# Delightful Identification & Persuasion: Toward an Analytical and Applied Rhetoric of Digital Games

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#### Introduction

Why and how do digital games make us play with them? What are their argumentative strategies of make-believe like, shaped as they are by possibilities and necessities? How do games induce constant cooperation and persuade us to play, and keep playing<sup>1</sup>? Finally, what signifies the relationship between game design(er),

gameplay, and player?

Let us sidestep typical answers to these questions and interogate the fundamental reason for playing human-computer based games. Game designers Greg Costikyan and Chris Crawford cite *learning*; Malone and Malone/Lepper mention *motivational captivation* through aspects of intrinsic motivation such as confidence, control, challenge, fantasy, or curiosity. But perhaps it would be better for us to combine our introductory queries by asking more precisely: What is the empirically approximated and social-, media-, and neuro-psychologically rooted rhetoric of digital games?

Granted: comprehensively responding to this last matter would likely take much longer than one essay. But the attempt is worth-while, and overdue to commence with: when designing digital games requires thinking about digital games, and thinking about these games requires designing—or at least prototyping—them in the first place, a rhetoric of digital games can ultimately serve the purpose of bridging the worlds of *creating games* (that is, applying such a rhetoric) and *thinking about games* (that is, analyzing games along such a rhetoric). This paper shall provide a first attempt to offer such an *anastomosis*.

General rhetoric—as the mother of all media theory—has provided specific *rhetoricae* with this same goal for other forms of symbolic action, strategic communication, and effective expression. Think of the speeches and public performances analysed and described

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by Aristotle, Cicero, or Quintilian; painting (Ueding); interior architecture and ornamental design (Frank/Hartung); design aesthetics and general aesthetics (Mühlmann); general design (Buchanan); interface design (Bonsiepe); and entertainment mass media such as radio, TV, and film, see e.g. Shrum's compendium². As a performative approach toward means such as participant entertainment and/or enjoyment, general rhetoric may best be explicated with the Greek term "psychagogy," that is, literally, guidance of the soul. Hence, in this article, I define gameplay as a rhetorical perform-

Hence, in this article, I define gameplay as a rhetorical performance between player(s) and game design, a symbolic action that takes place among agents involved in playful human-computer eigenworld cooperation on the basis of identification-making, and persuasive operations. I will use my German-English neologism eigenworld, one because it elegantly describes an autarkic, idiosyncratic, but still self-constrained social situation; and, two because there is no equivalent translation to the original term "Eigenwelt," it is best to simply accept the original German term, replete with its complexities.

Triadic relationship between game designer, game, and player

The above mentioned *rhetoricae* encompass a triadic relation between the (1) *designer and communicator* of certain content (in classical rhetoric, usually referred to as the orator); (2) the *communicans* itself including its performance; and eventually, (3) its receiving audience, which can be a group of agents, or an individual agent. The whole of the process I understand as symbolic action in the sense of rhetorician Kenneth Burke (1973).

Hence, one could define rhetoric as the science and art of persuading a receiver to couple with a message, and through the message, to couple with the communicator. Although mostly unidirectional in its original communicative process setting—a message is conveyed from the most important communicative factor, the orator, to the audience (see Cicero)—and without any agent participation of technological mass media, modern mass media force modern rhetorical theories to re-read this pristine triad which had been best expressed by Aristotle's original definition of *písteön tría eíd*ë.

### Overview

In the following, I present first steps toward a digital game rhetoric by further investigating a triadic activity relationship between game design, game, and player. I will first refer to related research; then move on to a description of general rhetoric and its core operation, persuasion; following this, I will introduce and discuss a draft model that shows how identification-making and persuasion between gameplay participants takes place through systemic, symbolic, and structural couplings. I end with future research issues and conclusions.

#### Related Research

Researcher Drew Davidson has presented his own "gameplay rhetoric." As opposed to my holistic (both analytical and praxeological) attempt here, which renders rhetoric's core feature and duty, persuasion (and identification) multi-dimensionally with regard to gameplay, Davidson adopts rhetorician Wayne Booth's idea that there is a rhetoric of fiction at work in literature, and rereads this idea concerning games, where rhetorical elements serve as "'friends of the [player]' that exist within" the gameplay of games. These mechanics have rhetorical elements that serve the purpose of conveying the game's techniques and rules enabling play" (7).

Other writings that have influenced this article include attempts to standardize, or systematically bring to terms, and/or examine scientifically (mostly digital) game design issues, for example the ontologically operating *Game Design Patterns Project* by Holopainen and Björk, Noah Falstein's "400 Project – Rules of Game Design" and his monthly column in the Game Developers Magazine; Rollings and Adams; and Crawford.

#### What signifies a general rhetoric?

In this section, I define and discuss rhetoric as a scientific discipline concerned with symbolic action, identification, persuasive operations, strategic communication, and proper (cross-medial) expression and present its technical core, persuasion, as well as the latter's relevance for digital games.

Analytical, applied, and performative psychagogy

Rhetoric is the science of strategically communicated symbolic action and choreographed expression through theory, analysis (lat. *rhetorica docens*), design/creation, and performance (lat. *rhetorica utens*), cf. Ueding and Steinbrink, and University of Tuebingen rhetoric professor Jochaim Knape.

At the heart of rhetoric: Persuasion

Aristotle writes that "The speaker's character may almost be called the most effective means of persuasion he possesses" (1: bk. I, chapter 2). I would like to reformulate this citation with "The medium's character—its gestalt, composition, in short: its design—may almost be called the most effective means of persuasion it possesses." Thus, the design of any given artifact is effective should it be able to persuade an individual, or a mass of individuals, to do what its message, such as entertainment, wants the individual to do; for example, play a game of *Tetris*. The process of persuasion influences the choice-making of others in that it, naturally, persuades them to change their status of "unplaying" to playing in the instance of playing games:

Persuasion involves influencing the audience's mental state, commonly as a precursor to action. Although a number of mental states may be the focus of a persuader's attention, social-scientific persuasion research has given pride of place to attitude, understood as the general evaluation of an object, such as a policy, proposal, product, or person. Hence, much of the relevant social-scientific work concerns attitude change, because such change represents an exemplary case of rhetorical success. (O'Keefe 580)

An attitude can be defined as a "psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken). An entity—an object of evaluation—can be concrete (for example, a "digital game"), or abstract (for example, "entertainment") circumstances. At the same time, a single entity (somebody else's newly bought, or rented digital game) or a class of entities (digital games per se) can exist as an object of evaluation. Classifiable behaviors (to play a digital game), or a class of behaviors (a sequence of interactions with(in) a game constituting gameplay) may function as an object of evaluation. A persuasive message can nevertheless lead to a change in attitude—a change from inactivity to enactment—provided only if six information processes or phases have been successfully absolved (McGuire).

Players would, accordingly, (1) need to be confronted with a presentation of a certain situation to be evaluated; (2) the player would need to spare attention to that situation given; (3) the player would then need to comprehend the situation; (4) the player would need to accept or agree with (be positive about wanting to play) the situation. In order for this act of acceptance and the change of attitude to become behaviorally manifest, the player would need to stick to this change of attitude in at least a temporarily stable fashion (Ross).

We can come to understand, then, that the change of activity from "unplay" to "play" can be interpreted as a persuasive operation where the change of attitude from favoring "play" over "unplay" becomes behaviorally manifest in the form of starting to play, and *keep playing*.

#### Toward a rhetoric of digital games: A model

On the road toward a specific rhetoric of digital games, we need to rethink general rhetoric: Thus, we now dare to find a rhetorical key to digital games themselves.

Identification as a key to a rhetoric of digital games

According to game designer and researcher Chris Crawford, one core feature of digital games is interactivity. As a social psychologist, anthropologist, and rhetorical theorist and practitioner, I am

convinced that we should, complimentarily, look at digital games from a human-computer activity perspective involving symbolic

This perspective, however, almost immediately calls for (willful, involuntary, voluntary, conscious, or unconscious) acts of cooperation between human and computer, because there would be no human-computer activity if there was no cooperation between these two agents. So we are in need of the mortar that explains why

humans cooperate with computers in the first place.

Kenneth Burke has rethought rhetoric in this context, although without thinking of, or addressing specifically computer games, or human-computer activities. The term "consubstantiality"-or, equally used by Burke, the term "identification"-signifies the textual metaphor of a social psychological mechanism that Burke understands as (1) the raison d'être of all cooperation, first, in face-toface situations, and second and macroscopically speaking, in society and other communicative settings; and (2) as cause of all social cohesion. This definition correlates with the social psychological evidence that identification serves a major role in keeping an individual's, and a group's, psychic balance, as Holocher has it. Whereas Aristotle put forward an audience-centered rhetoric where the aim of the *rhetor* is on gaining audience assent, Kenneth Burke suggests that rhetoric is identification, meaning "The generation and fulfillment of expectations through the use of symbols (forms)" (5), and that there cannot be any form of persuasion without a prior form of identification between two interacting agents.

So from here on and in accordance with Burke, I define digital game design "as a symbolic means of inducing cooperation in beings that by nature respond to symbols." To Burke, these identification symbols can consist of "speech, gesture, tonality, order, image, attitude, idea." I find it exciting to imagine and analyse digital games, and specifically their gameplay-that is experiential human-computer-cooperation-in-symbolic-action-neither as a story/narrative, nor a plaything, nor an idea, but rather as a multimedial (sic!), experiential, possibly delightful, moving, or educational operation of constant argumentation between player and game design, containing consubstantialisations and, consequentially, persuasions where the use of one agent's symbolic actions induces actions in another participating agent so that player and game design couple through gameplay-in short: in (flowing) gameplay, we are observing a rhetorical performance (loop).

This makes even more sense when we conceive that in digital games, a player enacts two roles at a time, that of a witness, and that of a player/participant. Media psychology calls this personal union an act of para-social play between player and play figure/character. As opposed to entertaining movies, where protagonists as media figures (a) trigger an affective disposition in the individual observer and (b) rest upon that individual's moral beliefs, so called socio-emotions, in the case of digital games, the witnessing player/participant addresses herself emotionally in the form of so called "ego-emotions" that have been researched by social psychologist Christoph Klimmt.

With the found key of identification joining player and game, one central question arises once we start thinking about an analytical and applied rhetoric of digital games in the following section: By the way of which dimensions does this coupling take place, and how?

We can think of three such dimensions, which will be discussed in detail in the upcoming sections:

- A *systemic coupling* takes place through gameplay, so that gameplay represents an eigenworld of reciprocal power, control, and mastery. The "player model" and the "game design model" coincide conceptually (and rhetorically) in(to) the "system image," that is, the gameplay eigenworld. This view is analogous to the Aristotelian 'orator–meaning/message–audience (gr. *písteön tría eídë*) model when we replace Aristotle's "orator" with the function of "game design," and his "audience" with "player." This view is also analogous to Human-Computer Interaction research's definition of [game] designer virtually meeting the user [i.e., player] in the [game] system image by the way of coinciding mental conceptions as described by Norman.
- A *symbolic coupling* between these two agents of human-computer activity takes place, too, as Burke discusses. In this case, gameplay itself can be described as a performance loop of symbolic game action based on the player's *identifiedness* with the game design, and her *persuadedness* with the third coupling dimension.
- A game design's motivational call character in the form of Klimmt's offers and demands *structurally couples* the player's expectations, motives, and needs through social psychologically verified "functional circles" –cf. Fritz–in the game eigenworld. These links connect player and game design (a) sensumotorically<sup>3</sup>, (b) semantically; (c) syntactically, and eventually (d) through self-appealing offers and demands such as order, closure, displacement of self, audit and probation, etc. Structural and symbolic coupling interrelate strongly, as they both are grounded in tagging, and thus persuasive and motivational processes between player and game. Figure 1 provides a visualization of aforementioned dimensions, as well as of processes detailed in the sections below.

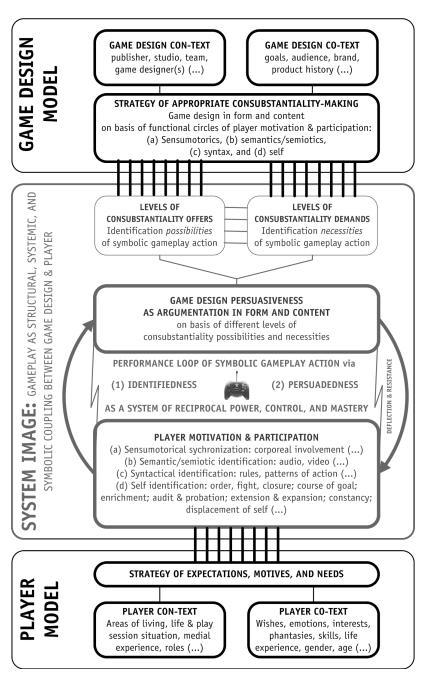


Figure 1 – Structural, symbolic, and systemic coupling have game design and player cooperate and perform through game play.

Symbolic and structural dimensions of a rhetoric of digital games

In this subsection, I outline dimensions of my model that describe gameplay as a performance loop of symbolic game action based on the player's identifiedness with what the game design's consubstantiality offers and demands, and her persuadedness with the game's argumentation surfacing in the form of functional circles, its (a) sensumotorics, (b) semantics, (c) syntax, (d) self-appealing offers and demands such as order, closure, displacement of self, audit and probation, et al., that appeal to the player's motivation and participation. Motivation and participation themselves rest upon the player's strategy of expectations, motives, and needs.

### Link joints between player and game design

In his milestone article in the edition Warum Computerspiele faszinieren?-unfortunately so far only available in German Jürgen Fritz analyses and describes these functional circles on basis of a number of empirical player and game design studies conducted at the University for Applied Sciences in Cologne.

In situations of gameplay, these link joints (as Fritz calls them) engage a social psychologically based structural coupling between player expectations, motives, and needs, and the possibilities offered of the game to motivate the player. Thus, I argue that a given game's persuasiveness comes into play argumentatively by the way rhetorical game design offers and demands to first make the player identify—"consubstantialise" à la Burke—with the game, and second, persuade her to play, and keep playing; this operation is an operation of symbolic action between a human and a computer agent, a player and a game application and its inherent design.

So in the eigenworld of gameplay between these agents, something is at stake; and wherever and whenever anything is at stake, power and control, as well as subordination and resistance-which could also be "channel deflection," à la Joachim Knape, rhetorically speaking—are being negotiated between agents involved in the game. This negotiation takes place within a given set of rules, or by breaking these rules willfully, voluntarily, or accidentally. Especially in the realm of playful human-computer symbolic action, where gameplay structurally couples the game designer and the player in the computer generated game world, we can understand this game world as a system of power, control, and mastery negotiation between player and game designer by the way of actual gameplay.

#### Empowering the player in a control environment

From here, it seems plausible to think of game design as the craft of, literally, empowering the player while at the same time, it is the trade of effectively controlling and steering the player's activities. It is here, too, that both the practice and scientific discipline of rhetoric re-appear on the scene. Psychagogy is the goal of rhetoric, whereas its means-strategic communication in the possible form of entertainment-follows the rhetorical end, persuasion. In rhetorical

situations—universally speaking, situations when something is at stake, and parties try to gain medial control while granting rational, emotive, or delightful empowerment—persuasion most likely appears in the form of argumentation. A speech can formally and content-wise argue for or against something, as can a text, a physical building, a piece of pop music, or a software application. The whole purpose of any given game design is first, to have a player identify with a game, and second, to persuade a player to play the game, and to keep playing: we can call these forms of *identifiedness* and *persuadedness* a successful structural coupling between player and game design.

#### Game design strategy and argumentation

Thus, a game design's strategy and argumentation (its motivational potential) will consist of relational structural elements—the aforementioned link joints—that, ideally, will connect with the player's personality traits and her life context (following Fritz's argumentation). This motivational potential equals the game's "offer," is opposed by the player's "expectation," and makes up a game design's fascination. I will introduce the aspect of "game demand" equal to the game offer in the subsection following this paragraph. But first let me explain the four links or "functional circles" that connect the player and the game design:

Sensumotorical synchronisation. This pragmatic function circle has a player latch (mostly) corporeally onto the events on display; the player starts to automatize body movements according to the game design's requirements until, only ideally, in perfect sync. This choreography includes mouse movements to accomplish in-game interface tasks, as well as mimetic reactions from untrained players who co-curve with their electronic cars in races, or co-jump with their locum tenens during jump and run games, for example. I would suggest that with the player, sensumotorical synchronization can cause the whole spectrum from pleasure and internal exuberance to feelings of regimentation (see Roger Caillois).

Transferral of meaning. This semantic function circle encompasses the semiotic events on display that the player construes. Usually, a player re-constructs the game in accordance to the (genre-typical) directions the game design implies through its implicit and explicit meaning structures. An egoshooter, for example, requires a player to witness herself shooting other participants, while simulating the shooting of them from a first-person point of view. Game designs can bear (not-so-) complex themes, role offers, typical patterns of action, and dramaturgies on many experiential levels.

Graphical, aural, and other sensual semantics transfer meaning to the player, Fritz states.

Rule competence. This syntactical function circle controls the player whilst the player aims at gaining power of the rules of the game design, and thus the game-in-play. The circle contains game rules, and gameplay mechanics such as the game world border, which the player learns to acknowledge, and apply. The player also realizes relationships between game objects and/or mechanics, and applies the rules (or breaks them) to approximate a personal in-game-strategy of behaviors to keep up motivation, and succeed with game events, and challenges. Combined strategies point at certain game genres, and a player's competences help her to develop cognitive skills needed to master the game, eventually. In this case, we can speak of optimal player rule competence; note that in my opinion, game pattern (as outlined by Holopainen and Björk) competencies, too, are specifically symbolic gameplay actions oriented in a way that they offer sequences of rules and mechanics.

Self reference. Fritz suggests that this dynamic function circle resembles psychodynamic and psychodramatic game arrangements with the goal to appeal to, and help express the internal player world by offering a stimulus configuration she can relate to within a world without physical sanctions. A player's wishes, interests, emotions, skills, and/or fantasies may be allured by (basic) patterns of life accomplishment re-appearing in digital games such as order; fight; closure; course of goals; enrichment; audit and probation; extension and expansion. These patterns make up for the dynamics of games. Apart from the possibility to substructure Fritz's overview, for example, "closure" into (a) predictive and (b) dramatic closure (see Holopainen and Meyers), I would complement Fritz's list with other patterns that may fulfill neuro-psychological functions, for example, displacement of self.

## Game design offers and demands

Klimmt has found that a majority of players regard computer games in general as a synthesis of medium and toy. We can describe the motivational potential / "call character" of digital games (and, implicitly, of their design) not only in terms of offers as

outlined in the preceding subsection, but also in terms of demands. So simultaneously, digital games do not only offer *symbolic identification possibilities* to the player, but also demand *symbolic identification necessities* from the player once the game is cooperative-

ly performed through gameplay.

We can deduce that thus, game design is deeply rhetorical in the sense of a *rhetorica utens*, that is: an *applied psychagogy*. Not only is the orator (the game designer) actively aiming to guide, but the audience (the player) takes over this role and becomes, temporarily, the designer of the game herself. We could say that any player playing a game designs her own game experience in the very moment the game is played; this holds true especially when we take digital games as forms of experiential human-computer activity rather than say, functional activities.

Gameplay as system of reciprocal power, control, and mastery

I think it possible to argue that in toto, the major (rhetorical) goal of any given game design is to convince people to convince themselves to build their own (eigenworld) game experience. Gameplaying a digital game can thus be defined as the reciprocal shifting of control and power by the way of Fritz's functional link joints that couple game and player, and in parallel, game design and game design "user." From a less rhetorical, and more social psychological view, games are successful when they have the power to keep a player playing, whilst to the player, a game experience is being successfully mastered when under its control.

Systemic dimension of a rhetoric of digital games

Systemically, and from a digital game design standpoint, game applications represent a form of rhetoric that is rooted in conventional interactive system design, mostly in terms of how the game has been designed conceptually to be both understandable, usable, and experiential. This way of looking at the rhetoric of digital games interrelates with the structural and symbolic couplings presented in the above. How this happens exactly will need to be shown in future research.

We can say that a given game design operates as a formal rhetorical argument along the Aristotelian triangular model of (a) orator, (b) speech, and (c) audience, but that in the case of digital game design, the orator element is represented by the (to [a]) game designer; (to [b]) the game replaces the speech element; and (to [c]) a single player substitutes a terminologically speaking, rather blurry—"audience." The structure (and not its rhetorical origin) of this threefold model is analogous to the conventional relations of user, product designer, and design product as discussed by Donald Norman.

Conceptual models in interactive system design

In order to better understand digital game design in general-and argue specifically for a rhetoric of digital games-it seems worth-

while to look at the fundamental aspects in both interactive system, product, and device design, namely, (1) conceptual models, and (2) the visibility of design structure and functionalities.

Conceptual models, cognitive scientist and human-computer

interaction design researcher Norman states:

are part of an important concept in design: *mental models* [italics orig.], the models people have of themselves, others, the environment, and the things with which they interact. People form mental models through experience, training, and instruction. The mental model of a device is formed largely by interpreting its perceived actions and its visible structure. I call the visible part of the device the system image.

The system image derives from the physical structure that has been built and makes up the visible part of a device. In that, all communication between the system designer and the system user

takes place through the system image.

Ideally, the "user's model" (the mental model developed through interaction with the system) is identical with the designer's conceptual model which Norman calls the "designer's model." In this optimal case of equivalence, "everything about the product is consistent with and exemplifies the operation of the proper conceptual model," including its physical appearance, its operation, its responses, and its accompanying manuals, documentations, and instructions. When following Norman's argument, it becomes clear that the user of conventional software products acquires all knowl-

edge about the system from its system image.

What Norman calls the mental model signifies (in the sense of 'means') the model itself, as if a model is something that is unquestionably valid to everyone when properly crafted. Often, experience and empirical research in the qualitative social sciences show that this is not the case. The problem, however, does not lie with the model itself, but with individual meaning making. People tend to take models not for what they are, but what they mean to them in certain contexts, or, what they want these models to mean to them in the very moment the models move from periphery to center of attention, or when they identify a certain model or an element of this model that suits their concurrent desire best. So the interpretation of models-in Norman's rather mechanistic, functional view: their gulfs of execution and evaluation-often does not fail due to the models' deficit of visible self-explanation, but because people have different, individualised, highly situative, con- and cotextual understandings of these models (see critical theorist Mieke Bal). This holds true specifically when analyzing and designing a playful user's experience rather than, say, a user-centered piece of software for that user.

So we as game designers have to assume that user experiences differ from subject to subject not only gradually, but substantially. It is only in real life projects that we usually cannot weave in this

understanding into our products and apparatuses. One could also say that because players want to engage in a world-in-action visually, aurally, and interactively, their compelling encounter of that world represented by a symbol processing machine should have the human-computer activity designer (in the sense of Brenda Laurel) provide (1) actions—and subsidiary to this central goal— (2) characters/thoughts, (3) language/communication, and (4) enactment within this world according to the following notion: "Think of the computer, not as a tool, but as a medium."

In comparison to game designer Chris Crawford's sequential conversationality principles of well-listening—thinking—speaking, Laurel's design and analysis principles are much more performance orientated, that is to say, Laurel applies Aristotle's qualitative elements of drama, including their causal relations as found in *De Poetica*, to the construction and debugging of human-computer (play) activities. Now, both drama based and conversationalist perspectives help us to comprehend human-computer activity from a systemic standpoint, but they do not thoroughly explain why and how people are persuaded to play, why they keep, and how they can be kept playing. Why? Naturally, neither Laurel nor Crawford, nor Rollings and Adams, think of human-computer play activities in terms of symbolic gameplay action, consubstantiality offers (coherent and proper identification possibilities), and consubstantiality demands (proper and coherent identification necessities) as outlined with the functional circles that serve as link joints between player expectations.

Conceptual models as systemic argumentation in interactive game system design

According to Swartout and van Lent game designers "try to imagine what players will experience as they work their way through the game, trying to deliver the most exciting and compelling experience possible...." They must still heed functional aspects when designing digital games that encompass user interfaces. Whereas in conventional design, user tasks play a vital role for designing these systems, the

two key aspects of the player's experience are the goals they pursue and the environment in which they pursue them. Game designers often seek to keep players engaged by creating three levels of goals: short-term (collect the magic keys), lasting, perhaps, seconds; medium-term (open the enchanted safe), lasting minutes; and finally, long-term (save the world), lasting the length of the game. (Swartout and van Lent)

The "interplay" of these levels of goals, together with the tension between storyline and freedom of interaction gives the player the perception that "they have free will, even though at any time their options are actually limited." This notion exemplifies that next to a symbolic, and a structural coupling, a systemic coupling between game design and player takes place in the form of performative gameplay indicating a rhetoric of digital games.

#### Conclusion and future research

In this essay, I have introduced a first and rough rhetorical model of how we can approach digital games symbolically, structurally, and systemically, for both their analysis, and their design. In how far this model of gameplay as cooperative-consubstantial and persuasive-symbolic eigenworld action and structural and systemic coupling between player and game design will prove usable, I will try to examine empirically in the future. Contrary to Henry Jenkins's exemplary notion that game design is about "environmental storytelling," I propose to view delightful game design as the science and art of psychagogical experience induction, and the conceptual craft of creating strategies of proper and coherent consubstantiality-making, and successful player persuasion within the game's space-time eigenworld.

Therefore, to me, game design represents the applied and practical aspects of a rhetoric of digital games. Of course this view should be tested through much game design experimentation. As part of my ongoing research, and in order to meet my postulation of a rhetoric of digital games, I am currently working on building an applicable and analysis library of rhetorical game design figures (such as a sensumotorical metaphor, or a syntactical metonymy, for example) based on social psychologically validated functional cir-

cles as described in the preceding sections.

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#### **Notes**

<sup>1</sup>Note that my discussion does not reflect how researchers use persuasive techniques to define play in the sense of Sutton-Smith [34].

<sup>2</sup>It should be mentioned that this is an exemplary media effects / marketing studies publication. Although the term "rhetoric" is mentioned therein, it is merely understood and empirically analysed as a promotional quality rather than a scientific discipline of strategic and effective expression as it is here.

<sup>3</sup>"Sensu-," or "sensomotorical" signifies not only corporeal (in/output, navigational, direct manipulative etc.) movements, but also body motion, and player perception.

# **Works Cited**

Aristoteles. *Rhetorik*. Übersetzt und herausgegeben von Gernot Krapinger. Stuttgart: Reclam, 1999.

Bal, Mieke. Kulturanalyse. Frankfurt/Main: Suhrkamp, 2002.

Bonsiepe, Gui. "Visuell-verbale Rhetorik. Über einige Techniken der persuasiven Kommunikation." Gui Bonsiepe. Interface -Design neu begreifen. Mannheim: Bollmann, '1996, 85-103. [Available Online: <a href="http://www.guibonsiepe.com/pdffiles/">http://www.guibonsiepe.com/pdffiles/</a> rhetorik.pdf>]

Buchanan, Richard. "Declaration by design: Rhetoric, argument, and demonstration in design practice." Ed. Victor Margolin, Victor. Design discourse: History, theory, criticism. Chicago: U of

Chicago P, 1989. 91-109.

Burke, Kenneth. A Rhetoric of Motives. Berkeley: The U of California P, 1969.

Burke, Kenneth. "The Rhetorical Situation." Ed. Lee Thayer. Communication: Ethical and Moral Issues. London: Gordon and Breach Science Publishers, 1973. 263-275.

Caillois, Roger. Die Spiele und die Menschen. Maske und Rausch.

Frankfurt/Main: Ullstein, 1982.

Cicero, Marcus Tullius. *Vom Redner (De oratore)*. Übersetzt, eingeleitet und erklärt von Dr. Raphael Kühner. Stuttgart: Hoffmann'sche Verlagsbuchhandlung, 1873.
Costikyan, Greg. *I Have No Words & I Must Design*. 7 Dec 2004

<a href="http://www.costik.com/nowords.html">http://www.costik.com/nowords.html</a>.

Crawford, Chris. Chris Crawford on Game Design. Indianapolis,

IN: New Riders, 2003. Davidson, Drew. "Games and Rhetoric: A Rhetorical Look at Gameplay." The IGDA Ivory Tower column, August (2003): n. pag. 7 Dec 2004 <a href="http://www.igda.org/columns/ivorytower">http://www.igda.org/columns/ivorytower</a>>.

Eagly, Alice H., and Shelly Chaiken. The Psychology of Attitudes.

Fort Worth, TX: International Thomson Publishing, 1993. Falstein, Noah. "Better by Design: Asymmetrical Distribution." Game Developer Magazine August 2002. Manhasset, NY: CMP Media.

Frank, Isabelle, and Freia Hartung, eds. Die Rhetorik des Ornaments. Munich: Wilhelm Fink, 2001.

Fritz, Jürgen. "Modelle und Hypothesen zur Faszinationskraft von Bildschirmspielsen" Jürgen Fritz, ed. Warum Computerspiele faszinieren. Empirische Annäherungen an Nutzung und Wirkung von Bildschirmspielen. Weinheim: Juventa, 1995. 11-38.

Holocher, Hermann. Anfänge der >New Rhetoric<. Tuebingen:

Niemeyer, 1996.

Holopainen, Jussi, and Stephan Meyers. Neuropsychology and Game Design. 7 Dec 2004 <a href="http://www.stephan.com/">http://www.stephan.com/</a> NeuroBio.html>.

Holopainen, Jussi, and Staffan Björk. "Game Design Patterns. Lecture Notes for GDC 2003 Lecture." Game Design Patterns Project 7 Dec 2004 <a href="http://www.gamedesignpatterns.org">http://www.gamedesignpatterns.org</a>

Jenkins, Henry. Game Design as Narrative Architecture. 7 Dec 2004 <a href="http://web.mit.edu/21fms/www/faculty/henry3/games&">http://web.mit.edu/21fms/www/faculty/henry3/games&</a>

narrative.html>.

Klimmt, Christoph. "Computer-Spiel: Interaktive Unterhal-tungsangebote als Synthese aus Medium und Spielzeug' "Computer-Spiel: Interaktive Unterhal-Zeitschrift für Medienpsychologie 1 (2001): 22-32

Knape, Joachim. Allgemeine Rhetorik. Stuttgart: Reclam, 2000.

Was ist Rhetorik? Stuttgart: Reclam, 2000.

Laurel, Brenda. Computers as Theatre. Reading, MA: Addison-Wesley, 1991.

Malone, Thomas W. "Toward a Theory of Intrinsically Motivating Instruction" Cognitive Science 4 (1981): 333-369.

Malone, Thomas. W., and M.R. Lepper "Making Learning Fun: A Taxonomy of Intrinsic Motivations for Learning." R.E. Snow, and M.J. Farr, eds. Aptitude, learning, and instruction: Cognitive and affective process analyses. Hillsdale, NJ: Lawrence Erlbaum, 1987. 255-286.

McGuire, William J. "The Nature of Attitudes and Attitude Change." Eds. Lindzey, Gardner, and Elliot Aronson. The Handbook of Social Psychology. Vol. 3. Reading, MA: Addison-Wesley, 1969.

Mühlmann, Heiner. Die Ökologie der Kulturen. 7 Dec 2004 <a href="http://www2.uniwuppertal.de/FB5/muehlmann/muehl\_oekolo-">http://www2.uniwuppertal.de/FB5/muehlmann/muehl\_oekolo-</a> gie.html>.

Norman, Donald A. The Design of Everyday Things. New York: Doubleday/Currency, 1990.

O'Keefe, D.J. "Persuasion." Encyclopedia of Rhetoric. Ed. Thomas O. Sloane. New York: Oxford UP, 2001. 575-583.

Quintilian, Marcus Fabius. Ausbildung des Redners. Lat./dt.. Hrsg. und übers. von H. Rahn. 2 Bde.. 2., durchges. Aufl. Darmstadt: Wissenschaftliche Buchgesellschaft, 1998.

Rollings, Andrew, and Ernest Adams. Andrew Rollings and Ernest Adams on Game Design. Indianapolis, IN, New Riders, 2003. Ross, Raymond. S. *Understanding Persuasion*. Englewood Cliffs, NJ: Prentice Hall, 1990.

Shrum, L.J., ed. The Psychology of Entertainment Media: Blurring the Lines Between Entertainment and Persuasion. Mahwah, NJ: Lawrence Erlbaum, 2004.

Sutton-Smith, Brian. The Ambiguity of Play. Cambridge, MA: Harvard UP, 2001.

Swartout, William and Michael van Lent. "Making a Game of System Design." Communications of the ACM. 7 (2003): 32-39.

Ueding, Gert, and Bernd Steinbrink. *Grundriß der Rhetorik: Geschichte, Technik, Methode*. Stuttgart: Metzler, 1986.

Ueding, Gert. Klassische Rhetorik. Munich: Beck, 2000.