intervention in the practice chapter. The Ludic method is considered as experiment, including the use of a particular AR/mobile phone applications and other mobile tagging technologies for the temporary recruitment of "Ludic Society members" in order to exemplarily construct a collective "Con-Dividuality" (Jahrmann 2000) by the means of networked social reputation. The instantaneous creation of a viral reputation network in the Ludic Society project (2006-2008) is demonstrated as practice-based research on social media networks, connected to mobile gaming as subversive "Ludic Interface". Ludics as method includes the analysis of contemporary technological frameworks for art and

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Collège du 'Pataphysic, as early artists research association, which applied principles of playfulness.

"social engineering", as found in the cross connection of social media networks. The technical exchange of user data, location-information, and user-generated content allow new methods of profiling in arts. Evidences were given in the practice chapter 5.0, for example about the Ludic Society (http://www.ludic-society.net) project as Pervasive Play and real life networking art project. As experts from arts, cultural management and arts, Ludic Society members discussed and tested fake identities and role-play, as evidences of political subversion in social media networks and arts. Artists feel the increasing necessity to critically play with the new awareness generators. Ludics suggests a critical analysis of a leading orientation of modern societies in mobile electronic interfaces, which are increasingly connected to game-like social networks. Through arts evidence and curatorial practice, Ludics questions the potential of social networks as critical "fun-ware" (Zichermann 2008) in relation to arts. It addresses electronic social platforms as a "socially-propagating story", compares practices of attention and reputation management in mobile communications and arts. Through arts practice as research it analyses the increasing dominance of technologies of mobile tagging, location based services, and time-based content. Drawing on arts practice, *Ludics* (Ludic Society) includes the theoretical model of „content-driven identities" in networked arts and real politics.

As outlook in and through *Ludics*, a suggestion would be to embrace the position of the creator, and of the recipient, in the actor network of Ludics method in arts-research. The outcome of this thesis can be applied in future practice-based research and cultural studies based contexts. Examples include the potential for Alternate Reality Games (McGonagall 2006) as an opportunity for artists and game designers to develop pervasive play models that allow the players to see how play with technological objects can affect political conditions. This perspective promises future analytical approaches to emerge from creative opportunities that include the user, consumer, and public as active participants in the shaping of new forms and strategies of arts-research by play as principle. These insights into the shift of the roles between agency, distribution and consumption pave the way for future Ludics research. In particular, for contexts of creative flow and cultural production, complemented by historic analyses of technological evidence, Ludics can carefully prepare the unravelling of a lost desire in the player, to emancipate from the demands that technocratic societies have established. The main aspects of Ludics can be

summarised by the dominant understandings of playfulness and subjecting those to a critical evaluation relative to (i) new technologies, (ii) marginalised practices of playfulness (Jahrmann 2010), and (iii) a particular attitude to political subversion in *Pervasive Prosumer Plays*[92]. As a future perspective, these considerations and experiences will culminate in a new arts-research practice, informed by Ludics as method. The values of Ludics will be elaborated in further distinct research planned by the author on political efficacies of hybrid games, urban interventions, and *Funware* in social media networks and in new hybrid exhibition formats. This research will cross the borders between cultural research, social design and arts.

[92] The topic of *prosumer* will be investigated by applying Ludics as method by the author in the research project "Pervasive Prosumer Plays (PPP)" at the University of Applied Arts Vienna, which is funded from the *HERA Humanities in the European Research Area* programme of the European Science Foundation. The project is part of the Collaborative Research Project "Technology, Exchange and Flow: Artistic Media Practices & Commercial Application", led by Prof. Dr. Michael Punt, University of Plymouth. Project partners are the Free University Amsterdam, Prof. Dr. Bert Hogenkamp; the Eye Film Institute Netherlands and the Netherlands Institute for Sound and Vision, Details available from: http://www.heranet.info/Default.aspx?ID=356, [Accessed: March 22, 2010]. The output of this research will be a Pervasive Prosumer Play, an exhibition curated by the author.

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2003 *DEAF Emerging Artists*, Mama Gallery, Rotterdam, Netherlands.

2003 *Interactive Arts Exhibition of Prix Ars Electronica*, O.K Centrum, Linz, Austria.

2004 *Software arts award transmediale*, Haus der Kulturen d. Welt, Berlin, Germany.

2005 *Postmedial Condition*, Neue Galerie Graz, Austria.

2005 *Postmedial Condition*, Neue Galerie Graz, Austria.

2005 *Processes of Inquiry*, Kultur- und Kongresszentrum Luzern, Switzerland.

2006 *transmediale*, Haus der Kulturen der Welt, Berlin, Germany.2006 *Salon transmediale*, Haus der Kulturen der Welt, Berlin, Germany.

2006 *Game Console and Nudity*, Filmfestival/ Mediaforum Moscow, Russia.

2006 *Pong Mythos*, Kornhaus Forum, Bern, Switzerland.

2006 *Device Art*, Conteiner Gallery, Zagreb, Croatia.

2006 *Perguntas sobre Arte, Consciência e Tecnologia.* SESC, São Paulo, Brazil.

2006 *Postmedial Condition*, Arco Electronico, Centro Conde Duque, Madrid, Spain.

2007 *I Love Social Hacking*, Plymouth Art Centre, Plymouth, United Kingdom.

2007 *Pong Mythos*, Games Convention, Leipzig, Germany.

2007 I Love Social Hacking, Plymouth Art Centre, Plymouth, United Kingdom.

2007 Drake Circus Shopping Mall, Plymouth, United Kingdom.

2007 *Game Worlds,* inaugural exhibition Laboral, Gijon, Spain.

2008 *Kunst und Politik der Spiele*, Kunsthalle Projectspace, Wien, Austria.

2008 Commissioned work for Homo Ludens Ludens, Laboral Centro de Arte y Creacion Industrial, Gijon, Spain.

2008 *Dada Machinima*, Planet Art, Amsterdam, Netherlands.

2009 *Enter Act*, Kunstmuseum Aros, Aarhus, Denmark.

2009 *Gogbot Festival*, Enschede, Netherlands.

2009 *5days off*, NEMK Netherlands Media Institute, Amsterdam, Netherlands.

2009 *I-machine*, Edith-Russ Haus, Oldenburg, Germany.

2009 *e-mobile arts*, State museum, Biennial Thessalonica, Greece.

2009 *5days off*, NEMK Netherlands Media Institute, Amsterdam, Netherlands.

2009 *I-machine*, Edith-Russ Haus, Oldenburg, Germany.

2009 *Enter Act*, Kunstmuseum Aros, Aarhus, Denmark.

2009 *Video Juegos*, ATA Alta Technologia Andina, Lima, Peru.

2010 *Coded Cultures*, Ovalhalle MuQua/ Museum of Modern Art, Vienna, Austria.

2010 *Fractal Midsummer night's Dream*, Opera Schloss Werdenberg, Switzerland.