

EXPLORING COMPUTER GAME DRAMATURGY

*An exploration into the relationship between the theory of game studies
and the practice of game design and development*

Master thesis presented to Utrecht University for the title of MA New Media
Studies and Digital Culture

Student: Javier Sancho Rodríguez (0353701)

Tutor: Mirko Tobias Schäfer

Second reader: Imar de Vries

August, 2010

“One does it and the other talks about how it’s done and the talk about how it’s done never seems to match how one does it”

(From “Zen and the Art of Motorcycle Maintenance”, Robert M. Pirsig)

FOREWORD

Throughout my years studying Media Studies (Bachelor programme: Theatre, Film, Television and New Media Studies) and my Master programme of New Media Studies and Digital Culture, I have always maintained a special interest in studying computer games from a wide range of perspectives. I have related this subject with topics such as psychology, film, documentaries, media archeology, theatre, and narratology, because I believed exchanging knowledge between disciplines can only enrich each other and lead to new perspectives.

However, there is one significant field where I did not have the chance to exchange knowledge with as much I wanted to, that is: the art of designing and developing games. The academic curriculum inclined me to analyse games as a cultural and social phenomenon, or get into issues of reception. The repertoire of the games we analysed was primarily selected for their ‘researchable’ relevance (e.g. Tomb Raider and feminism, World of Warcraft and social behaviour, the educational value of ‘serious games’ such as Food Force and Darfur is Dying), rather than their aesthetic, historic or compositional relevance.

I slightly envied my friends and fellow-students who decided to get deeper into film or theatre, because they got to explore and understand composition and the creation of ‘essential’ works in their field, while I had to think hard to find a way to justify a discussion of the composition *The Legend of Zelda* in academic research. Their broad knowledge of the composition of film and theatre allowed them give a meaningful contribution to the creative practice (even without practical know-how), while I was ‘too theoretical’ to get close to game development.

Perhaps I should have chosen to become a game designer, rather than exploring the theoretical depths of game studies, but I stuck to my believes that this knowledge, as abstract as it may be in some occasions, can somehow serve the creative minds in game development.

I tried gaining insights of how all this critical knowledge could contribute by taking place at the lower ranks of game development as a game tester for Nintendo, Sony, and other studios, but to no avail. I still haven’t given up though.

All personal frustrations and envy aside, this thesis was principally created out of the believe that there can be a valuable exchange between game studies and

game development. Many scholars and designers have gone before me and, in fact, such an interdisciplinary critical discourse already exists. It is however still limited to special occasions and places, such as congresses and research projects. I believe such an exchange should be self-evident, just like other disciplines and arts have found productive ways to exchange knowledge without prejudice of being “too abstract” or “too theoretical”, and therefore should be further explored.

Some special thanks are in place before I start exploring. First of all to my girlfriend Robin van Westen, for her care, understanding, patience, and her valuable knowledge of theatre studies and dramaturgy; Michael Ros for letting me know that I am not the only one with this crazy idea (a ‘paradigm shift’ is perhaps too exaggerated, but I believe we are on to something...); my tutor Dr. Mirko Tobias Schäfer for his patience, advice and motivation throughout the years, and reminding me to keep a critical distance of my ideas; and lastly Lies van Roessel and Jeroen van Mastrigt, both teachers at HKU Game Design and Development, for providing me insights into “the other side” of game studies.

TABLE OF CONTENT

<i>1. Introduction</i>	7
<i>1.1 Thesis and hypotheses</i>	8
<i>1.2 Method</i>	9
<i>1.3 Structure</i>	10
<i>2. Perspective on dramaturgy</i>	13
<i>2.1 A slippery term</i>	13
<i>2.2 A short history of dramaturgy</i>	14
<i>2.3 Dramaturgical analysis</i>	17
<i>2.4 Practical values of dramaturgy</i>	18
<i>2.5 Creative value of dramaturgy</i>	21
<i>2.6 Dramaturgy as a conceptual meeting point for theory and practice</i>	22
<i>3. Theory looking at practice</i>	27
<i>3.1 Salen & Zimmerman: Rules of Play</i>	28
<i>3.2 Other 'ludologies'</i>	32
<i>3.3 Järvinen's 'applied ludology'</i>	33
<i>3.4 Beyond systems</i>	35
<i>4. Enabling theory for practice</i>	39
<i>4.1 Unit Operations</i>	39
<i>4.2 Game mechanics</i>	46
<i>5. Practice looking at theory</i>	54
<i>5.1 Discussing game design at Game Developers Congress</i>	55
<i>5.2 Post-mortems: dramaturgical mode of looking in the design process</i>	59
<i>5.3 'Design research': creating a space for knowledge creation and discussion in practice</i>	63

6. *Epilogue: epistemological reflection on discourse* 68

6.1 *Hermeneutical design* 68

7. *Conclusions* 74

7.1 *Dramaturgy in game studies and design* 74

7.2 *Contrasts* 75

7.3 *A dramaturgical relationship* 76

7.4 *An unexpected parallel* 77

8. *Future research and discussion* 79

8.1 *The term 'dramaturgy'* 79

8.2 *Dramaturgy in practice* 80

8.3 *The 'dramaturg'* 80

8.4 *A team of dramaturgs* 81

8.5 *The designer as a dramaturg* 82

8.6 *Rethinking creative processes* 82

8.7 *Dramaturgy and 'meaningful' games* 83

References 84

Ludography 91

I. INTRODUCTION

At this year's Game Developers Congress (GDC) in San Francisco, the fifth edition of Game Studies Download (5.0) was held. At this annual panel, leading game studies researchers (Ian Bogost, Mia Consalvo, and Michael Mateas) present a selection ('top 10') of academic findings that give surprising and relevant insights for game designers. Each finding is broken down into three key components: 1) What question did the researchers decide to investigate? 2) What are the most important insights that the researchers uncovered? And most importantly for the designers attending the panel, 3) how can these findings be applied directly to the future design and development of innovative games?

The selection contains studies approached from various disciplines with targeted expertise (Human-Computer Interfaces, economics, computer science, anthropology, artificial intelligence, architecture and more) treating very specific topics. For example: "how does music affect player's effectiveness?" "What do player's think of voice chat and its usefulness during gameplay?" "How can we generate facial animation that combines speech and variable emotion?" In conclusion, the results of these studies presented as possible design "take-aways" for designers to pick up and implement in their designs.

The Game Studies Download panel is one of the rare occasions where studies done in academic circles get to be presented to a wide range of game designers; from major figures in the commercial games industry, to independent designers and applied games designers. It creates an interesting exchange of knowledge between theorists and creators that is worth exploring, but also raises questions of how this relationship between theory and practice takes place.

Are these studies cultivated in rigid academic circles and then presented as a buffet of ideas for designers to pick up or simply discard as irrelevant for their practice? Or does a more productive relationship between theory and practice take place? Are these theories actively involved in the creative process or do developers resist (academic) theorisation of their creative practice? Do these encounters between theory and practice have to depend on occasional moments such as a congress?

This thesis seeks out to explore how a constructive relationship between theory and practice takes place and how it can be advanced. Both fields have created a wide expanse of knowledge where it is worth exploring how an active relationship can be stimulated to become an even greater and richer field of discourse and interdisciplinary dialogue.

1.1 Thesis and hypotheses

To explore the relationship between theory and practice, I draw knowledge from the field of dramaturgy as a conceptual rendezvous between both fields.

Dramaturgy operates in various creative practices, principally theatre, between theory and practice, serving the creative process. It is a field worth exploring and understanding in the context of computer games since it may give useful insights of how the current relationship between theory and practice takes place and how it eventually may be geared towards a constructive and creative synergy.

This exploration serves to answer the following question: how can we understand the current relationship between theoretical field game studies and the practice of game design and development through a dramaturgical perspective? Which consequently leads to the question, how can this relationship be advanced through a dramaturgical perspective?

This research is not primarily intended to establish some kind of ‘computer game dramaturgy’ as a discipline of its own or function in the creative process. Instead, it serves to explore epistemological implications in the current relationship and how they can be seen through the critical qualities of dramaturgy. It primarily focusses on how game studies present their knowledge in relation to the practice of game design and how game designers theorise and conceptualise their practice. Dramaturgy does not only serve to reveal these implications, but connects them directly to specific creative aims implied by dramaturgy.

It is important to notice that this concept of dramaturgy can easily be misunderstood, especially in the context of game studies. The term ‘dramaturgy’ is easily associated with ‘drama’ which in a narrow sense can be understood as the ‘creation or adaptation of stories’. In game studies discourse, this might be understood as a way of trying to bring in narratological concepts into a field that has had heated discussions (in the so-called ‘ludology vs. narratology debate’) to

separate the understanding of games as a form of storytelling. Therefore I want to make the important disclaimer that in this thesis, I see dramaturgy essentially as a field that relates theory and practice in the creative practice of any aesthetic medium by means of analysis and practical collaboration; not as a theatrical or narratological concept. This also means that it is not my intention to implement theoretical concepts from theatre into the discourse of game design, although it might serve as a conceptual platform where these (and concepts from other arts) could serve the creation of computer games.

1.2 Method

To understand the relationship between game studies theory and the practice of game design and development, this exploration primarily draws knowledge from the field of dramaturgy. The meaning of dramaturgy and its practice, however, has throughout its existence been explained in a great variety of ways. Therefore it is not possible to construct a single satisfactory definition of what it is. It is however possible to extract some of its critical qualities. These qualities relate to ways of combining theory and practice, performing analysis, practical values, and creative aims that might overlap depending on the creative context.

The critical qualities are first contrasted with some of the practice-oriented works within game studies' discourse. This includes works, such as Katie Salen and Eric Zimmerman's work *Rules of Play* (2003), that lie between the border of game studies and game design. Works that combine academic theory and creative practice to make principles of game design explicit.

Secondly, the dramaturgical qualities are contrasted with the practice of game design. This is done by taking a sample of accounts (Game Developers Congress presentations and design postmortems) where designers explicitly reflect and theorise on their creative practice. The exploration also discusses the field of game design research, mostly performed in design schools and collaborative research projects, where there seems to be an active collaboration between theoretical and scientific research and game design.

By using dramaturgical critical qualities to reflect on both academic and practical discourse, the goal is to explore how these dramaturgical qualities are reflected in terms of creative, analytical and practical concerns and to see what

contrasts can be found in their epistemological implications. Besides reflecting on academic and practical discourse, the thesis also explores how theoretical concepts in game studies can be understood to serve the creative practice and dramaturgical goals.

I am sharply aware that this thesis is just a preliminary exploration for the concept of dramaturgy within game studies and game design discourse. It is essentially based on literary research that gives more detail to the academic discourse than the practical concerns. The academic discourse is easier to observe as a coherent whole since it is explicitly intended to create an interrelated critical discourse. Contrarily, game design practices and their critical observations are more fragmented as every creative process focusses on its own work, thus relating it to a wider discourse of creative practices is a secondary concern. The goal is not to come to a conclusive answer to how the relationship takes place or should take place, but to force revaluations of this relationship and invite correction, application and enlargement by others. Particularly by the designers whose practice is so diverse and complex that it cannot be covered by any academic research paper but also to any researcher who is reaching out towards the creative practice to enrich it with his specialised knowledge.

1.3 Structure

The first chapter is dedicated to establish the critical qualities of dramaturgy. It primarily draws from Synne K. Behrndt and Kathy Turner's extensive research (2008) into the field of dramaturgy which contains valuable observations from practicing dramaturgs about what dramaturgy is or might be from both a theoretical and pragmatic perspective. I define Dramaturgy's critical qualities in terms of an analytical process (thinking in terms of compositional elements, exploring compositional implications of creative possibilities), practical values (safeguarding creative values, acting as an active mirror between the work and the artists involved), and creative values (relate the compositional situation to the possible experience it might elicit, advocating for the experience of the audience). I also argue that to understand how these critical qualities maintain an active relationship between theory and practice, it is important to see dramaturgy as a particular point of view where concepts and theory function as a meeting ground in

the working process.

In the second chapter, I use dramaturgy's critical qualities to analyse the practice-oriented discourse within game studies. I highlight two specific academic works that explicitly reach towards the creative practice by presenting 'fundamentals' and 'tools' to be used by designers: Salen and Zimmerman's, *Rules of Play* (2003) and Aki Järvinen's, *Games without Frontiers* (2008). I argue that these works offer valuable concepts to be used by designers as they allow to explore compositional implications of creative possibilities by emphasising how specific compositional elements interact within the work. However, these works tend to present their work as instrumental universal frameworks, based on formalist approaches that rely heavily on taxonomies and emphasise conceptual and disciplinary boundaries. I also argue that although these models offer ways to understand how players make sense of gameplay experiences (through conceptual models of psychology and semiotics), they lack in giving expression of that particular experience in a wider context (aesthetic, socio-cultural, ideological, philosophical).

The third chapter explores an alternative way of relating theoretical findings to particular creative choices. Drawing from Ian Bogost's idea of 'unit operations' (2006), I explore how the concepts of 'gamemechanics' can be used as a conceptual compositional element to give expression to certain game experiences while simultaneously interrelating the compositional situation that builds this mechanics (its underlying rules, the given goals and objectives, its implementation on the controller interface, etc.). This exploration serves as a possible dramaturgical way of interrelating creative choices with theoretical concepts that serve as explicative levers for the working process.

The fourth chapter turns to the practice of game design highlighting a selection of accounts where designers explicitly reflect and theorise on their creative work, exemplifying how practice also moves towards theory but not necessarily the academic field of game studies. This selection contains presentations from this year's GDC where designers reflect on dramaturgical issues such as understanding how player's make sense of the gameplay experience and the expressive capacity of computer games. This chapter also discusses reflections on the specific creative processes through design 'postmortems' (evaluations of the

process). I discuss how these reflective accounts (the presentations and postmortems) demonstrate dramaturgical qualities but somehow overlook relevant findings from game studies that deal with similar creative concerns.

This chapter also discusses a more explicit relationship between theory and practice represented by the field of 'design research'. I argue that while these studies create valuable findings for game design and development that go far beyond dramaturgical concerns and into highly specific technical and organisational concerns, they also lack in giving expression to certain gameplay experiences. It also contrast dramaturgy in the instrumental way they present knowledge and aim to use knowledge for 'effectiveness' and optimisation of computer games and design processes that risk putting the artistic processes in conceptual straight-jackets.

The final chapter serves as an epilogue to reflect on the current relationship of practice and conceptualise how this relationship is approached by dramaturgy on an epistemological level. Here I propose to understand dramaturgy as a way of hermeneutical designing that presupposes a different relationship between theory and practice and discuss how this contrasts with the current dominant relationship.

2. PERSPECTIVE ON DRAMATURGY

2.1 A slippery term

There is no single satisfactory formal answer to what dramaturgy¹ is and what a dramaturge's activities entail. Dramaturgy is a field that is forever open to being rethought and reinvented, but by discussing some of its critical qualities we can proceed to contrast these with how current discourse in game studies and game design is actively relating to each other.

Cathy Turner and Synne K. Berhndt's extensive research into the history, practice and theory of dramaturgy from their book *Dramaturgy and Performance* (2008) plays a significant role in the following analysis as it gives a broad picture that includes a wide range of practices and articulates contemporary approaches to dramaturgy. Additionally they envision how these contemporary approaches may evolve in the future beyond theatre (including new media, interactive art, computer games).

Perhaps the best way to start understanding the value of dramaturgy would be to give the definition from the *Oxford Encyclopaedia to Theatre and Performance*:

"A dramaturg is a person with a knowledge of the history, theory and practice of theatre, who helps a director, designer, playwright, or actor realise their intentions in a production. The dramaturg –sometimes called a literary manager– is an in-house artistic consultant cognisant of an institution's mission, a playwright's passion, or a director's vision, and who helps bring them all to life in a theatrically compelling manner. This goal can be accomplished in a myriad of ways and the dramaturg's role often shifts according to context and is always fluid. As there is no one way to create theatre, there is no single model of the dramaturg" (qtd. in Luckhurst, *Dramaturgy: A Revolution in Theatre*, 2008: 8).

This definition is insufficient in understanding the synergy between game studies theory and game design as this definition tells us that dramaturgy will always vary

¹ "Though the words are linked, 'dramaturgy' can be separated from the 'dramaturg': while the term 'dramaturgy' applies to the general composition of a work, the 'dramaturg' is a specific professional role." (Turner and Behrndt, 2008)

depending on the creative process, which in theory and practice means dramaturgy becomes an altogether flexible, fluid, encompassing and expanded term.

Additionally, as Turner and Behrndt state, the term dramaturgy cannot simply be understood as the activity of the dramaturg, as the above definition does, and may be considered without reference to the dramaturg at all. It is possible to categorise different types of dramaturgy within theatre such as production, generative dramaturgy and adaptive dramaturgy (Meyrick, 2006: 270). However, we shall not go into detail of these categorisations, as it is difficult enough to make an assertion of what dramaturgy is without falling into generalisations and categories.

As I mentioned in the introduction, it is also important to understand that dramaturgy does not only apply to theatre, but can be very widely applied. In this case the focus is on extending this concept to the field of game studies and game design as a conceptual meeting point between theory and practice through considering its main critical qualities. Before I extract these qualities, I would like to highlight some of the pivotal figures in the history of dramaturgy to understand how some of critical qualities were established early on.

2.2 A short history of dramaturgy

Looking at early examples of dramaturgy and its main figures based on Turner and Behrndt's research provides us with an important foundation for understanding what might be involved in dramaturgical thinking and practice. While Aristotle's *The Poetics* must be considered perhaps as the earliest examples of dramaturgical writing, it was Gotthold Lessing who was responsible, in the mid eighteenth century, for attaching the term to a particular critical practice ('identifying a play's dramaturgy') (Turner and Behrndt, 2008: 12).

The word 'dramaturgy' is derived from the Greek *dramaturgia* which means the composition of a play. Lessing first established the modern understanding of 'dramaturgy' as a theatrical concept and practice, with the publications of his *Hamburgische Dramaturgie* (1779), written during the brief period of his appointment as the Hamburger Nationalstheater's resident playwright, critic and artistic consultant (Ibid.). This publication is essentially a collection of critical essays in which Lessing reflects not only on play composition, structure, acting and audience, but also on the state and future of German theatre and criticism (ibid: 19).

Turner and Behrndt argue that it is important to understand Lessing's project in the context of the Enlightenment (Ibid.: 19). Enlightenment thinkers, such as Lessing, are mainly characterised by the drive towards finding more objective criteria for explaining phenomena in the world that also resulted in a preoccupation with systematisation, categorisation and (inter)connectivity. With his *Hamburgische Dramaturgie*, Lessing attempts to develop a more rigorous, objective and analytical theatre discourse and practice, identifying some principles for theatrical renewal (Ibid: 20) that often reference to compositional rules and moral purpose (Ibid: 23). Lessing sought to reform theatre discourse, to revitalise both critical writing and theatre audience by initiating a debate about what 'dramaturgical models' could help shape a distinct German theatre (Ibid.: 22). Maintaining his 'serious pretensions' was accompanied with little respect for Lessing's contemporary theatre and its audience. In order to create a theatre of 'serious pretensions', he was concerned in re-educating the audience with a need for a critical discourse that goes beyond superficial convention and inherited assumptions (Ibid.: 21).

Turner and Berhndt continue on Lessing's relevance for contemporary dramaturgy by explaining his form of theatre critique. In constructing his arguments, they state that Lessing weaves in references to philosophy, literary studies, structural principles, dramatic composition and theatre history, thus he approaches the argument as a scientist who reaches his conclusions through a process of careful consideration, cross-referencing and deduction (Ibid.: 22). In this way he was much less insistent on rules than Aristotle placing himself between this kind of dogmatic rules and creating a new form of criticism that focused on the aesthetics of reader response (Ibid.: 23).

Another pivotal figure in Turner and Berhndt's history of dramaturgy is Berthold Brecht. They argue that his work has been key to the development of contemporary dramaturgy and is associated with a gradual, but decisive shift in thinking about theatre, taking place during the first half of the twentieth century. While both Brecht and Lessing combined the roles of critic and playwright, Brecht took his practical experimentation further, eventually establishing his own theatre, the Berliner Ensemble, in East Germany (the German Democratic Republic) in the 1950s (Ibid.: 38).

Brecht emphasised that the theatre is not only a place of entertainment but a moment of political action (Ibid.: 68). His dramaturgy involves a whole range of strategies that aim to make it possible to engage an audience in an energetic, playful, yet critical analysis of its world, some of which are commonplace in contemporary theatre, film and other arts². According to Turner and Berhndt (Ibid.: 41), one of the main reasons Brecht's ideas are relevant for contemporary dramaturgy are his studies, theories and plays that gave rise to a need for more active, practical, involved dramaturgs, since his theatre presumes a whole range of dramaturgical skills and activities. His principles of theatre did not only affect the play text, but also other compositional elements such as acting style, staging, music and the use of film. These principles did not form a solid framework, or 'dramaturgical model' as Lessing might suggest, instead the 'working out' of these principles was a never ending task addressed through both theoretical writing and creative practice.

In many respects, Brecht's work led to a shift in the function of the dramaturg as a researcher and towards the evolution of what is now called 'the production dramaturg' that tends to be much more involved in the practical work of the theatre. (Ibid.: 56). Lessing pioneered with his ideas of dramaturgical analysis but it was Brecht who further developed it into a form of active involvement with the creative process. From this brief historical analysis we can understand dramaturgy introduced a way of analysing a creative process from the artistic institution itself, instead of a form of analysis outside of the institution.

² Such as: 'Verfremdungseffekt' (best translated as 'non-empathic distancing' according to Turner and Berhndt), 'Fabel' and 'Epic Theatre'. For this analysis it is not primary importance to go further into these techniques or how a play should be made political, instead it is more important to understand what Brecht's dramaturgy means for expanding contemporary dramaturgy into the relationship between game studies and game design in terms of how he related dramaturgic criticism in the creative process.

When we continue to describe the critical qualities of dramaturgy, it is important to note that this is not a formal taxonomy of dramaturgy, these qualities overlap and differ depending on the creative practice. We can understand these qualities in terms of analysis, practical value and creative aims. These terms cannot be strictly separated, therefore it is important to understand dramaturgy as a way of looking at a work and its process and serving its creative goals by combining theory and practice.

2.3 Dramaturgical analysis

When discussing dramaturgy as a part of a play or performance it usually refers to its 'composition', 'structure' or 'fabric' (Turner and Behrndt, 2008: 3). While it is a term for the composition itself, it is also applied to the discussion of that composition. Lessing's critical essays included reflections on play composition, structure, acting and audience. The term dramaturgy is used in this context as shorthand for 'dramaturgical analysis' which necessitates an articulation of a work's architecture (Ibid.: 18). Indeed, dramaturgy and dramaturgical analysis entail the attempt to bridge theory and practice; to move from the theoretical idea to the practical implementation.

Turner and Behrndt argue that contemporary views of dramaturgical analysis tend to stress the consideration of the performance as a whole and emphasise that, in looking at a work's dramaturgy, we need to consider how all elements interact. Unlike forms of performance analysis that make use of a one particular theoretical framework (for example semiotics), focusing on the specific elements of the work, dramaturgical analysis regards the performance as a complex web of elements, and aims to identify the ways in which all these elements connect (or fail to connect).

Also, dramaturgy emphasises an engagement with the context of the work. Dramaturgical analysis must try to outline the different questions the play provokes on a philosophical, ideological, socio-political and aesthetic level. The ability to identify and conceptualise differences and similarities between different plays and performances, to articulate what is distinct about a particular dramaturgy, is therefore central to dramaturgical thinking (Ibid.: 29).

In this sense, a dramaturgical approach to computer games seeks to make the principles of how to design them explicit. This allows to explore compositional

implications of creative possibilities which can make it easier to consciously break some of the principles and seek new forms of expression. It also seeks to create a vocabulary that enables communicating design ideas and approach issues in the design process. These implications of dramaturgy as a form of analysis are closely related to the practical values and creative aims of dramaturgy.

2.4 Practical values of dramaturgy

In practice, the role of dramaturgy and dramaturgical analysis is frequently associated with that of an ‘active mirror’: as a safeguard of creative values (as a ‘map-maker’ or ‘compass-bearer’), as an advocate for the audience, and as a bridge-builder. As an active mirror, dramaturgy is seen as a ‘supportive, but questioning force’ (Bly, 1996: xxiv), whose work can function in a multifaceted and overlapping manner, helping director and other artists to interpret and shape compositional, sociological, textual, acting, directing and design values, as well as culturally sensitive aesthetic approaches (Ibid.). Depending on the creative process, one may question the creative influence of the dramaturg, as Flamish dramaturg Hildegard de Vuyst implies, she does not aim to give her ‘opinion’, so much as to describe what seems to be going on in the work and to relay these observations to the choreographer (Turner and Behrndt, 2008: 134). In this sense, dramaturgy gives artists a conscious layer of self-reflection. It can shape the discussion of the work during the creative process and raise awareness of the inner logic of the work.

Often closely involved in conception, processes of research, facilitation, shaping and discussion of the work, Turner and Behrndt argue that the dramaturg is aware of the inner logic of the work, and is able to take critical stock of whether the production follows its own logic. Consequently, they argue that the dramaturg’s feedback and presence might also help to establish ‘red threads’ (lines of connection) through the work safeguarding creative values of that work. This particularly may concern the way in which the detail relates to the whole, and with strengthening the conceptual framework by considering the process, material and ideas from different perspectives and angles (Ibid.: 166). It involves being able to distance oneself from the creative process which can be difficult for artist with a

certain vision in mind and involved in a complex detail of the work.

The practical value of safeguarding creative values has its clearest manifestation in the practice of 'devising' in contemporary theatre. Turner and Behrndt, describe this in the strictest sense of the word as a process where 'no script - neither written play text nor performance score - exists prior to the work's creation' (Heddon and Milling qtd. in Turner and Behrndt, 2008: 172). The performance text as the main structural element is not produced *before* but *as a consequence* of the process (Ibid.). Director of theatre production companies Primitive Science and Fake Productions, Boz Temple-Morris, argues that dramaturgical overview is needed because a director might be so preoccupied with the complex details of the work that he or she could find it difficult to see them in context and as a whole (Ibid.: 170).

As improvisations, rehearsals, and discussions, generate new ideas, directions and developments, it is also natural that others are forgotten and even the original impulse can seem remote. Turner and Behrndt argue that the dramaturg needs to be the navigator on these occasions, who differentiates between what might be an important pathway and what is probably a false lead, keeping in mind the overall journey and direction. At the same time, they add, the dramaturg must bear in mind that new ideas can develop by chance, from 'mistakes', detours and free associations which can change the direction of a work entirely.

A key tool in maintaining the dramaturgical overview mentioned by Temple-Morris is the dramaturg's extensive record of the process, often a hybrid between a rehearsal journal, research archive, documentation, dramaturgical analysis and creative reflection (Ibid.: 176) . On a more pragmatic level, it is important to retain and organise information: the dramaturg's production book can become a treasure chest of ideas and an enormous resource for the director's work (Ibid.: 177).

Although the dramaturg may act as a map-maker, it is nevertheless, like all other involved in the creative process, engaged in a journey of exploration facing the necessity of identifying the shape and direction of a work, not as something that is based on an existing source (as in Brecht's extended process of textual analysis), but as something that is emerging and in process (Ibid: 184).

The production of many art forms or design, from theatre to computer games, involves a network of people working together towards creating a work. It is a 'transdisciplinary' creative process where different disciplines are not strictly separated, but merge into a collective. It is a creative process that includes the potential player into the awareness of the involved creators (Naafs, 2009: 63). According to Turner and Behrndt, it is not unusual for the dramaturg to become the person who holds this team of people together, acting as a bridge-builder on the production itself (not necessarily in terms of production management). One will often find the dramaturg as the production's mediator or go-between, both in terms of communicating with the institution and audiences and in terms of mediating between the members of the creative team, collaborators and all other parts involved in a process (Turner and Behrndt, 2008: 161), ensuring some kind of collaborative cohesiveness on the production. As dramaturg André Lepecki comments in an interview with Berndt:

"[dramaturgy in practice includes] making sure that the sound designer understands what the lighting designer is trying to do and that they are both speaking the same language" (Ibid.: 161).

"Speaking the language" as Lepecki mentions, implies that the dramaturg knows the work intimately which commands the language to describe the process. This concerns finding ways of articulating, discussing and framing what is going on during the creative process (Ibid.: 162) which closely related to the function of dramaturgical analysis for creating a critical vocabulary.

From this description it may seem that the dramaturg is an all-encompassing figure that influences every detail of the production process. Turner en Behrndt state however that the dramaturg is a modest figure, at the service of the artist whose vision he or she helps support by giving feedback. It manifests itself in the dialogue between the directors and the artists and does not necessarily represent itself in the work. A dramaturg is a servant of the creative process. While not an artist, he or she works collaboratively with the playwright, directors, and designers as a kind of critic in residence (Abbott, 2008: n. pag.).

2.5 Creative value of dramaturgy

As an advocate for the audience, dramaturgy's object of analysis extends beyond the work itself, including the audience and the various ways in which the work is framed (Turner and Behrndt, 2008). One of the main questions from a dramaturgical perspective focussing on the experience of the audience is: how does the audience convert what it sees and hears into what it knows? In other words, how is meaning actively created by audiences? (Meyrick, 2006). Dramaturg and theatre scholar, Maaïke Bleeker (2003), sees meaning as something that "takes place" (Ibid.: 164) and results from the way the audience is moved by a performance or invited to move along with it or even led astray. She argues that questions of how meaning takes place and why it takes place the way it does, are crucial to the dramaturgical perspective on the elements that make up a performance and the process in which this performance is produced. According to Turner and Behrndt, this implies revealing the implicit ideological, compositional, philosophical and socio-political ideas that drive the work. However, they add that dramaturgical analysis does not need to 'make sense' or give a definitive interpretation but can identify open and plural readings and its effects.

Dramaturgy's advocacy for the audience in practice implies the dramaturg representing the audience within a rehearsal process who is able to identify a potential gap between what is intended and what is likely to be received and to give the artist a perspective on what they are creating.

Dramaturgy's creative value lies in comparing the artists' intentions with the possible effects of the creative choices. As performance maker and game critic, Michael Abbott states:

"a dramaturg helps an artist see the work in context with whatever the team decides matters: history, aesthetics, verisimilitude, translation. He or she functions as a conduit between the artists and the play itself, and also between the production and the audience" (2008: n. pag.)

2.6 Dramaturgy as a conceptual meeting point for theory and practice

Through an analytical approach, dramaturgy emphasises a connection between artistic practice and theoretical thinking and research, combining them as complementary references in the context of a specific composition. It is a term for the composition itself and of the discussion of that composition (Turner and Behrndt, 2008: 4). Research may include identifying points of reference relevant to the work from plays, films, texts, exhibitions, catalogues, music, images, (academic) articles, sounds, and so on. Theorising the works and creative process may however imply a tendency towards systematisation (especially keeping Lessing's initial ideas from Enlightenment) and 'management', but as Turner and Behrndt suggest, at its best it implies responsiveness, an awareness of the connections between things and is able both to facilitate and critique them. This involves a simultaneous engagement with research and finding practical ways into work; if the work of the director may be often engaged with looking at specific performance ideas, the dramaturg can help to create a practical and conceptual framework in which these ideas could be developed and understood (Ibid: 156).

Dramaturgy is strongly related with the academic study of theatre, in fact most dramaturgs have an academic background. But that does not mean dramaturgical analysis is equal to academic theorisation of theatre. Bleeker observes this relation between theorisation and art is embodied by the practice of dramaturgy and is often misunderstood as an opposition between "intellectual" versus "artistic" in which for example intellectualism is over-privileged and theatre has to become philosophy to justify itself through theoretical frameworks (2003: 131).

The central point of focus of dramaturgy and its practical, analytical and creative qualities, is the way it relates theory and practice in situ. It is important not to understand dramaturgy as a some independent aspect of a work or something applied to a work, but as an involved mode of looking. I do not intend to "apply" dramaturgy to the field of game design, instead I want to identify a specific relationship between theory and artistic practice that can be advanced through the idea of dramaturgy as a mode of looking.

Although we have used the term ‘dramaturg’ as a specific function or person, dramaturgy is not the exclusive terrain of this person. Some of the aspects of dramaturgy we have described are also embedded in other functions and persons in the creative process, such as ‘project management’, ‘designer’, or ‘artistic producer’ that occasionally exhibit a dramaturgic way of looking at the work. Bleeker proposes dramaturgy as a mode of looking as follows:

“[dramaturgy] is a practice that involves a specific relationship to the various elements that make up the work and the working process. Both the director or the choreographer and the dramaturg deal with the same material and are part of the same creative process, yet they have a different approach to it; they look at the material at hand and the process of making a performance from a different point of view.” (2003: 163)

This “different point of view” still implies an analysis of the orchestration of elements. Perhaps not as systematically as Lessing’s dramaturgy would imply. Turner and Behrndt find that many contemporary theorists tend to describe dramaturgy in rather different terms from Lessing, placing greater emphasis on non-literary elements. In practice, this leads to different metaphorical conceptualisations of the field of dramaturgy. Theatre director, Eugenio Barba, for example, articulates dramaturgy as ‘the weaving of the performance’s different elements’ (Turner and Behrndt, 2008: 12). He sees performance as a complex network of ‘actions’ and clarifies that by ‘actions’ he means all the elements of the performance that work directly on the audience’s attention, on their understanding, their emotiveness, their synaesthesia’.

These kind of metaphorical conceptualisations of dramaturgy can also be found outside the context of performance making. For example, sociologist Erving Goffman (1959) has used it to discuss social behaviours, the roles we play in communicating with others and in presenting ourselves to the ‘audience’ that surrounds us. He suggests that our encounters may be considered as ‘scripts’, including not only our words, but also our gestures and actions. Architects have related dramaturgy to the ways in which buildings suggest the possibility of a range of uses, and are completed by ‘events’ (Turner and Behrndt, 2008: 5). Architect Bernard Tschumi does not use the term ‘dramaturgy’, though he does use performance related terms, he is clearly describing architecture as a dramaturgical

practice, one in which there is a deliberate deployment of structure in order to provoke or enable live events (Ibid.)

Perhaps more important than the metaphor itself is the way the dramaturg uses it to relate to these compositional elements. Bleeker argues that in practice, doing dramaturgy turns into a quest for provisional or possible arrangements of the diverse elements used by the artist and the question of how this challenges, invites puts off, or leads astray an audience (2003: 166). Here, dramaturgy turns into a mode of looking that implies an eye for the possibilities inherent in the ideas and the material, as well as an idea for their implications, their effects. She uses a similar metaphor as Barba from aesthetic philosopher/curator/art historian, Hubert Damish, called “moves”:

“[Chess] moves that make up the performance turn time and space into a specific here and now place. These moves appear through and against complex networks of earlier moves, be it performances, other art works, philosophical ideas, practical knowledge and everyday experience, or historical events.” (Ibid.: 166)

Bleeker explains that the dramaturgical mode of looking might be the development of an awareness of, on the one hand (possible) relationships between the various ‘moves’ that make up a performance, and on the other hand, the relationship between these moves as they make up the performance. She adds that the goal of this awareness is not to follow some pre-given rules and conventions, but about becoming aware of them as they guide the creation of a work as well as experiencing the work (Ibid.).

Dramaturgy interprets the creation of a work as it happens taking the uniqueness and subtleties of the design situation into account. It may use research papers, concepts, models, and methods as springboards for interpretative strategies of creative choices, rather than acting as theoretical or methodological straightjackets. These are mainly used as an explicative lever, making use of their conceptual precision.

Dramaturgy can be somewhat of an all-encompassing term if we would take all the pragmatic and theoretical observations into account. In this chapter, however, I have tried to distinguish some of dramaturgy's critical qualities that may serve for a conceptual relationship between theory and practice in any medium.

In terms of an analytical process, dramaturgy emphasises looking at the work in terms of compositional that enable to explore the compositional implications and effect of creative possibilities. This in turn, also enables to provide practical values that focus on safeguarding the creative vision as a sort of navigator and allows to communicate, as a bridge-maker, between the various collaborators between the work. Dramaturgy also extends the analysis beyond the work itself and includes the experience of the player and provides creative value by raising awareness how the player makes sense of the experience. Dramaturgy helps to see the artist see the artwork to whatever context may be relevant to the work: aesthetic, socio-cultural, historic, ideological, philosophical, etc.

This conceptual division of dramaturgy in different terms is difficult to maintain as these qualities easily overlap in practice. Analysing in terms of composition and structure, for example, directly relates to creating a vocabulary which in turn relates to the creative value of interpreting the artists' intentions and its possible effects. Similarly, the discussion of dramaturgy as a form of analysis is inseparable from the way dramaturgy relates theory and practice as a mode of looking at the work

However, this division is useful for our analytical comparison in the following chapters. The academic discourse might relate with dramaturgy in terms of analytical values, while studying the way designers theorise their practise might show more of the creative and practical concerns. It is mainly for practical use within this analysis.

One of the central qualities of dramaturgy that overlaps counts for dramaturgy on all terms is the way dramaturgy employs theoretical (academic) knowledge within the creative process. It is not a rigid academic force that operates separately from the work and forces conceptual, theoretical or methodological frameworks to the process and the work. Instead, I argue that dramaturgy should be understood as a mode of looking. This implies that dramaturgy does not act as a purely academic force alone and tries to surpass an reductionist opposition of

'intellectualism vs. art' as an involved participant while (perhaps paradoxically) offering an outsiders view. Although dramaturgy looks at the orchestration of elements within a work, it does not try to force it into a relevant framework. It is more common to use (metaphorical) conceptualisations that are relevant to the work in process that to apply and develop a priori dramaturgical models. These conceptualisations then draw on whatever models, theories, or methods that are appropriate for the compositional situation.

In the following chapter we shall carry these qualities of dramaturgy we have developed in this chapter to reflect on current Game Studies discourse. By highlighting various academic scholars that reflect on play composition, structure, gameplay and player experience we discuss how these approaches can be contrasted with dramaturgy to develop a productive relationship between theory and practice.

3. THEORY LOOKING AT PRACTICE

By contrasting the practice-oriented discourse of game studies with the discussed qualities of dramaturgy, the aim is to analyse this discourse in terms of how they reflect these qualities, present the knowledge and relate towards the practice of game design. This explorative analysis should not be seen as an attempt to try to categorise which of the theories and concepts are useful and which are not useful. This obviously is not to be decided by a theoretical researcher like myself, instead I will analyse how the works in this discourse are framed and in continuation think of ways to how these theoretical findings can be actively involved within a creative process through a dramaturgical way of looking.

Game Studies is an emerging field that since its pinnacle ‘year one’ in 2001³ (Aarseth) has successfully strived to separate the study of computer games as an academic discipline of its own. A scope within this academic shift is characterised by reflection on play composition, structure, gameplay and player experience establishing an analytical and aesthetic discourse for computer games.

These studies can be considered as ludologist although this field does not strictly separate itself from the broader discourse of game studies. What ludological approaches have in common is that instead of expanding the concepts of narratology or other disciplines, they aim to achieve a “clean break” (Bogost, 2006) from existing theories by uncovering and studying games in their own terms. Their goal is to find and describe basic features and patterns that constitute what games are and how they work focussing on aspects such as rules, goals, player activity, the projection of the player’s action into the game world, and the way the game defines the possible actions of a player.

³ Of course there have been many studies of (computer) games before 2001 from various disciplines including mathematics, psychology, anthropology, and social sciences. However, 2001 one is regarded as a starting point of Game Studies as an independent academic discipline, usually established in the academic faculties of Humanities and Media Studies.

Within the discussion of practice-oriented⁴ discourse of game studies, two works shall be highlighted namely, Katie Salen and Eric Zimmerman's *Rules of Play: Game design fundamentals* (2003) and Aki Järvinen's *Games without Frontiers* (2008). These works are featured because of their explicit aim to merge academic knowledge from game studies and other disciplines into the practice of game design and because they provide concepts that are useful for this exploration of game dramaturgy.

3.1 Salen & Zimmerman: Rules of Play

When it comes to building bridges between the theory and practice of game design, Katie Salen and Eric Zimmerman's *Rules of Play: Game design fundamentals* (2003) is probably regarded as the most exemplary work. Although the book is clearly focussed on the practice of game design, it is considerably more academically founded than articles available on game design websites such as *Gamasutra* or the works of such authors as Richard III Rouse (2005) and Chris Crawford (1984). Then again, it associates itself more with the praxis than most practice-oriented theorists, such as Aerseth, Juul, Sicart, and Bogost.

The authors' goal is to understand games and its diverse play activities within a common framework based in game design. They study games in their own disciplinary space, occasionally borrowing from other areas of knowledge such as sociology, psychology, literary criticism, semiotics, mathematics and cultural studies⁵. The authors bridge theoretical and practical concerns by looking closely at games themselves, discovering patterns within their complexity that bring the challenges of game design into full view (Salen and Zimmerman, 2005: 78).

⁴ Many of the scholars mentioned in this chapter are game designers themselves, some more experienced than others, ranging from teachers in game design schools and founders of development studios to scholars that experiment with game design aside their academic work.

⁵ As Aki Järvinen mentions in his review of the book: "the book is a testimony to the variety of disciplines that game design and game studies can potentially draw on (2004)."

Rules of Play theorises the art of game design by developing an expansive theoretical framework based on three pillars that provide the foundation for the book: rules, play and culture. The book is organised under the heading of these three primary ‘schemas’: conceptual lenses to frame and organise knowledge on different levels. Rules accounts for “the organisation of the designed system,” play for “the human experience of that system” and culture for “the larger contexts engaged with and inhibited in that system”. These three levels of game design are all based around the central concept of the book, ‘meaningful play’ that is defined as follows⁶:

“Meaningful play in a game emerges from the relationship between player action and system outcomes; it is the process by which a player takes action within the designed system of a game and the system responds to the action. The meaning of an action in a game resides in the relationship between action and outcome.” (Salen and Zimmerman, 2005: 60-61)

The authors address different aspects of analysing and designing meaningful play on all levels. They explain that meaningful play⁷ engages games on all three fundamental levels (rules, play, culture) simultaneously giving rise to layers of meaning that accumulate and shape players experience (Ibid.: 62).

Throughout the book games are discussed as systems, and subsequently topics such as rules and how these rules create meaning tag along. According to Salen and Zimmerman, a system, defined as “a group of interacting, interrelated, or interdependent elements forming a complex whole.”, comes in many forms, from mechanical and mathematical systems to conceptual and cultural ones. Hence, they frame games on each level as a system: a formal system of rules, an experiential

⁶ Salen and Zimmerman give two definitions of meaningful play that are both separate and related at the same time. The definition used here is a ‘descriptive’ definition that refers to the way games operate. The other definition is an ‘evaluative’ definition that refers to the goal of successful game design: “Meaningful play occurs when the relationships between action and outcomes in a game are both discernible and integrated into the larger context of the game. Creating meaningful play is the goal of successful game design.” (2005: 61). I highlight the descriptive definition as it highlights meaningful play in relation to how meaning is created on an experiential and cultural level instead of focussing on a formal level in relation to the direct emotional and psychological experience.

⁷ Although the concept is elegantly defined and consistently discussed and put in perspective with a wide range of different concepts it, as Järvinen (2004) argues, becomes so pervasive it loses some of its meaning. As each concept contributes to their grand theory of meaningful play, you start to question what ‘meaningless’ play would mean. Järvinen adds that more observations about meaningless play, and the methods with which to convert the meaningless into the meaningful, would provide for a stronger concept.

system of play, and the game as a cultural system.

The authors do make a distinction between open and closed systems. Games as a formal system is a closed, self-contained system. Games as a cultural system is open, considering the way that the game intersects with other contexts such as society, language, history etc. When it comes to describe games as a experiential system, it gets tricky and the framing of games as system loses its sophistication to understand the experiential meaning a game creates and its engagement with the context of the work.

It tries to understand the experience of the player and how meaning takes place through different structural models drawing from semiotics as well as psychology that include structured models of psychological processes, 'patterns of pleasure' (2003: 341), structure for narratives, etc. They create useful models that may serve as general feedback loops of how players experience a game, through concepts such as 'cognitive frame', but lacks in trying to give expression beyond the direct (psychological) involvement of the player.

Salen and Zimmerman provide useful concepts and compact definitions of useful terms that are related to the central concept of meaningful play, but slowly turn into concepts that assimilate everything remotely related when it comes to understanding them beyond the closed system of rules. Järvinen gives a few examples of how these concepts start to merge and conflict:

"signs become "narrative tension," and representations start to tell stories by default. The discussion on "autotelism" -intrinsic motivation to play games just for the fun of it- seems to fall into oblivion, as suddenly "narrative tense" substitutes it as the motivation to destroy block in Breakout, or contexts of conflict based on competition are substituted with narrative contexts". (2004: n. pag.)

These concepts reflect dramaturgical perspective in the sense that they provide a way to look at compositional elements and the possible effects of creative decisions in games. Therefore they can be useful in answering questions of how meaning takes place and why it takes place the way it does.

Salen and Zimmerman's greatest achievement with this book is that it has opened a scope within academic game studies discourse focussed on the practice of game design. In a very specific way, it has allowed to discuss of games in a

dramaturgic way through thinking in terms of composition on various levels: the formal system, the experience and its relation to a wider culture. They also develop a more rigorous, objective and analytical discourse that identifies principles for renewal within the art of creating games. Furthermore, they show that in constructing their arguments it is useful to make references outside of game design such as philosophy, literary studies, structural principles, semiotics, and psychology. It may, intentionally, not give definitive answers to how games can create meaningful play but it spreads seeds that future game design theorists may pursue further. The framework offered in *Rules of Play* offers several areas that can be advanced and expanded on and from a dramaturgical perspective.

First, a dramaturgical perspective can focus on opening up the discussion on the offered concepts and frameworks by contrasting them with others and discussing them in relation to the creative process. Salen and Zimmerman, wholeheartedly acknowledge that their definitions, models and concepts leave some things out and work better in some circumstances than others, which does not lessen their overall utility (Salen and Zimmerman, 2003: 3). A dramaturgical perspective on these concepts tries to find the seams and cracks when competing definitions bump up against one another and tries to create new ideas that are valuable for the specific creative process. This includes putting some of the discussed topics in light of new research and methods and approaching some of the theoretical stones left unturned by the authors. For example: when discussing the player's psychological involvement with the game, Salen and Zimmerman turn to the, commonly used, concept of 'flow' from psychologist Csikszentmihalyi. This is a very useful concept that can highlight specific (experiential) game design problems, but may lack affinity compared to newer concepts such as Gordon Calleja's 'Digital Game Involvement Model' (2008). This way the creative practice not only uses *Rules of Play* as a platform of reference but as a platform for further discussion on the provided frameworks in the context of an actual design process.

Secondly, as mentioned, a dramaturgical perspective can further elaborate relations between the games as a rule-based system and its experiential and cultural dimensions. This may imply revealing implicit, ideological, compositional and even philosophical and socio-political ideas that drive the creation of the game. This type of dramaturgical analysis does not need to 'make sense' or give a definitive

interpretation but can identify open and plural readings and its experiential effects. Designing games from an experiential dimension connects all three levels (rules, play, culture) as integrated phenomena and keeps dramaturgy's advocacy for the audience in mind.

Thirdly, a dramaturgical perspective may provide a more elaborate way of framing the experience of a game and its relation to a wider culture than as an 'combination of open and closed system'. Thinking in terms of systems (borrowed from the field of Systems theory) focuses on the interrelation of between parts of a system as the primary basis for understanding that system (Bogost, 2006: 4). Since it is not sure whether the system is closed and self-contained or open, it is difficult to reveal what the parts of these supposed systems are, hence the blurriness of concepts in later stages of the book. In the further discussion of practice-oriented game studies we shall notice that many of the works rely on similar structuralist methods that include categorisations, systemisations, and taxonomies.

3.2 Other 'ludologies'

Besides Salen and Zimmerman, other researchers and practitioners have developed methods and models to design games that display a ludological attitude towards the practice of game design. Chris Crawford (1984), Costikyan (1994), Hunicke, Le Blanc and Zubek's MDA framework (2001), Church's Formal Abstract Design Tools (FADT) (1999), Falstein's 400 Project (2001), Adams and Rollings (2003), Fullerton, Swain and Hoffman (2004), Walz (2003), Björk and Holopainen's Game Design Patterns (2002): all these researchers and studies present different models, methods and frameworks that include their own categorisations of "components", "elements", "factors", "features", "tools", "parts", "strategies" and "patterns".

All these approaches drive towards game design and development with a need to understand games in general terms, trying to find practical applications both in academic studies of games and formal methods for game design. All these models also adapt psychology, architecture, game theory (mathematics), design theory, information theory, semiotics, rhetorics, etc. for the purposes of game analysis and development. This ludological attitude thus shows some similarities with the dramaturgical mode of looking as it tries to understand games in terms of composition and make these explicit, bridges academic theory and creative

practice, refers to concepts from other disciplines, aims to find common vocabularies to communicate design, and create a conscious layer of reflection on the creative process.

3.3 Järvinen's 'applied ludology'

Criticising these approaches, self-claimed ludologist Aki Järvinen, argues: "ludology largely ignores players, which makes it essentially an approach based on structuralism, i.e. theories of literature originating from the structuralist movement in the 1960s by scholars such as Roland Barthes" (2008: 24). In his doctoral dissertation, *Games without Frontiers* (2008), Järvinen proposes an alternative approach he terms as "applied ludology":

"[this approach is] based firmly on close analysis of aesthetic and social phenomena known as games, but with methods that would be easily applicable into practice by replicating the process of analysis through a systematically outlined method." (Ibid.: 24)

He argues that the above mentioned "ludologies" are presented as clear systematically documented methods, but the aim of these methods to be used in practice are not communicated through concrete enough methods (Ibid.: 25). He adds, although all these ludological writings can be presumed to be used in practical analysis, some are more explicit in their aims than others. For example, it may be difficult to adapt ludological studies which employ descriptive and conceptual methods to practical analysis or design tasks, because the methods are not detailed enough to be replicated. Järvinen's applied ludology does not see research papers with descriptive methods as sufficient end results, instead it treats research papers as springboards and sets of documentation for practical applications, such as development and analysis tools, or new games.

Järvinen's applied ludology relies on 'rapid analysis' methods that adapt theoretical models to analysis 'recipes'. The underlying principle in such method is that one does not have to know their theoretical basis in its every detail in order to be able to employ the methods for particular tasks. In this sense, Järvinen holds a dramaturgical way of looking towards the creative process, putting theoretical models in service of the practice instead of trying to intellectualise the practice for the sake of intellectualising.

His expansive work sets out to prove that all games can be analysed through a unified set of concepts, and the concepts can be harnessed into practice in the analysis methods. To prove his thesis he applies these concepts to more than 100 games in his included '100+ Game Project'. *Games without Frontiers*, thus covers a broad range of subjects while striving to construct a unifying theory which connects game studies to game design. The 20 chapters include many subjects, such as: categories of game elements, player experience, elements of play, rulesets, player contexts, key psychological concepts, emotions, schemas, goals, plans, hierarchies, categories of pleasure and moods, 'metamoods' and 'moodproposals', typologies of game mechanics, principles of game rhetoric, perspective on game genres, and much more.

Like Salen and Zimmerman he approaches games on different levels, i.e. as a formal logical system to the player experience and the context play takes place. Järvinen however, takes a more emotion-centred approach focussing on the design of the play experiences, counting on countless models of emotion categories, variables of affecting emotional intensity, models of suspense, psychology of goals, etc. He connects theory with practice in a way that from a dramaturgical perspective allows close analysis of the creative process while maintaining the function of advocacy for the player.

This work signals the beginning of work that enables communication, debate, application and production between both the theoretical field and the creative practice. The broad range of findings from game studies as well as other disciplines such as psychology and cognitive science suggest, as Järvinen argues, both a canon and a methodology of how game studies, or its application as research into game designs as objects of study can and should be pursued in multi-disciplinary context (Ibid.: 370). This work is a toolbox for applied ludology aimed to facilitate game designers and game design students.

His strive to propel game studies forward through such a broad unifying practice-oriented theoretical framework is however somewhat problematic. Järvinen's way of including, and partly excluding, so many theoretical findings from game studies gives a helpful, generative and accessible model to be used in practice. However, there is no model capable of representing every aspect of what games are and how they are experienced, as even his model is selective in choosing which

concepts to include and which ones to exclude. Järvinen is aware of this as his study does not mean to be dogmatic and tries to open up a discussion between theorists and designers, but with such a strong tendency for formalism it is hard to interpret his approach otherwise. His approach seeks to find a grand 'ultimate model' that gives us more game design frameworks and fundamentals in addition (and partly as replacement) to all the existing ones.

Järvinen's model presents a similar problem to Salen and Zimmerman's when it comes to the dramaturgical quality of understanding the expressivity of creative choices. The model selects parts of a design situation and treats them as discrete entities, clearly abstracted from each other and their context. His and other ludological models allow for interpretations of the design situation in a general way, confined by the models they propose, while dramaturgy seeks multiple interpretations and seeks whatever fits the subtleties and uniqueness of a given design situation. In other words, ludology seeks to define the design situation as concretely and universally as possible, while dramaturgy seeks to interpret it in its context.

Järvinen does admit in the opening of his dissertation that the inevitable conclusion is not to spend a lifetime in producing these individual, totalising, theses but rather, produce one where disciplines are put into dialogue with one another in creative fashion (Ibid.: 17). That is why his study has a more text-book-like character than a doctoral theses usually does. Ironically, *Games without Frontiers*, ends up being another totalising thesis, but one that pleads for a more active involvement of theory and design practice.

3.4 Beyond systems

The search within game studies for the model that explains all that is games is endless. Yet game studies keeps attempting to put every conceivable piece in its place as if it was living in the era of modernism. It seems to rely on the faith that somehow there is a model that can understand, control and change the way games work and how they are made for the better. To certain extent, these models can indeed help to pursue this goal but a model remains a model meaning some element will always be left out and a new one has to be made.

One of the reasons for the systemisation in game studies is the dominant

understanding of games as systems⁸. This implies a structural view that sees games that are made out of parts that interact. This structure is then conceptualised as a system which has led to numerous conceptualisations that both complement and contradict each other.

This dominant structuralist tendency for systemisation in game studies is also due to the fact that game studies and game design are young fields of research and artistic practice trying to establish its position in both the academic world and as a culturally legitimate form of expression. Therefore it needs to explore its own formal qualities in relation to other disciplines. In this effort, knowledge from other disciplines are used, but the main goal is to conceptually separate game design from other arts by creating conceptual boundaries. That is partly why game studies, especially ludology, took such a radical stance towards other disciplines, narratology in particular, as it did not want games to be framed by other fields that did not truly understand the nature of games (“colonising attempts” as Aerseth calls them). Therefore, game studies have taken a functionalist separatist strategy to become its own discipline, but still relies on findings from other disciplines whenever they seem useful.

What these models especially leave out are the uniqueness and subtleties of creative process: the technical limitations, time and management constraints, cultural contexts of the creative process and the audience, etc. As concrete or complex the theoretical models intend to be, these cannot be captured by a theoretical framework. Particularly not through systemic, formal approaches which only risk to become more complex, self-referential and distanced from the constantly changing reality of the creative process. I am not arguing that these highly contextual elements should be included into these universal theoretical models⁹, but they seem to lack a way of understanding how the design of a game is

⁸ A frequently used definition is Jesper Juul’s definition of games: “*A game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome and the consequences of the activity are negotiable.*” (Juul 2005: 36)

⁹ Researchers consciously do so as well by trying to limit their focus on what the essence of games should be. Salen and Zimmerman, explicitly state it in the introduction of *Rules of Play*: “This is a book about game design, not game development (2003: 2.” Implying that they do not go into practical concerns such as programming and production management.

subject to the affordances of a specific design situation; especially those given by the technical materials with which games are made. This does not require an even greater, more complex model, but an epistemological shift that enables to confront the unique complexities of design situations.

Ludological works such as Salen and Zimmerman's and Järvinen's offer a wide range of valuable concepts that reflect dramaturgical qualities. They allow to make specific compositional elements explicit which consequently enables designers to understand the possible effects of creative choices. They also create highly detailed models that allow to understand how players make sense of specific gameplay situations and how these can be adapted to create different results.

However, these models and concepts seem to lack a way of understanding how games create expression as a cultural artefact in a wider context than the direct gameplay situation. They model the experience of the player through general feedback loops that model the direct involvement of the player but lack in understanding how meaning is created in a wider aesthetic, socio-cultural, ideological or philosophical context.

These attempts to serve the game design practice paradoxically aim to create discussion and exchange between theory and practice while theorising and abstracting it into a model that is concrete and universal as possible. This paradox lies not so much in the theoretical concepts themselves, which can be very useful in specific design cases, but in the way they present the knowledge as a logically consistent and coherent set of relationships within a system.

Although these models include a wide range of knowledge from other fields and understand game on different levels of complexity, they focus on privileging or precluding some aspects (especially those that are medium-specific) rather than respecting the interdependence and interaction with unique aspects of design situations such as the material that makes the game. This requires a broad and flexible approach that allows multiple and interrelated interpretational strategies rather than an understanding through complex conceptual straight-jackets.

It would be wrong however to reject the progress game studies discourse has made throughout the years just for being structuralist, essentialist or instrumental. Instead, I want to explore conceptual ways into how these theoretical resources can be actively involved within a creative process through a dramaturgical way of

looking. Unlike previous mentioned attempts, I do not seek to provide another unifying theory or an optimal method, but a conceptual approach to create a tangible relationship between the dominantly formalist theory and the unpredictable creative practice of game development. Or as game researcher Steven E. Jones describes it:

“[...] a more productive direction, towards embracing a more pragmatic eclecticism that avoids both the dangers of sterile formalism and of facile culturalism and that takes into account contextual elements in games [...]” (Jones, 2008: 6).

In the following chapter, we remain inside game studies discourse and start exploring a path towards a dramaturgical relationship between theory and practice by discussing the concepts of ‘unit-operations’ and ‘gamemechanics’. I discuss how these models allow open interpretational strategies that enable to understand highly the effect of a specific compositional element while interconnecting it to other elements that build it.

4. ENABLING THEORY FOR PRACTICE

In this chapter, I explore an alternative way to relate theoretical findings to a specific context sensitive approach. Instead of trying to model the design process and all its issues, the proposed approach offers interpretational strategies that can serve the design process in a dramaturgical way (i.e. thinking in terms of compositional elements, understanding the effects of a compositional situation and enabling communication between the various disciplines involved in the process) respecting the subtleties and complexities of a specific design process. This conceptual alternative draws from Ian Bogost's idea of 'unit operations' (2006) and ties this broad concept to the specific compositional element of 'game mechanics' as it is defined by Miguel Sicart (2008).

4.1 Unit Operations

The previously highlighted works within ludology are just one way to address the need to explain what games are, how they work and how they should be designed. Games researcher and designer, Ian Bogost presents an alternative to the dominantly formalist studies arguing their approach to ontology, typology, and classification. In his book *Unit Operations* (2006) he lays out an approach that tries to bridge the chasm between intellectual approaches to computer games and the technological expertise in practice to serve as a model for future collaborative encounters, both analytical and practical. Like ludological approaches, his theory draws on a broad range of academic fields, including, literary theory, psychology, semiotics, film, media theory and philosophy but also technological and exact sciences such as, programming, biology, and mathematics. All these fields are weaved into a narrative that reveals how these seemingly disparate fields relate to and inform each other.

Bogost sees computer games as a type of configurative, procedural¹⁰ artefact, one built up from units of tightly encapsulated meaning (Ibid.: xii). He claims that in fact any other medium -poetic, literary, cinematic, computational- can be read as

¹⁰ "Procedurality refers to a way of creating, explaining or understanding processes." (Bogost, 2007: 2-3)

such a configurative artefact; an arrangement of discrete, interlocking units of expressive meaning (Ibid.: ix). These general units of procedural expression is what he calls 'unit operations'.

Bogost explains that games rely on unit operations which are "modes of meaning-making that privilege succinct, discrete, referential and dynamic actions" (2006: 3). He opposes this to system operations that "are characteristically protracted, dependent, sequential, and static" (Ibid.: 3). Compared to system operations, unit operations "privilege function over context, instances over longevity" (Ibid.: 4). The main difference between systems of units and systems as such, as Bogost explains further, "is that the former derive meaning from the interrelation of their components, whereas the latter regulate meaning for their constituents" (Ibid.: 4).

Yet the relationship between units and systems is not a binary opposition (Ibid.). Bogost understand that we need the integrity of systems to identify physical, conceptual, or cultural phenomena. But he sees these as new types of systems that fluctuate assemblages of unit-operational components rather than overarching regulators or totalising structures that seek to explicate games in its entirety. Unit operational systems are only systems in the sense that they describe collections of units, structured in relation to one another. Such operational structures must struggle to maintain openness, to avoid collapsing into totalising systems (2006: 7).

“a unit-operation may be observed in any artifact, or any portion of any artifact, rather arbitrarily. I insist on the broader understanding of unit operations to allow its logic to resonate across expressive forms, from literature to film, to software to videogames.”
(Ibid.: 14).

Bogost sees computer games as a part of a broad field of cultural texts¹¹ but with a less isolationist character compared to ludology. From this viewpoint he encourages the use of comparative criticism as a tool for understanding how computer games work as cultural artefacts, and how they do so with other modes of human expression. Bogost’s account however can become rather bedazzling as he compares the unit-operational logic to software, genetics, literature, film and many other fields.

Narrowing this logic to computer games we can understand them as differently layered modalities of representation, which include the formal structures such as game design (such as the ones discussed by Salen and Zimmerman), but also physical and technological structures like the hardware, programming code, the development engine, etc. Unlike ludologists, he highlights how computer games are also subject to the affordances of their raw materials (hardware, code, development tools, etc.).

Central to his approach is the idea of ‘unit analysis’ which entails the general practice of criticism through the discovery and exposition of unit operations at work (Ibid.: 15). This approach is useful and close to comparative criticism by focussing primarily on the expressive capacity of computer games while revealing and interrelating different unit operations.

Bogost for example uses the game engine as a unit operation arguing that the “discursivity of games is changed by the capabilities of game engines. The kinds of works, and the nature of these works, have material and functional limitations and capabilities the game engine exposes (Ibid.: 64).” In this case he exemplifies the

¹¹ According to game researcher, Steve Jones, understanding games as “texts” is easily misunderstood as solely focussing on the story a game produces. Although it is an approach often used in literary theory, it refers to more than the story a game produces. Understanding games as “texts” implies an approach that describes a process of signification within a ‘readable’ structure of meanings. It also implies an intertextual approach that gives attention to larger social context, where cultural and interdisciplinary approaches have much to contribute, reminding us that no game or instance of gameplay is an island but extends itself in many directions (Jones, 2006: 6).

unit-operations of the game engine as a reflexive window for the notion of the game genre ‘shooter’ and its expressive capabilities.

Games built on the same engine share the same material basis: the same core code. The low-level routines, that render objects, manage collisions, fire projectiles, and model physical interactions between characters are fundamentally, explicitly, identical (Ibid.: 62). The limitations and capabilities, provided by the game engine, influence the kind of discourse the works can create, the ways they create them, and the ways users interact with them (Ibid.: 64). The Unreal engine initially intended to power the production of games, particularly First Person Shooters (FPS), was eventually used as a way of innovating on the genre. Bogost highlights Warren Spector’s games THIEF (1998) and DEUS EX (2000) as they used the same game engine to turn the traditional discursive mode of the FPS on its head (Ibid.: 62). Instead of killing as much as possible, he included elements of stealth and alternative, nonviolent ways to solve the challenges the game provides.

This way of approaching unit analysis reveals the fungibility¹² of unit-operations. In this case, Bogost uses the game engine but other unit operations could be applicable. Further on I would like to present the notion of gamemechanics as a valuable unit-operation. But before doing so, I would like to discuss in what way Bogost’s approach expands on the ludological discourse and what this means for developing a dramaturgical approach to games.

Bogost criticises ludology for being essentialist, for trying to understand computer games as ‘systems operations’; in focussing on how games work as systems ludologists cast a blind eye to how computer games operate on and function as cultural units. He believes that the zeal with which the burgeoning field of ludology has relied on formalist approaches to its object of study has created a kind of pure ‘functionalist separatism’ that, even if it is eclectic by drawing on other disciplines, still privileges the material at the cost of the expressive (Ibid.: 53). However, this does not mean he declines ludologists’ findings when creating a productive relationship between theory and practice. The comparative approach Bogost

¹² In his online review of the book, game researcher, Zach Wahlen (2006), explains the concept of fungibility as follows: “Whether they [unit operations] are units of programming, criticism, or analysis, their meaning-making does not depend exclusively on the structure in which they are expositied but can be exchanged and manipulated within other systems to produce similar effects. By testing the fungibility of certain concepts or elements of a game, one exposes the unit operational logic obtained within that particular system.” (2006: n. pag.)

proposes does not turn its back on functionalist approaches, but recognises them as a useful lever for explication (Ibid.: 54).

These structuralist approaches answer important questions on what games are and how they function, but lack in giving expression to the gameplay experience. From a dramaturgical perspective, the focus should be on what computer games do, what happens when the player interacts with them, and how they relate to, participate in, extend, and revise the cultural expression at work in other kinds of media (Ibid.). Bogost's approach opens up for interpretative strategies that remain faithful to the configurative properties of games and focus principally on the expressive capacity of games without having to rely on essentialist, unifying models such as the one Järvinen tries to create.

Instead of using universalisation as an approach it treats universalisation as a possible outcome, as unit operations balance between staying open and discursive and collapsing into totalising systems. Instead of relying on systematic approaches that redundantly affirm the principles of that organising system, unit operations articulate connections between nodes in networks; they build relations.

Dramaturgy could be understood as a unit-operational practice since they share many qualities: it is an interdisciplinary, constant changing practice creating relationships between groups, ideas, resources, etc. instead of reliance on knowledge as static isolated departments. Like dramaturgy, the unit-operations focusses on the expressive effect of the creative choices as an advocate for the player. Dramaturgy also entails revealing the underlying unit operations during the creative process that articulate the work's architecture and stress how all compositional elements (from formal and technical to cultural, ideological, social and interpretative) interact within a work, in Bogost's words:

“Unit operations articulate connections between nodes in networks; they build relations. Rather than attempting to construct or affirm a universalizing principle, unit operations move according to a broad range of diverse logics from maximizing profit to creating new functional capacity.” (Ibid.: 8)

Both the dramaturg, the comparative approach implied by unit analysis and computer game software development entail the 'bricoleur': "the deft handyman who assembles units of preexisting meaning to form new structures of meaning

(Ibid.: 50).” Bogost’s approach suggests a more intimate interrelation of two spaces of bricolage, that of criticism and production (Ibid.); the same way dramaturgy is a form of criticism and a mode of looking towards the creative process.

Despite the abstractness of its theory, its use is understandable on a critical level, but on a practical level it does not present itself as a clear-cut method –nor should it, because by isolating and streamlining it as a method, Bogost would contradict himself by presenting a formal method towards design.

Like the field of dramaturgy, this relationship between theoretical analysis and practical development is not always clear and is not constituted by broad unifying theories and methods. It does lay bear to some mentioned critical qualities that resemble contemporary dramaturgy and it opens up for a tangible relationship that is forever open to being rethought and reinvented without the need to define this relationship as formalist methods or theories.

In spite of Bogost’s critical stance towards ludology’s structuralist tendencies, he does relate his theory to the creative practice in a similar manner, trying to offer a ‘toolbox’ to bridge theory and practice:

“we create cogs rather than machines, bricks rather than houses, tacks rather than furnitures. Works of literary criticism or technology are potential user guides, possible tools to incorporate into one’s own critical and material products”. (Ibid.: xi).

Bogost’s vision is grand but also eclectic and highly theoretical. While working through all discussions from post-structuralist philosophy to mathematics of complexity, it is not always easy to see why all this matters for the study and the development of games.

As a form of cultural, philosophical, aesthetic, and cross-medial analysis it serves as a new direction for whoever is interested in studying games. However, as a way of involving theoretical criticism in practice it is harder to define what a unit operational approach would entail¹³. Understanding it as a form of dramaturgical analysis of computer games can help us in finding a productive relationship between theory and practice that does not necessarily have to emphasise formal taxonomies

¹³ As game researcher Zach Wahlen comments in his book review of *Unit Operations*: “it is better to recognise it as a tendency within criticism in which the analyst incorporates a deeper understanding of the configurative properties of a text’s components” (2006).

and conceptual disciplinary boundaries.

Understanding computer games as configurations of expressive units is similar to how contemporary dramaturgy is understood as a form of ‘cultural assemblage’¹⁴. As we have seen in our discussion of dramaturgical aspects in the first chapter, dramaturgs often articulate the way they look at the compositional elements that make up a play through different kind of (metaphorical) conceptualisations. All suggest the interconnection of many different parts and are articulated in different ways such as: ‘mechanisms’ (Pavis 2003: 8 qtd. in. Turner and Behrndt 2008: 31), ‘architecture’, ‘network’, or ‘moves’¹⁵. This raises the question of what kind of expressive units a dramaturgical approach such focus on

So what kind of conceptualisation of ‘metaphor’ of compositional elements can we use for a dramaturgical approach to games? Following the philosophy of unit-operations, we should focus on units of expressive meaning that allow us to think about the composition of computer games in concrete yet very multidisciplinary ways, interconnecting the formal level of rules and design elements, their psychological effect, the technical engineering of the code hardware, interface and controller layout, while revealing cultural, artistic, ideological, and social interpretations of these elements. Therefore, I believe the concept of ‘game mechanics’ as defined by Miguel Sicart (2008) does this in a useful way without being too formalistic and collapsing into system-operations that present themselves as yet other self-contained arguments for advocating the purity of computer games.

¹⁴ Performance researcher and archeologist Mike Pearson and Michael Shanks propose that dramaturgy can, in fact be considered as a term for many kinds of ‘cultural assemblage’. They write: *“Dramaturgy, as cultural assemblage, works equally with settings, people, bodies, things, texts, histories, voices, architectures. In these connective networks that are the dramaturgical, it is usual to consider things and people as separate, their conjunction considered after their distinction. We propose instead the inseparability of people and things, values, etc.”* (Turner and Behrndt, 2008: 36).”

¹⁵ Recapitulation of what was mentioned in section 2.6: Eugenio Barba sees performance as a complex network of ‘actions’ that work directly on the audience’s attention, on their understanding and their emotiveness (Turner and Behrndt: 2008). Similarly, Maaïke Bleeker appeals for an awareness of ‘moves’ that appear through and against complex network of earlier moves, be it performances, other art works, philosophical ideas, practical knowledge and everyday experience, compositional principles or historical events. The goal of this awareness is not to follow some pre-give rules and conventions, but about becoming aware of them as they guide the creation of a work as well as experiencing the work (2003).

4.2 Game mechanics

In his article, *Defining Game Mechanics* (2008), Sicart defines game mechanics in relation to rules and challenges. He defines it in a broad sense as “methods, invoked by agents for interacting with the game world”. He applies this definition to a comparative analysis of several games including, *REZ* (2001) and *SHADOW OF THE COLOSSUS* (2005) to show the relevance of a formal definition of game mechanics. Although his approach to come with a clear definition of game mechanics is formalistic, it allows seeing game mechanics functioning as a sort of unit operation rather than a system operation. His way of revealing expression in these game mechanics is comparative, implicating the meaning of the game mechanic is given through its interrelation with other mechanics, elements of the game system, hardware, player experience and input procedures.

Through his effort of coming to a formal definition of game mechanics, we can see how unit operations balance between being open discrete units of meaning-making and closed formalistic, deterministic parts of a system. Although Sicart aims to be formalistic and speaks in terms of systems, his concept of game mechanics finds meaning by assembling other units of pre-existing meaning, he considers systematic, such as rules, challenges, emotions and player experience as he believes it would be impossible to come to a formal definition without acknowledging these concepts. With this approach he resembles what the mentioned bricoleur would entail: assembling units of preexisting meaning to form new structures of meaning. Sicart gives us a closer look to his definition that allows us to expose how his concept functions as a unit operation.

“Game mechanics are methods invoked by agents, designed for interaction within the game state”. (2008: n. pag.)

The part “method invoked by agents”, uses terminology taken from object oriented programming (OOP), providing a set of metaphors that describe the elements of systems and their interrelations. It is important to note that Sicart does not want to imply that the analysis of the source code of a game will reveal that all game

mechanics have been implemented as ‘methods’ or ‘classes’¹⁶ or that OOP should be considered as a default methodology and programming language paradigm for the actual production of computer games. In Sicart’s definition, the word ‘methods’ means “the mechanisms an object has for accessing data within another object, a game mechanic, then, is the action invoked by an agent to interact with the game world”.

Both Sicart and Bogost appropriate concepts from OOP to create a better understanding relation between the technological nature of the game and the human experience¹⁷. This is important for dramaturgy in the creative practice as it gives conceptual tools to communicate and discuss between different disciplines, in this case specifically programmers and designer. Also, the way OOP works is close to the way unit-operations work: they organise software around units of code, called objects, that spring to life and action when other objects call upon them instead of sequential lines of commands¹⁸. Or in terms of unit operations: units of tightly encapsulated meaning that derive meaning from the interrelation of their components.

When using terminology from OOP for understanding game mechanics (or other unit operations), the concept of ‘encapsulation’ becomes relevant to understand its relation to unit operations. Encapsulation hides the internal workings of a particular operation for the purposes of reducing complexity and present it as a compositional element or “mode of meaning making” (Bogost, 2006: 3). In this sense a game mechanic is limited (encapsulated) by the rules that apply to the gameworld. Sicart uses the example of GEAR OF WAR’s (2006) ‘cover’

¹⁶ ‘Methods’ and ‘classes’ are basic concepts within OOP, although not all OOP languages use these concepts.

¹⁷ As Bogost explains about OOP or Object-Technology (OT): “OT attempts to close the gap between human experience, its programmatic representation, and its computational execution.” (2006: 39)

¹⁸ It is not my intention to delve into the very broad and complex discourse of what OOP is as computer science and programming is not my expertise. Technology editor and journalist, Scott Rosenberg gives a quite understandable, although not definitive explanation of what OOP is: “Object-oriented techniques organize programs not around sequential lines of commands but instead around chunks of code called objects that spring to life and action when other objects call on them. Objects relate to other objects via strictly defined inputs and outputs, so that programmers writing code that must interact with them need not concern themselves with what’s happening inside them.” (2006: 75).

mechanic: the player presses 'A' and this will make the avatar seek cover from fire. But the player is limited by rules of the gameworld, in this case, the general physics simulations whose objects are suitable for providing some kind of cover¹⁹, in other cases rules that apply exclusively to that particular mechanic.

The best way of understanding game mechanics as units of expressive meaning is to formalise them as verbs (e.g. 'cover'), with other syntactical/structural elements, such as rules, having influence on how those verbs act in the game. Sicart gives an example from SHADOW OF THE COLOSSUS that also shows how game mechanics are used as aesthetic concepts on low level design (programmatic) decisions. It also exemplifies how the ontological distinction between rules and mechanics is put in practice:

"Players have a mechanic called "climb", but they are determined by a property called "stamina" which is the algorithmic translation of a rule: "players have x stamina units". The climbing mechanic states that when invoked, stamina is lost a certain ration. A property/rule states that if stamina is below a certain thresholds, climbing is not possible anymore. The game loop checks the game state; if the player invokes the climb mechanic, those functions that determine the consequence and boundaries of the players' interaction are called, and the resulting changes in the game state are evaluated against the rules of the game." (Sicart, 2008: n. pag.)

This formal description of the game mechanic "climb" only determines that games are structured as systems with mechanics, rules and challenges, understood as the essential grammar of computer game design. But there is more to the act of playing a game than just interacting with mechanics constrained by rules. Sicart distinguishes rules as normative and mechanics as performative which gets closer to the player experiences. Thus it is possible to thread connections between different

¹⁹ This type of encapsulation is very clear in similar 'context-sensitive' mechanics, made popular by the game LEGEND OF ZELDA: OCARINA OF TIME (1998) and later used in games such as SPLINTER CELL (2002), BEYOND GOOD AND EVIL (2003), and ASSASIN'S CREED (2007). Basically it means that the actions allowed by the player are determined by the position of the player, the objects surrounding him and what the player is doing. This allows game designers to map different actions to one button on the controller instead of separating each action to a specific button. For example, in THE LEGEND OF ZELDA: OCARINA OF TIME, when standing close to a box the A-button allows you to climb on the block, while walking against the box, the A-button allows you to push the block.

games and intended player experiences, giving expressive qualities to game mechanics:

“In many computer games, players are supposed to feel empowered, yet challenged by their enemies. Shadow of the Colossus is designed to present player with what appears like an insurmountable enemy and equips them with just the bare abilities to epically undergo the slaying of these creatures. By slightly modifying a well known game mechanic, it could be argued that the design of Shadow of the Colossus is intended to create an experience of powerlessness and epic achievement.” (Ibid.)

As an example, Sicart explains how the “stabbing” mechanic contributes to this experience. “Stabbing” requires the player to select specific weapon when placed in a specific weak spot of the colossus, then press once the x-button to “charge” her attack, then press once again to release and effectively stab the colossus. The player is weak in a position between inputs as he might be shaken off by the colossus during the “charge”. The mentioned “climbing” mechanic does this in a similar way: having limited climbing stamina reinforces a sense of awe and scale of the colossus because the player cannot climb the colossus in one go. Instead he has to rest on safe places where he cannot be shaken off to restore stamina and continue climbing the towering creature as if it was a mountain. Sicart ties this mechanic to an expressive goal of the game: an experience of powerlessness and epic achievement.

Game mechanics not only operate in isolation of specific games but allow to understand the compositional element of the work in a wider context of other works. It can function as a lead for comparative analysis to other games. Sicart, for example, ties the mentioned “stabbing” mechanic to the mechanic “shoot”, used in the rhythm shooter REZ. While holding the x button, players can select enemies with their crosshair, up to a limit of 8. When releasing the x button, players destroy the enemies. For each enemy destroyed, a rule states that a beat is played, hence the rhythm-based gameplay of the game. Both games have a mechanic that carry a principle of tension and release that can be interpreted as design choices that create a specific player experience. In case of REZ, players build up tension by targeting multiple enemies, then releasing and creating music beats. This communicates a

synaesthetic²⁰ experience to the player: “players experience musical tension and release structure while actually playing the game” (Ibid.).

This concept of game mechanics allows a dramaturgical approach that focusses on how the player relates to gameplay on different levels, how the gameplay is given expression during gameplay and emphasises the context of a creative element. Through game mechanics, we can ground the gameplay experience in a set of coherent and expressive, values, responses or understandings that constitute the effects of the work (Bogost, 2006). It allows to combine game rules with subjective ideas: from low level design decisions on how the player is involved to what it expresses on an aesthetic (even socio-cultural) level. It reduces the complexity of a creative decision for dramaturgical purposes (e.g. communication between disciplines or understanding the internal logic of the work) while at the same time it is flexible to open up for multiple interpretations in different contexts: in relation to rules, its mapping on the controller interface, the player experience, relation to other games, socio-cultural meaning, aesthetics, etc.

Take for example, Jonathan Blow’s critically acclaimed computer game BRAID (2008). The gameplay revolves around a time-manipulation game mechanic (‘rewind’) that offers increasingly complex tasks to solve with the use of this mechanic. Each level introduces a new twist to this mechanic which teaches the player to understand the behaviour of this mechanic. At the same time, the time-manipulation mechanic become interwoven with the plot of the game; the game mechanics give expression to our experience of time. There are many different interpretations to what the ideological meaning of the game is, but what is important to understand is that what this game does very well is interweave the narrative and a non-linear experience of time into the work’s construction, similar to films such as MEMENTO (2000) and ETERNAL SUNSHINE OF THE SPOTLESS MIND (2004). This example shows how game mechanics not only relate to the gameplay experience but also resonate their logic throughout other expressive forms such as film. That is just one example of interpreting the game mechanic as a

20 As a review of the game describes it (Craswell, 2008): “It’s the converging of the senses when one is experienced through the perception of the another. It’s a phenomenon various artists claim to have, and in some instance it involves the linking of colours to letters and words. It’s this feeling of sound, vision and touch all coming together at the same time that makes Rex so utterly brilliant.”

specific design choice.

Thinking in terms of game mechanics evokes a perspective that keeps the player experience in mind. It allows us to think about how game elements create meaningful experiences but also how they reveal cultural, artistic, social and ideological issues within the creative practice, thus expanding on the formal level of design and the semi-formal approach where player experience is framed with models from psychology and semiotics.

Game mechanics allow connecting formal analysis of gameplay experience with creative decisions in game design. It provides a conceptual tool to discover, describe and interrelate game mechanics in any given computer game. Game mechanics serve as discrete units that can be created, analysed, and put in relation with others. On a practical level, the use of game mechanics can be used as a dramaturgical tool within game design in different ways:

- **Dramaturgy and player advocacy:** game mechanics are not only formally recognisable by designers; they are also a big part of the players' repertoire. By modifying the basic interaction patterns of a mechanic, designers can arguably expect to break player expectations, consequently modifying player experience. A possible use of this definition then is as a formal tool for describing and modifying mechanics in a coherent comprehensive way, by understanding the relations between different methods, its properties, and how those are mapped onto the controller interface.
- **Dramaturgy as a map-maker:** a practical contribution to game design is related to its documentation and communication. When writing a design document, game designers often have to translate into words their ideas about player interaction with the game world, how that interaction is constrained by rules, and how those mechanics can help overcoming the challenges in interesting ways. Most of the literature on game documentation is based on tradition or set of common practices (e.g. Rouse, 2005) more than on a research-based (dramaturgical) approach to the formal elements of games and their expressive quality.
- **Dramaturgy as a bridge-builder:** the concept of game mechanics could facilitate the communication between programmers and designers with limited technical

background. By thinking about rules and mechanics as designed methods, properties and aesthetic tools, game designers could perhaps document explain their concepts with more precision.

Of course, the development of a computer game entails more than designing game mechanics, it is however central to the way players experience games. Sicart's approach maintains a formalist character and therefore falls short of trying to explain all possible player interactions. A dramaturgic perspective, however, focusses on opening and expanding formalist models, by combining it with other concepts and models from the mentioned ludological approaches (e.g. 'meaningful play', the division of 'rules', 'play', and 'culture') but also relate them to other disciplines and arts. In his discussion of the concept of game mechanics, Sicart mainly focusses on the direct player experiences but it would also be possible to connect them to broader cultural readings of the gameplay experience.

As Bogost examines in his book, *Persuasive Games: the expressive power of videogames* (2007), computer games mount arguments and influence players, through what he calls 'procedural rhetoric'. It is not my intention to go into further detail to how this meaning is created but it makes clear that through the rule-based representations, and their embodiment in mechanics that relate the rules towards the player experience, play a central role in creating this experience. Numerous examples can be named of how computer games create broader social-cultural meaning through their mechanics and many studies are devoted into revealing possible interpretations.

For example, SIM CITY has offered many insights into the process of how a game can communicate ideology. The game's biases have been discussed in theoretical and popular work since the game's release (e.g. Friedman, Starr). These works try to interpret how the game's composition (the game's rules and mechanics) represents ideological issues (e.g. "It discourages nuclear power, while rewarding investment in mass transit."). Interpretational strategies are not limited to simulation games, it is even possible to give ideological readings to abstract puzzle

games, such as TETRIS²¹, but they may be helpful for games that use specific (historical, social or aesthetic) themes²². The conceptualisation of game mechanics would enable to identify such interpretations in relation to the actual design process and specific creative choices. Dramaturgy keeps in mind that these are not definitive interpretations but aims to raise awareness and identify open and plural readings and its effects.

Through this conceptual exploration of game mechanics and the broader theory of unit operations, I have propose a way of theoretical concepts can be merged to analyse specific elements of a game's composition while connecting these elements to other elements (from formal and technical to experiential and interpretational). By looking at the openness of these concepts I intended to deploy it as analytical concept that can serve the creative process. It respects the interdependence and interaction of different elements that create the game (technical, aesthetic, formal, etc.) without trying to frame into universal models. It offers a way to interpret compositional situations during the creative process through an analytical encapsulated concept that is open for multiple and flexible interpretational strategies.

The following chapter takes a look at the other side of the coin of the game studies / game development relationship and focusses on how the practice of game development relates itself towards the practice oriented theoretical field by looking at accounts where designers theorise their practice. These shall be analysed through contrasting them with the dramaturgical qualities.

21 Janet Murray, for example, gives a specific reading to this game in her book *Hamlet on the Holodeck* (2004): “*Tetris is the perfect enactment of the overtasked lives of Americans in the 1990s -of the constant bombardment of tasks that demand our attention and that we must somehow fit into our overcrowded schedules and clear off our desks in order to make room for the next onslaught*”.

22 e.g. games where the theme is an important part of the experience RED DEAD REDEMPTION (2010), ASSASIN'S CREED (2007), or controversial moments in games such as MODERN WARFARE 2 (2009) (the player partakes on a terrorist attack in an airport) or the upcoming Medal of Honor (2010) where the player may choose to play as the Taliban fighting against US forces.

5. PRACTICE LOOKING AT THEORY

This chapter shall discuss the way the field of game design and development relates itself to the theoretical field of game studies. The goal is not so much to categorise what theories are used and which ones are not used, but what kind of creative issues are concerned when a designer resorts to theorise and conceptualise the work he is working on. Additionally it will explore how creative processes contain some of the initially established dramaturgical qualities. I should also disclaim, due to the focus on creative processes, that this chapter relies less on academic discourse and draws primarily accounts from designers in the field, in the form of presentations and ‘postmortems’ (game design process evaluations). This chapter will also focus on an important area that lies between academic research and design practice, namely the field of ‘design research’ performed in design schools, development studios and (government funded) research projects.

Of course there were forms of reflection on game design and production processes from the practical side that existed before game studies started to develop as an academic approach to games. Game developers had an interest in understanding how to design better games as the practice of game development established itself decades before the academic discipline of game studies, although strangely enough books ²³ about computer game design did not start to appear until around the turn of the millennium (Rouse, 2005: xvi).

What these works lacked however is a coherent critical discourse as Salen and Zimmerman and other researchers aim to establish. These works focus on ‘best practices’ and are usually based on personal accounts of their experiences, rather than trying to take part of a critical discourse. As veteran game designer, Warren Spector, states it: “It is absolutely vital that we start to build a vocabulary that allows us to examine, to some degree of precision, how games evoke emotional-intellectual responses in players”. The previously mentioned researchers (Salen and

²³ Compared to game studies and ludology, these works within the realm of game design and development are more case-specific covering a wide range of topics. They offer tips and tricks for making successful digital games, writing design documents and how to generate game ideas. They also deal with technological issues such as programming or choosing development tools. Furthermore they focus on external issues such as funding, marketing, and distributing games.

Zimmerman, Järvinen, Bogost, etc.) respond to this need, but so have the game developers in the games industry in their own way.

5.1 Discussing game design at Game Developers Congress

Although the game industry can be very secretive about their production processes and the issues involved, there are several places where designers and artists discuss and reflect on their approaches to game design and development. Magazines like *Game Developer* and *Edge*, and websites like *Gamasutra* provide in-depth articles on the art and business of making computer games. Perhaps where the most concentrated interaction and discussion takes place, are the *Game Developers Conferences* (GDC) held throughout the world, with the annual edition in San Francisco being the largest. To understand how game designers reflect on their creations on a more abstract level and partake in critical discourse of game design, I shall discuss some of the main topics discussed in the last GDC in San Francisco.

One of the main themes game designers talked about at last GDC was the increasingly sophisticated understanding of how players behave in order to make better games (*Edge*, 2010). To understand how players behave and create player-centred approaches, game designers increasingly rely on models and theory from psychology to understand how players behave. In his talk, *The Psychology of Game Design (Everything You Know is Wrong)* (2010), renowned game designer, Sid Meier (CIVILIZATION, RAILROAD TYCOON, PIRATES!), argues that gameplay is a psychological experience implying that a designer should take a player-centred approach.

Meier used to be opposed to this approach and instead recommended defining the the theme (building civilisations, railroad systems, being a pirate) of the game first, and then identifying applicable narratives, technology or genres (Rouse, 2005). In his newfound approach he puts the psychology of the player as the central point of creating a game using concepts such as, 'egomania', 'paranoia', 'delusion', and 'self-destructive behaviour'. He appropriates these terms as 'psychological' without going into much detail of where these concepts actually come from and what they mean within psychological discourse. Instead, he gives an

interpretation of these concepts from his own experience and makes up (“trademarks” in his words) other concepts as he goes along (e.g. ‘winner paradox’, ‘unholy alliance’). This makes it unclear whether he refers to ‘psychology’ as the academic study of human behaviour or ‘player expectations’ he terms as psychological concepts.

What is important to highlight from Meier’s observations is that he attempts to theorise an approach to make games that keeps in mind how the player creates meaning during the gameplay experience. In a sense, he is presenting a dramaturgical approach that tries to understand how players create meaning by making the components that create this experience explicit and creating a conscious layer of self-reflection.

A similar approach is presented by game designer Jeremy Griesemer. He is a game design lead at Bungie studios and worked on the HALO franchise, specifically focussing on balancing the weapons (making sure no weapon is overpowered and each weapon motivates to use different tactics) in HALO’s multiplayer. At GDC 2010, Griesemer gave a presentation about designing a very specific detail: changing the time between shots for the sniper rifle from 0.5 to 0.7 for HALO 3 (2007).

In this presentation, Griesemer uncovers what process and principles lead to that very specific change and also how it was proposed, evaluated, tested to conclusively answer what can be learned from that change to improve game designer’s ability to make changes in the future. To do so, he uses concepts from other theoretical fields, specifically the mathematical field of game theory and psychological concept of flow developed by psychologist, Mihaly Csikszentmihalyi (1975).

Without going into much detail about the concepts, what is interesting about his approach is that Griesemer shows dramaturgical sensibility by taking a very specific design choice and elaborating the decision through analytical concepts from other disciplines. He calls this type of self-reflection ‘applying conscious control’. He adds that he and his team members all majored in philosophy, implying that as a game designer you need to develop a conscious layer of self-reflection that calls for a broader perspective seeking for usable concepts and theories outside of game design. He also mentions that control over ‘flow’ (and perhaps the understanding of other usable concepts) is the essential skill of the designer and we

should not expect others to have it: “programmers are concerned with bugs, artist focus on still frames and producers worry about delays”.

One of the prominent concepts explored in the discussion of player-centred approaches is that of game mechanics. When discussing at this concept from the theoretical side of game studies, I concluded that it might be a valuable concept to bridge the fields of theory and design for various purposes. Looking at how game designer value this concept, there are similarities in the way this concept is used to develop a critical view towards the design.

Game designer and programmer, Soren Johnson, who worked on games such as CIVILIZATION III (2001), CIVILIZATION IV (2005) and SPORE (2008), used his presentation, “Theme is not Meaning” (2010), to explore the difference between a game’s mechanics and its theme. He argues that the meaning of a game is not defined by its theme but by its mechanics. Accordingly, when a game conflicts with its mechanics, it risks disappointing the player. SPORE, for example, was expected and promoted as a game about evolution, from single-celled creatures to advanced civilisations. The game’s mechanics, however were focussed on the creativity of the player by letting them design their own creatures including their behaviours. In the end it ironically turned out to be a game that is more about intelligent design than about evolution²⁴.

His conclusion was that a game’s mechanic have to deliver on the theme’s mechanic. He used this conclusion to explore the possibility of bringing realistic, or historical themes to games. Although there are game genres that successfully do this, such as sports games, management games and simulators, he believes that this becomes challenging when using complex historical or social themes such as the Holocaust.

A similar argument (also a GDC presentation) is made by his former colleague in the production of SPORE, Chris Hecker, who is now an independent game developer. He highlights the current rise of indie games that show their innovation and creativity through exploring and inventing game mechanics, rather

24 Johnson gave several other examples if differences between mechanics and theme: “Super Mario Bros. is actually a game about timing, not about plumbing. Peggle is about chaos theory, not unicorns.” Battlefield 2 and Left 4 Dead are both about teamwork, but they apply different themes to the mechanic. “Here you have two games with very different themes that are fundamentally about the same thing.

than cutting edge technology and graphics. However, he is worried about the short time these games are made and how indie developers quickly move to other experiments without really finishing their game. Therefore he recommends developers to “finish their game” by “exploring the mechanic to the depth it deserves”. Otherwise these game risk coming across as “wacky, shallow games” that although they show more creativity and innovation than an average mainstream game, will quickly be forgotten. He takes the previously mentioned BRAID as an example that explores its mechanics with great depth, not only by creating increasingly complex gameplay but also by exploring its narrative, ideological and philosophical meaning.

In these presentations and discussions at GDC 2010 we can recognise some of the main questions that are prominent in the field of dramaturgy: how do creative choices affect the player? How does meaning take place during gameplay? How can we understand the creative process and work by looking at other theoretical fields and arts? Through what concepts can we understand the way players create meaning.

Designers produce a variety of approaches that have their own underlying theories and models to answer collectively shared questions. The problem is not so much that they are not taking an academic approach that tries to understand the theoretical basis in every detail. On the contrary, the developers show a pragmatic approach to theorise their work that embraces pragmatic eclecticism that draws on whatever theoretical fields that seem useful for the sake of creating better games. What is striking however, is that different designers are trying to answer the similar questions through their ideas, theories and models, with little dialogue going on between them. Probably because the self-reflection and their personal creative process is more important than creating a discourse. This makes it difficult to establish a critical discourse within the creative community as everyone is creating self-contained theories primarily to reflect on their own cases.

Perhaps what is most striking when looking at how this selection of game designers theorise their work, is that there is hardly any mention of game studies and ludology discourse. While this field provides very usable models, concepts, and theories that concern the same issues as the designers discuss, it seems that they are still easily overlooked. Designers rather look at the same tangential fields that

academics draw from (especially psychology) and use those concepts to their liking. Some do it with detailed understanding of the concept (e.g. Griesemer), while others give their own interpretation of it or create their own concepts as if they were part of that theoretical field (e.g. Meier).

It is feasible to say then that when looking at the theory/practice relationship, from the side of the designers and the developers, that it seems to go one-way. Academics create increasingly detailed models and concepts as a 'toolbox' for designers, while designers use whatever is useful for them and leave the rest for discussion within the theoretical field.

This does however not imply that I am arguing for an academic approach to game design and that the designers themselves should also take part in the discourse. Although it would provide many useful insights for the academic field and many academics are designers themselves, it is most probably not a designer's primary interest as they are more interested in the creating games rather than discussing them in a coherent discourse.

5.2 Post-mortems: dramaturgical mode of looking in the design process

Through looking at how game development processes took place, it is possible to identify some issues that relate to dramaturgical concerns. Some of these issues become clear through so-called 'postmortems': evaluations of game development processes that reveal various "What Went Right" and "What Went Wrong" highlights throughout the creation process.

The postmortem of the game *BORDERLANDS* (2009) written by the studio's (Gearbox) product development VP Aaron Thibault, reveals some issues that comprise some of the dramaturgical critical qualities discussed in the first chapter. *BORDERLANDS* is a FPS with the characteristics of role-playing games, especially *DIABLO* (1997), since it is heavily based on looting new equipment and leveling the character.

One of the main issues of "what went wrong" was maintaining the creative vision throughout the process. The team started with very-high level goals and decided at that point that the most efficient tool for documentation and communication would be a wiki. However, the vision on the inner-logic of the work

was soon lost as “designs evolved faster than the wiki pages that described them, and discipline was inconsistent throughout the team in terms of keeping things updated.” Thibault describes it as follows:

“Down the road, this led to difficulty recalling why certain decisions had been made, and what was on the table for discussion or change versus what they didn’t want to revisit until they were implemented at a state where they could be tested and analyzed. There were times early in the development when a team member would implement things that weren’t documented at all, which led to confusion about the actual state of some features and content. The desired end state for some things was not fully articulated, and when that combined with disagreements or lack of recollection about how they attained present state, there would be meeting where many things were discussed but no decisions were made. There would also be disagreements about what the customer [the publisher, 2K Games] would think about the item at hand and what the team should do next.” (2010: n. pag.)

It is possible to identify this issue as loss of ‘dramaturgical overview’. One of the practical values of dramaturgy is trying to safeguard creative values. Somewhere during the initial state of this process, the inner logic of the work was lost as nobody was closely responsible safeguarding the creative values. This was mainly caused by poor documentation (despite that they used wiki as an approach where everybody could contribute and communicate) to record the creative process. Somehow the creative team needed a ‘navigator’ to safeguard the creative values and be aware of the inner logic of the work.

The developers solved this issue by assigning a team of testers to describe what was going on in the work and to relay these observations to the production team:

“[...] the Truth Team was born. He [the technical director] intended this group to speak for the costumer and to speak through data, not opinions or conjecture. Truth turned out to be one of our very best decisions, and we are now utilizing the strength of that team across all our projects.” (2010)

Although market oriented focussed audience tests in performance dramaturgy would perhaps be frowned upon, in game development it is regarded as an essential part of the development process. Not only to discover technical issues but also to

see if the intended design of the gameplay experienced is conveyed to the audience. It is one way of getting closer to understand how the player makes sense and meaning of the designed gameplay experience which corresponds to dramaturgy's critical quality of player advocacy.

One of the important moments in the development process was the radical change in art style, which they named 'The Change', where they changed from a realistic style to a cartoony style that used 'cel-shading' techniques to make the game look more like a comic book:

"With the new art style, everything started to fit together. We had art that matched the evolving attitude of the game. It was now fine to jump high in the air, for enemies to take varying amounts of damage based on level, for missions objectives to be zany, for psycho midgets to run at you, for brains to pop out of heads intact and fall on the ground, and for a wisecracking unicyclebot to show up in the game as your guide." (2010)

The change of art style was an important element that was essential to connect the game mechanics, the theme and the narrative of the game. It also made it possible to make the central idea of the game clearer and allowed to make connections to other forms of expression:

"[the project director] promoted the notion that our attitude should take inspiration from Paul Verhoeven, director of Starship Troopers and RoboCop-movies where over the top violence takes on its own brand of dark humor. It was okay for things in the world to be humorous, whereas with the previous realistic style, the team was shooting for designs that played as "serious business". (2010)

What we see here is that through this layer of self-reflection, that the team installed by means of a test team, they were able to identify an element (or detail) of the work that was essential to shape the direction of the work. In this case it wasn't trying to find the proper game mechanic that would convey the meaning of the game, but to find the art style that related to the rest of the work, including its mechanics. This may teach us that in a dramaturgical view of the work, it is not only important to focus on the compositional elements that constitute the medium (rules, mechanics, goals, etc.) but also the ones that shape the experience (in this case, the art style). By focussing on this compositional element, instead of the

mechanics, it allowed them to interpret and shape their work and to relate it to other works outside the world of computer games (in this case, Paul Verhoeven's films).

Sometimes these initial problems of creating a solid vision and having a conscious layer of self-reflection (whether through documentation, discussion, communication) are no problem at all for development teams. In the case of the smaller productions, *A BOY AND HIS BLOB* (2009), created by Californian studio WayForward, and *SWORDS & SOLDIERS* (2009), created by Dutch studio Ronimo Games, this initial vision was easily established.

Both studios worked with a small core team (6 to 7 people) which made communication much easier than in a big-budget process like *BORDERLANDS*. Besides the small team, what was fundamental in keeping a focussed vision was establishing the central mechanics of the game.

For the production of *A BOY AND HIS BLOB*²⁵, this was relatively easy established because they decided to remake and honour the same-titled classic on the Nintendo Entertainment System console from 1989. They decided to take the mechanics from the classic, the transforming blob, and adding their own transformation and cartoony art style inspired by Disney and Miyazaki. They knew from the start what the compositional strength of the work would be and worked from that idea.

Similarly, the developers of *SWORDS & SOLDIERS* (a 2D sidescrolling real-time strategy game), established a core vision by defining the strengths of their central mechanics. In this case they were not working on a remake but were strongly inspired by the real-time strategy game, *STARCRAFT* (1998), and especially their core mechanic of asymmetry: the game contains several factions that have their own unique style, in terms of mechanics and visual style; instead battles of two armies with the same strengths and weaknesses, it features battles that call for different strategies depending on the factions facing each other.

²⁵ *A BOY AND HIS BLOB* is a 2D puzzle platformer. The main characters progress through a variety of levels with various obstacles to get to the end of the level and move on to the next. The protagonist feeds the blob jelly beans in order to transform it into one of fifteen different objects that can be used to solve puzzles and defeat enemies.

Like we have seen in GDC presentations where designers reflect on their creations and production processes, the postmortems show that during the process designers also take a reflective critical stance towards their work that can be interpreted as dramaturgic. These reflections express some dramaturgic sensibilities. During the production process, designers show a self-reflexive attitude that focusses on conceptualising core compositional (expressive) elements.

Especially the concept of gamemechanics is used effectively to establish a core vision of the creative process and as a central element to understand how their decisions affect the player. The use of these compositional concepts also allows wider comparative approaches that inspire the creative process (e.g. film and animation). A gameplay experience ‘makes sense’ when its mechanics deliver on the theme and all other elements. In some productions this inner logic is established and maintained easily, but, as in the case of *BORDERLANDS*, it can easily be lost as well. In this case they implemented an ‘active mirror’ in the form of a test group (“Truth Team”) to keep dramaturgical overview of the work.

5.3 ‘Design research’: creating a space for knowledge creation and discussion in practice

Besides the academics and the developers, a crucial contributing factor in creating a space for knowledge creation and discussion about game design and developments are game design schools and research projects. This area should be highlighted and contrasted to dramaturgy as it promotes combining theory and practice through research as one of the explicit central goals. The Utrecht-based HKU school of the arts, has a research and development program, ‘Art & Technology’, that shows a good example of how practice and theory can be combined.

This research program is focussed on disciplines that intersect between art and technology, such as: interaction design, information design and especially, game design. This research group also contributes to a larger, government funded, program, GATE²⁶ (Game Research for Training and Entertainment), which aims to advance the state-of-the art in game design and game technology by building a strong knowledge base. This advance entails “creating highly effective entertainment products and experience learning systems” (GATE website, 2010).

²⁶ <http://gate.gameresearch.nl>

Both GATE and 'Art & Technology' research groups, but also commercial research initiatives such as the one in Swedish design studio DICE²⁷, can be contextualised into the field of 'design research'. This framework is primarily based on Sir Christopher Frayling's (1996) description of the field which identifies three modes of design research: research into design, research through design, and research for design. These areas can be described as follows:

"Research into design includes the traditional historical and aesthetic studies of art and design. Research through design is project-based, and includes materials research and development. And finally, research for design is the hardest to characterize, as its purpose is to create objects and systems that display the results of the research and prove its worth." (Lunefeld, 2003: 11)

When designing games, 'research for design', may involve ethnographic research into the target audience or research into the theme of the game (important when designing an applied or 'serious' game for a client or when using a historical theme). From an academic perspective this mode of research classifies the scope of game studies discourse we have discussed in chapter 2: analysing games to create methods and concepts as tools for possible use in design. 'Research through design' is hardly seen on the academic side of game studies²⁸ but is commonly seen in the practical field of game design and development. This accounts for research where art or design is the vehicle of the research, and a means of communicating the results.

The GATE project and the publications of DICE's research department offers a clear view of how design research takes place and we can see it creates a different kind of synergy between theory and practice than the proposed dramaturgical approach. Most of the research focusses on highly technological issues such as AI, game engines, programming techniques, animation techniques, creating virtual worlds, in-game physics, telemetrics (measuring and applying, player behaviour), graphics, rendering and hardware interfaces. Besides technical issues, design research in computer games also covers productional issues that mostly covers management theories and methods that seek to create efficient strategies to optimise game production. These approaches have a high degree of (technological)

²⁷ Known for the Battlefield series: <http://publications.dice.se>

²⁸ Aki Järvinen's idea of 'applied research' is closely related to the idea of design research and does include 'research through design' as he transforms the key concepts of his thesis into a card game.

determinism as it is driven by the assumption that improved graphics, physics, visual realism, behavioural realism and new interfaces will lead to “highly effective entertainment products” (GATE website, 2010). They are also driven by a high degree of empiricism; it tries to measure compositional elements of games in terms of ‘effectiveness’ and validates findings through methods such as benchmark tests, user tests and questionnaires.

Design researcher, Darren Newbury (1996), argues against Frayling’s framework of design research as it ironically has provided and reinforced a conceptual division of research and practice. It reinforces the division, known as ‘the dual knowledge thesis’: “The argument that there are two ways of thinking - logical, analytical and rational on the one hand, and subjective, idiosyncratic and irrational on the other” (1996: n. pag.). This systematic and rigorous approach to understand and improve one’s own artistic process creates a one-way relationship where the application of knowledge is more important than the artistic work (Ibid.).

In the examples from GDC and postmortems, there is a strong tendency towards self-reflexivity that blurs the boundaries between the theorist and producer, the researchers and the designer, which, according to Newbury, provide unique opportunities for developing a culture of research in design, and a genuinely critical and reflexive practice. Therefore, he suggests a ‘hermeneutical’ (as opposed to empirical) understanding of design where “the process of design involves an interactive dialogue with the design situation” (1996: 19). He argues: “the development of a research culture in art and design must clearly be a two-way process, leading both to a clearer understanding of art and design, and to the development of art and design work” (Ibid.).

I am not arguing that dramaturgy is a better approach or that it should substitute the design research approach. On the contrary, design research offers insights on issues that go beyond dramaturgical concerns and are crucial for the advancement of computer games. I am also not arguing against the idea that the methods used will advance the state-of-the-art of gaming. I have much confidence in this kind of research as it already has led to interesting (mostly technical) innovations in gaming. The discussion around design research and the implied opposition of ‘research vs. art’, resembles dramaturgy’s discussion of ‘intellectualism vs. art’, mentioned in the first chapter. Similarly to Newbury’s argument for a two-

way, hermeneutical relationship between theory and practice, dramaturgy seeks to advance a culture of design and research that does not emphasise institutionalised divisions of knowledge and involves simultaneous engagement with research and finding practical ways into work.

A similar argument to Newbury's is made by technology journalist and researcher, Scott Rosenberg (2007). In the context of software engineering²⁹, he argues, we tend to think of the labours of art and those of science as distinctly separate endeavours, but in fact they form more of a spectrum. He argues that the field of software is cursed with an overabundance of absolutist who insist that the solution to all its problems lies by sequestering it in the realm of pure science (Ibid.: 274-275). Although design research does not claim to change the creative practice of designing into a science, it researches the process of making games as an empiric research process, susceptible to constant improvement, perhaps even perfectible, instead of one a primarily creative endeavour that might be tweaked toward efficiency but never made to run like a clockwork.

From these examples of 'theory oriented practices' we can assume that a dramaturgical approach is already taking place in different types of creative processes. It combines theory and practice to understand its compositional logic, the expressive potential and the way the player makes sense of the experience. Strangely enough, findings from the theoretical side of game studies and ludology are hardly used for these goals. Which opens chances to further elaborate on these issues with more conceptual precisions, to enhance the internal communication and safeguard creative values during the creative process.

Especially the 'design research' approaches, used in design schools and research programs, have contributed in creating a broad analytical discourse that serves both academic research and design. However, the 'design research' framework (known for the BATTLEFIELD series) show a much stronger inclination for empiricism and scientific approaches that risk reinforcing the art vs. research opposition that favours research results over creative endeavour for meaningful

²⁹ The phrase 'software engineering' in fact, was initially deliberately chosen as being provocative, in implying the need for software manufacture to be based on the types of theoretical foundations and practical disciplines, that are traditional in the established branches of engineering (2008: 272). The phrase expressed a need rather than a reality since most of the issues which, according to Rosenberg, raises questions whether the parallel between building structures and building code makes sense.

expression.

The mentioned 'hermeneutical' approach deserves exploring in the context of game design as it may closely resemble the way dramaturgy intends to relate theory and practice as an interactive and involved two-way process that can foster an interesting range of connections between different disciplines, forms of knowledge and research traditions. This shall be done in the following chapter that serves as a way to reflect epistemologically on the current state of the theory/practice relationship in computer games and a way for further exploration.

6. EPILOGUE: EPISTEMOLOGICAL REFLECTION ON DISCOURSE

Throughout this thesis, I have analysed game studies discourse and how it relates itself to the practice of game development (chapter 2). Additionally, I switched the focus on how game design and development is creating its own discourse that partially relates to the academic discourse but mostly creates its own concepts and approaches (chapter 4). Both sides contribute to a discourse and reflect on the practice of game design through a myriad of models, concepts, methods and approaches that include dramaturgical issues such as, player-centred development, creating meaningful experiences for players, understanding how players make sense of gameplay experiences, and articulating compositional elements that can be deployed in game design.

In my analysis, I have questioned practice-oriented approaches in game studies (especially ludology), and research-oriented approaches in game design for the way these approaches mostly rely on formalist, structuralist, instrumentalist and positivist ways of relating theory to practice. This leads to the following epistemological question: what alternative does a dramaturgical perspective offer to the way game studies and game development relate? In reflection to the findings of this exploration of the relationship between theory and practice of computer games, I would like to propose the concept of hermeneutics as a way of relating theory and practice in a different productive manner.

6.1 Hermeneutical design

The idea of ‘hermeneutical designing’ is found in architectural discourse (e.g. Snodgrass and Coyne, 1992; Perez-Gomez, 1999), but has also found its ways to other design disciplines such as instructional design (e.g. Jonassen, 1997) and human-computer interface (HCI) design (e.g. Winograd and Flores, 1986).

Deployment of hermeneutical approaches are hard to find stated explicitly in game design and research, although there are few examples of game studies research

papers that use this approach. Hermeneutics began as the theory of the interpretation of texts, particularly mythical and sacred texts. Its practitioners struggled with the problem of characterising how people find meaning in a text that exists over many centuries and is understood differently in different epochs (Winograd and Flores, 1986: 27). Hermeneutics challenges the belief that a formal analytical understanding of texts is possible at all: instrumentalised theories, regardless of whether they are driven by technological, aesthetic, or formalistic imperatives, or by a desire to emulate models from other disciplines, are always unable to universally account for both the experiential dimension of designed works and the creative processes they come from as the complexity of these works and the models and experiences they convey increases (Perez-Gomez, 1999).

Architects, Richard Coyne and Adrian Snodgrass give interesting insights into how research findings relate to design practice through the idea of 'hermeneutical designing'. In their article "Models, Metaphors and the Hermeneutics of Designing" (1992), they question the way "design science" employs scientific models to structure and direct its researchers on the design process, working with the presupposition that the models correspond to the design process in a logically deducible manner³⁰. Instead of this presupposition, they argue that these models should be regarded as metaphors, and metaphors convey their meaning by way of a hermeneutical understanding. Therefore the assessment of the validity of a model of designing must be made by referencing hermeneutical criteria, such as the accuracy with which the model translates the design process as experienced in everyday design practice and the degree to which the model conceals or discloses aspects of designing (1992: 56).

Coyne and Snodgrass understand models (theories, concepts, methods) as metaphors, and therefore, are not to be assessed by logic, but by the criteria which apply to matters of interpretation³¹. The main criterion for the hermeneutical

³⁰ The use of theoretical models to describe and explain the design process is based on two presuppositions. First it is assumed that designing proceeds by way of a logical process which can be expressed in a formal language of game design or symbolic (semiotic) logic. Second, it is assumed that the theoretical models used to describe designing -themselves logically coherent and consistent structures- correspond to the design process in a logically deducible manner.

³¹ From a dramaturgical perspective, interpretation should not be understood as a 'definitive' reading but identify open and plural readings.

assessment of a model is the accuracy with which it approximates what it models. In other words, the importance of the metaphor lies in the accuracy with which the observation description corresponds with that it describes (Ibid.: 69).

When involving theoretical concepts and models in the everyday design practice, a description of the design process as simply the manipulation of compositional elements (e.g. rules, mechanics, experiences, goals) is a misrepresentation. Because these theoretical concepts are models, they reduce the rich and intricate network of components in the design process, to a singular, simplistic, and self-referential activity (Ibid.: 70). Coyne and Snodgrass add that the search for the perfect design paradigm has led to few results of practical value. There exists a gap between promise and fulfilment, between theory and pragmatic use, and between energy input and practically relevant product. They believe that the reason for this gap lies not in some supposed inertia or antiscientific prejudice on the part of designers, but in the lack of correspondence between models of the design process and the process itself as experienced by designers in practice (Ibid.: 71).

Another criterion presented by Coyne and Snodgrass for the hermeneutical assessment of the validity of a design model is the degree to which it reveals or conceals aspects of its referent. Metaphors reveal at the same time that they conceal. They throw light on certain aspects of a concepts and obscure others. Models focus on certain characteristics of the design process that fit certain purposes for which it is intended. This leads to the question that should be relevant within the practical context of designing: if all metaphors reveal and conceal, how can we assess whether they are potentially enabling or disabling in the design situation?

Coyne and Snodgrass make the distinction between logic-based metaphors and hermeneutical metaphors that differ in the way they reveal and conceal. In different degrees, some metaphors conceal more than they reveal (logic-based metaphors), while others are potentially capable of revealing more than they conceal, to the degree to which they open up possibilities of interpretation. This approach allows understanding concepts, theories and models we have discussed in this thesis, such as Bogost's 'unit operations', as hermeneutical metaphors. The concept has enough conceptual tolerance to preserve the wholeness of what it models, even as it

describes the functioning of parts. This and other conceptual models, do not break designing into fragments; destroy the complexity, subtlety and uniqueness of the design situation; or privilege or preclude aspects of the process but rather respects interdependence and interaction in different degrees. A hermeneutical metaphor establishes no artificial boundaries. Its borders are undefined and ambiguous. The greater the ambiguity, the more questions the metaphor raises and, hence, the greater impetus it gives to a dialogical exchange of question and answer (Ibid.: 72).

In this sense, logic-based metaphors are self-enclosed within their definitions; they do not point beyond their own horizons. Hermeneutical metaphors, on the other hand, dissolve the horizontal boundaries and open up new vistas of interpretation. Their open-endedness fosters the generation of other metaphors³². Secondly, the logic-based metaphor, founded on notions of objectivity, treats the design process as an object to be dissected, manipulated, and controlled. It distances or alienates the designer from the process as it occurs in the world of everyday experience. The hermeneutical model, by contrast, interprets designing as it happens in lived situations. Hermeneutic metaphors are never static, but are renewed in every unique situation and give rise to new interpretations as the situation varies (Ibid.:73). Thirdly, the hermeneutical metaphor does not translate into prescriptions or methods. It prompts interpretations which are appropriate to the unique features of the situation.

In summary, although the logic-based metaphor might be appropriate within the context of research, where its narrow focus and clear definition act as pointers to guide research activities, it is not appropriate when it is taken as a model of designing as a whole. The power of the logic-based metaphor inheres within its ability to concentrate on some specified and clearly defined characteristic of designing, and to structure these characteristics for research purposes. The power of the hermeneutical metaphor lies in the range and diversity of its possible interpretations, thus allowing an understanding of the design process as it changes from situation to situation.

³² Similar to the way the fungible concept of 'unit operations' allowed a different conceptual understanding of the concept of 'gamemechanics' (chapter 3).

Going any deeper into hermeneutical discourse, its epistemological and philosophical implications will lead the exploration of dramaturgy further away than intended. It suffices to say that understanding dramaturgy as a hermeneutical process conceptualises the way it can bring theoretical concepts closer to the everyday practice of designing but also how it brings the designed work closer to the human experience of the player. It challenges the belief that a formal analytical understanding of computer games and its design is possible at all, and therefore tries to go beyond oppositions of “intellectualism vs. art” or “research vs. design”.

In the last decade, both game researchers and developers have created very accurate ‘metaphors’ (models) that cover similar issues but also have slight differences. Dramaturgy does not disregard these metaphors, as formalistic as some may be, but try to discover what they reveal and what they conceal for relevant use in practical context. What game design discourse (especially academic) has tried to do is create a unifying discourse with a myriad of models that try to improve, contradict and complement each other. But as Coyne and Snodgrass mentioned, there is still a gap between the promise and fulfilment of these models probably caused between a lack of correspondence between the models and the actual design process (the correspondence goes one-way, the models are too abstract to be relevant for practical use). Instead of aiming for universal models and create an inward look that stares itself blind on what they reveal and conceal for the sake of creating a better, more concrete and universal, model.

If games studies and design research is to be as successful in its practical applications as it has been in generating research findings, it needs to convey a better understanding of designing as it occurs in everyday design situations. The development of such an understanding should focus how results of research could be enabling rather than disabling or merely irrelevant when applied in the design studio. The aim should be to understand and, thereby, assist what already works rather than to bind designing in methodological or theoretical straightjackets. According to Coyne and Snodgrass, this involves a close examination of: the part interpretation plays in the design process; how preconceptions lead to prefigurations of the designed work; and how tacit experience and skills enter into

the situation³³ (Ibid.: 74). It also involves an examination of the nature of metaphor, what metaphors operate throughout the design process, and how they are reflected in the design product. These involvements presuppose a recognition that design models are design metaphors only to be understood by the hermeneutics of design³⁴.

³³ The choice of using a model in the design process depends not so much on a knowledge of rules or theoretical concepts, but on skills of judgment, tacit knowledge, and experience in understanding the unique case (Coyne and Snodgrass, 1992: 73).

³⁴ Coyne and Snodgrass advocate a self-reflexive awareness of the metaphors and for designers to become critically conscious of the metaphors they design by, and to assess the accuracy with which they fit the design situation.

7. CONCLUSIONS

This exploration has served to give some insights at the current relationship between game studies and game design and development and how dramaturgy may serve as a conceptual meeting point between these two. Defining some of dramaturgy's critical qualities has given means to discuss this current relationship and shown paths to for further exploration that may advance a more productive synergy of theory and practice.

7.1 Dramaturgy in game studies and design

Theory and practice are clearly not separated from each other. In fact, to certain extent, dramaturgy in computer games is already taking place both in theory and practice. Both in the way the theoretical side approaches the practical side and vice versa, it is possible to identify many of dramaturgy's critical qualities in practical, creative and analytical terms. First, both fields attempt to apply a conscious layer of self-reflection, mainly by making compositional elements explicit and trying to think in terms of these elements and creating an analytical vocabulary. Which also includes drawing knowledge from other fields to enrich its own (e.g. psychology, cognitive science, mathematics, philosophy, sociology, etc.). Second, both fields are increasingly dedicated in understanding how players create meaning and make sense out of gameplay experiences and translate these findings into player-centred approaches of both creation and analysis. Third, some of dramaturgy's practical concerns can also be seen in practice of game development, especially when it comes to issues such as safeguarding creative values (maintaining a creative vision).

In all these matters, there are chances for a dramaturgical approach to computer games to expand the knowledge on shared subjects where both the creative practical side and the academic theoretical side have been working on, mostly separately, more than a decade. However, when we look at this development of synergy from a dramaturgical perspective, there are significant contrasts in the relationship that may frustrate a productive relationship between both fields.

Theory and practice are still struggling to find a productive relationship between them that approaches collective issues as a joint effort.

7.2 Contrasts

The main contrast with dramaturgy is found in the way discourse, principally in how academic studies presents its knowledge. Approaches in game studies, and ludology in particular, present the knowledge in a dominantly structuralist, essentialist and instrumental way that seeks to uncover a universal logic of how computer games work, create meaning and should be designed and analysed. This partly counts for the studies done within the scope of 'design research' that in most cases goes beyond creative dramaturgical concerns. Design research includes topics of research that focus on very specific subjects of technology and management where systematic, instrumental and empirical methods are in place. But when it comes to studies of dramaturgical concerns such as player-centred designing, making sense of gameplay experiences and exploring the expressive capacity of computer games, the same contrast with dramaturgy arises.

In an attempt to create a unifying discourse, both game studies and design research have created a myriad of models that try to improve, contradict and complement each other on similar issues. Their work is driven by the idea that the reason why concepts and methods from their field is not used in practice is because the methods and theories are not communicated through concrete enough methods. Therefore they aim to create more theoretical models that need to be even more detailed, complex and universal.

Researches do acknowledge that they present definitions, concepts, and models that leave some things out and work better in some circumstances than others. These concepts are made with a desire to serve the design practice and open an interrelated discourse between theory and practice, but if this exchange of knowledge is unidirectional (i.e. designers choose what serves the process and discard what does not), the discourse risks to remain in the academic circle. This discourse then tries to further the discussion with even more concepts and models and becomes fixated on finding formal definitions of concepts and taxonomies of compositional elements and effects (e.g. interaction, immersion, genre, mechanics, emotions, goals and challenges). Consequently they reduce the complexity and

interdependence of the practical context by creating their own conceptual and theoretical complexity.

Studies such as Järvinen's and Salen and Zimmerman's, try to understand games on an experiential level through structural models mostly based on psychology and semiotics, aiming to create some sort of general feedback loops that model the gameplay experience between the game and the player. Although these models give critical insight on making sense of the gameplay experience in a general way, they lack in giving expression to particular gameplay experiences. These models fail to convey how particular design choices in gameplay give expression to that experience beyond the direct psychological involvement, i.e. how games create meaning on a socio-cultural, aesthetic, and philosophical level.

7.3 A dramaturgical relationship

So what kind of relationship between theory and practice does dramaturgy entail? Dramaturgy presupposes a different productive relationship between theory and practice. One that entails a hermeneutical approach and tries to merge theories and concepts to enable interpretation of creative choices, instead of creating increasingly complex instrumental frameworks, creating artificial boundaries and treating the design process as an object to be dissected, manipulated, and controlled.

A dramaturgical approach to computer games interprets game design as it happens taking the uniqueness and subtleties of the design situation into account. It uses research papers, concepts, models, and methods as springboards for interpretative strategies of creative choices. Theoretical findings are used as an explicative lever, making use of their conceptual precision. This enables dramaturgy's critical qualities to act as an active mirror, a navigator and a map-maker through thinking in terms of composition. It uses theoretical concepts as metaphors that allow conceptual tolerance to include other metaphors to open up a dialogical exchange between them and the creative process.

The concept of game mechanics and the broader theory of unit operations, exemplify how theoretical concepts can be merged to analyse specific elements of a game's composition while connecting these elements to other elements (from formal and technical to experiential and interpretational). It exemplifies how

deploying analytical concepts can respect the interdependence and interaction of different elements that create the game and without trying to frame them into universal models. Furthermore, dramaturgy emphasises and engagement with the context of the work and the design process.

In this way, computer game dramaturgy seeks to create an active correspondence between practice and theory. As a way of analysing, and as a possible practice, it is flexible, constant changing, depending on the creative context and its used methods, ideas and tools. It is never static, but renewed in every unique situation, giving rise to new interpretations as the situation varies, instead of creating a universal interpretation.

7.4 An unexpected parallel

I would like to conclude with drawing attention to a, perhaps not entirely, coincidental historical parallel between the current state of game studies and game design and the development of dramaturgy as I described in the first chapter. Game studies (and ludology in particular) is characterised by an effort to establish medium-specific, universal principles for games driven similar to Aristotle's logic that sought to establish fundamental principles of drama which was epitomised in his work, *Poetics*. It shows a drive that was later revived in the era of Enlightenment, where Lessing tried to establish an objective and analytical discourse around a medium that, according to him, needed to be taken seriously. He showed a similar way of constructing arguments through systematic approaches that tried to be as objective as possible drawing on knowledge from various fields. Perhaps the next step in this historical parallel is moves towards emphasising the engagement with the context of the work (e.g. Bogost) to establish an even greater interaction between of theory and practice without having to put the practice into theoretical and methodological straight-jackets, but drawing these types of parallels remains highly speculative.

Performance dramaturgy has had centuries (millennia if you count Aristotle as a dramaturg) to evolve. It still remains an ever-changing flexible field filled with a vivid discourse between academic theory and creative situations. Comparatively, game design and game studies are still very young disciplines that are still in the

process of drawing their lines as a creative practice, an art, an academic discipline, and a cultural medium. It has quickly surrounded itself with a wide range of knowledge, experience, critical discourse and creative talent that only seeks to expand. I believe the time is ripe for computer game dramaturgy to accommodate this creative and academic endeavour into new directions to spark new debates, ideas with new alliances and surprising encounters.

8. FUTURE RESEARCH AND DISCUSSION

It is hard to expect that a single exploration of the possible use dramaturgy will give so much information to directly expand the ideas of dramaturgy into the realm of computer games. Although this exploration has led to some valuable observations, it will undoubtedly raise more questions than conclusive answers. Game studies and game development are relatively young academic and creative fields that are going through radical changes, while dramaturgy, as we know, is also a field that is forever open to being rethought and reinvented. Therefore I would like to touch on some tangential topics of our exploration. Some of which were originally intended to be included in this thesis but due to the already broad scope of this thesis, it was better not to.

8.1 The term ‘dramaturgy’

Although the concept has enabled to give useful insight about a productive relationship between theory and practice. I fear that its name, ‘dramaturgy’, will not hold out long in the context of computer games. It naturally brings up associations with theatre and linear narratives for anyone who is not familiar with the subtleties of the field. Ask any dramaturg and they will tell you how broad and all-encompassing this field can be without trying to colonise it in its own theoretical framework (as it does not rely on solid theoretical frameworks and strict methodologies). Nonetheless, I fear future approaches to creating a more productive between theory and practice will soon replace the term with something more fitting to the medium of computer games: “ludoturgy”? “hermeneutical game design”? “applied ludology”? “creative evangelism”? Who knows, but this issue is more of a matter of semantics.

8.2 Dramaturgy in practice

“Is there a video game analog to the dramaturg? Does the lead developer on a project take on this role? Is such a thing seen as even necessary? I’m curious to know. It’s quite possible to make good theatre without a dramaturg, but over the last 50 years we’ve come to see this person as a highly valuable and necessary part of the production team. I realize video games are produced very differently, of course, but I wonder if such a person exists or would be perceived as valuable in the video game industry?” (Michael Abbott, 2008)

As dramaturgy is a flexible field that bounces between academic research and creative practices depending on its unique situations, its implementation may not fully correspond to academic methods and its place in a specific discourse. I am fully aware that this preliminary exploration of dramaturgy is founded on literary analysis of academic discourse and a selection of accounts and reflections from the practical field. Therefore it cannot account for the wide variety of all design situation. One of the routes for further exploration is to take this idea for a productive relationship between theory and practice and take into actual development practices. I am looking forward to the results of my fellow student Michael Ros (Utrecht University) who is also researching the expansion of dramaturgy into computer games through active involvement as a dramaturg in the creation of an episodic FPS.

Since this research was more focussed on literary analysis than field research into the practice, another direction for further research would be to explore in detail how dramaturgical qualities are reflected in game development processes. As we have seen in chapter 3, some take thorough analysis of their design process more seriously than others: some reflect their work with academic theoretical concepts, while others make up concepts as they go along.

8.3 The ‘dramaturg’

The dramaturg as a practical collaborative person or function could be explored to gain more understanding of the practical values of dramaturgy. Perhaps what comes closest to what a dramaturg might be in game development is the so-called ‘creative evangelist’ (Edge 2006, 2009: 123). It is an uncommon role in game development but the British studio, Sumo Digital, has one for several practical functions. Sean

Millard's job as a creative evangelist is not rigidly defined, and has his fingers "in loads of pies to differing degrees of responsibility" both internal to the design process as external. He becomes the voice of the studio "largely because everyone is too busy making games."

Internally he creates the concepts and documentations for games. He can have a leading role throughout the pre-production phase concerned with holding the vision for multiple projects. Sumo's work mostly deals with existing IP's (Intellectual Properties), mostly from Sega which include remakes (e.g. *OUTRUN 2*, 2003) and new titles with trademarked characters (*SONIC & SEGA'S ALL-STARS RACING*, 2010). This means he has to "evangelise franchise values and ensure our creativity conforms to the established rules", and/or expands the IP in a relevant way". He provides a pair of "chimp eyes" through which to view the game. In other words, he has a unique standpoint that maintains dramaturgic overview understanding the constraints of the publisher as well as the development team's desire to be innovative and creative.

His function lies somewhere between a producer and a creative director, but according to Millard "it complements them, bolsters them and becomes a bane to them". Externally, his work also involves creating concepts and documentation for external uses such as presentable and understandable game design documents, studio biographies, marketing and website news.

Although this work does not seem to involve much combining of theory and practice it does reflect some of dramaturgy's practical values (navigator, map-maker). A direction for future research would be to see how development studios maintain or create such functions as the creative evangelist, since it might provide as a place for someone with a dramaturgical way of looking at the design process.

8.4 A team of dramaturgs

Game development processes can also be processes where a small group starts with an idea and iteratively expands to an increasingly large group of collaborators from various disciplines. Besides sharing a vision with an expanding team of newcomers, this can involve outsourcing creative work to specialised studios (e.g. motion-capture, animation, background art, sound) which may risk a loss of creative vision.

Therefore it would require a dramaturgical overview fragmented over several

spread over the various disciplines involved, instead of one person. From a dramaturgical perspective, it could be interesting to understand how vision is maintained as a team. It would be interesting to see how creative vision, communication and knowledge is maintained throughout expansion of outsourcing of game development processes, without necessarily focussing on efficiency or optimisation of the process (a manager's perspective).

8.5 The designer as a dramaturg

“99.9% of game design is critical thinking” according to Will Wright, creator of THE SIMS, SIM CITY and SPORE. The increasing amount of (instructional) game design books include an overview of the skills a game designer should have. Game designer Jesse Schell's book, *The Art of Game Design: A book of lenses* (2008), contains such an overview which demands a variety of skills and knowledge that rarely is shown by a single human: animation, anthropology, architecture, brainstorming, business, cinematography, communication, creative writing, economics, engineering, history, management, mathematics, music, psychology, public speaking, sound design, technical writing, visual arts, and many more. However, the most important skill, according to Schell, is 'listening'. This includes listening, to the team, audience, the game, the client, and self.

The designer is expected to have a somewhat schizophrenic relationship with himself and his work. On one side he is a creative mind, creating intuitively what feels right to him and on the other side he is expected to maintain critical distance from his work and observe his composition through wide range of perspectives. Is his creative approach different than his critical thinking? Can we distinguish a creative (or directive) mode of thinking and a dramaturgical mode of thinking? Or could the designer use some dramaturgical help for an external yet involved view?

8.6 Rethinking creative processes

Within game design discourse, there is a scope of research and discussion dedicated to studying and improving the design process itself. (e.g. Derks, 2008; Santiago, 2010) Many try to seek alternatives to so-called 'waterfall' models which are sequential and hierarchic. This type of processes are useful for the production of

technical products, such as a game, but are based the idea of an assembly line which may limit the creativity. Various designers and researchers propose alternative models: ‘agile’ developments methods such as, ‘scrum’, ‘kanban’, ‘lean’ ‘rapid iteration’. All these methods presuppose iterative methods that can give more or less room for experimentation and creative exploration without having to collapse into the tight deadlines and or creative restrictions of assembly line methods. It could be interesting to explore how dramaturgical qualities take place in these different approaches to the creative process, with questions such as: how is the creative vision established and maintained? Or, how does communication and exchange of ideas take place? How is this process documented and what role does the documentation have? Do these methods work for all games or only specific type of games?

8.7 Dramaturgy and ‘meaningful’ games

Although this exploration of how dramaturgy may take place in practice has generally focussed on commercial games and their production. A dramaturgical perspective may allow for alternative approaches to create games that explicitly provoke the player on a philosophical, ideological, socio-political level. Within game studies there are many interesting works that explore this idea (e.g. Bogost: ‘persuasive games and game poems’; Mary Flanagan: *Critical Play*, 2008; Sicart: *Ethical play*; Steven E. Jones: *Meaning of Games*, 2009). Some of these approaches are practice oriented while some primarily offer ways of analysing this kind of reading of computer games. Dramaturgy may offer a perspective of how these kind of works can find their way into game design. Perhaps a more subtle alternative than the forceful attempts aiming at “effectivity” and “optimised learning”.

REFERENCES

- Aarseth, Espen. "Computer Game Studies, Year One." *The International Journal of Computer Game Research* 1.1 (2001). July 2001 <<http://www.gamestudies.org/0101/editorial.html>>.
- Abbott, Michael. "Critics Don't Need Thumbs." *The Brainy Gamer* (2008). 09-06-2010 <http://www.brainygamer.com/the_brainy_gamer/2008/02/critics-dont-ne.html>.
- Adrian Snodgrass, and Richard Coyne. "Models, Metaphors, and the Hermeneutics of Designing." *Design Issues* 9 1 (1992): 56-74.
- Akker, Fabian and Jasper Koning. "Postmortem: Ronimo Games' Swords & Soldiers." *Gamasutra* (2009). 13-08-2010 <http://www.gamasutra.com/view/feature/4230/postmortem_ronimo_games_swords_.php>.
- Alexander, Leigh. "Report: Infinity Ward Studio Head Ousted for 'Insubordination?'" *Gamasutra*. 02-03-2010 <http://www.gamasutra.com/view/news/27462/Report_Infinity_Ward_Studio_Heads_Ousted_For_Insubordination.php>.
- Begy, Jason Scott. "Interpreting Abstract Games: The Metaphorical Potential of Formal Game Elements." Massachusetts Institute of Technology, 2010.
- Björk, Staffan, Sus Lundgren, and Jussi Holopainen. "Game Design Patterns." *Level Up: Digital Games Research Conference*. Ed. Copier, Marinka and Joost Raessens.: Universiteit Utrecht.
- Bleeker, Maaïke. "Dramaturgy as a Mode of Looking." *Women & Performance: a journal of feminist theory* 13 2 (2003): 163-72.
- Bly, Mark. *The Production Notebooks. Theatre in Process, Vol. I*. New York: Theatre Communications Group, 1996.
- Bogost, Ian. *Unit Operations: An Approach to Videogame Criticism*. Cambridge, MA, 2006.

- . *Persuasive Games: The Expressive Power of Videogames*. Cambridge, MA: The MIT Press, 2007.
- Bogost, Ian, Mia Consalvo, and Michael Mateas. "Game Studies Download 5.0." *Game Developers Congress*. San Francisco, 2010.
- Buren, Celine, Kiki Rosingh, Erica Smits, Annemarie Wenzel. "Dramatologie? Een Onderzoek Naar Dramaturgie in De Beroepspraktijk." Universiteit van Amsterdam, 2005.
- Cardullo, Bert. *What Is Dramaturgy?* New York: Lang, 1995.
- Church, Doug. "Formal Abstract Design Tools." *Game Developer* 1999.
- Consalvo, Mia, Nathan Dutton. "Game Analysis: Developing a Methodological Toolkit for the Qualitative Study of Games." *The International Journal of Computer Game Research* 6 1 (2006).
- Crawford, Chris. *The Art of Computer Game Design*. New York: McGraw-Hill, 1984.
- Dahlen, Chris. "Gdc: Mechanics Are Everything." *Edge Online*: Future Publishing, 2010.
- . "You Can Keep the Popcorn." *Edge Online*: Future Publishing, 2010.
- Derks, René. "Facilitated Chaos: Organizational Creativity in Videogame Development." Utrecht University, 2008.
- DICE. "Dice". 2010. website. (23-03-2010): DICE Research publications. 15-06-2010 2010. <<http://publications.dice.se>>.
- Falstein, Noah. "The 400 Project". 1999. (18-03-2005). 13-08-2010. <http://www.theinspiracy.com/400_project.htm>.
- Flanagan, Mary. *Critical Play: Radical Game Design*. Cambridge, Massachusetts: The MIT Press, 2009.
- Frayling, Christopher. *Research into Art & Design*. London: Royal College of Art, (1993/4). Research paper.

- Friedman, Ted. "Semiotics of Sim City." *First Monday*, 4(April 1999). <http://www.firstmonday.dk/issues/issue4_4/friedman>.
- Fullerton, Tracy, Christopher Swain, Steven Hoffman. *Game Design Workshop: Designing, Prototyping, and Playtesting Games*. San Francisco: CMP Books, 2004.
- "Gate | Game Research for Training and Entertainment". 10-08-2010. <<http://gate.gameresearch.nl/>>.
- Graft, Kris. "Gdc: Indie Innovators Talk Ideas, Philosophies." *Gamasutra* (2010). <http://www.gamasutra.com/php-bin/news_index.php?story=27655>.
- Griesemer, Jeremy. "Design in Detail: Changing the Time between Shots for the Sniper Rifle from 0.5 to 0.7 Seconds for Halo 3." *Game Developers Congress*. San Francisco, 2010.
- Grünvogel, Stefan M. "Formal Models and Game Design " *The International Journal of Computer Game Research* 5 1 (2005).
- Hecker, Chris. "Please, Finish Your Game." *Game Developers Congress 2010*. San Francisco, 2010.
- Holm, Ivar. "Ideas and Beliefs in Architecture and Industrial Design: How Attitudes, Orientations, and Underlying Assumptions Shape the Built Environment. ." Oslo School of Architecture and Design, 2006.
- Hoogendoorn, Evert. "Games, Performance En De Complexe Positie Van De Speler." Universiteit Utrecht, 2006.
- Huisman, Charlotte. "Utrecht Wil Mekka Van De Gamebranche Worden." *de Volkskrant*. 16-02-2010.
- Hunicke, Robin, Marc LeBlanc and Robert Zubek. "Mda: A Formal Approach to Game Design and Research." (2001). 13-08-2010 <<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.79.4561&rep=rep1&type=pdf>>.

- Lanzi, Pier Luca ed. *Dramaturgical Design of the Narrative in Digital Games: AI Planning of Conflicts in Non-Linear Spaces of Time*. CIG-2009: IEEE Symposium on Computational Intelligence & Games. September 7, 2009 2009. IEEE.
- Järvinen, Aki. "A Meaningful Read: Rules of Play Reviewed." *The International Journal of Computer Game Research* 4.1 (2004). 21-07-2010 <<http://www.gamestudies.org/0401/jarvinen/>>.
- . "Games without Frontiers: Theories and Methods for Game Studies and Design." Doctoral dissertation. University of Tampere, 2008.
- Johnson, Soren. "Theme Is Not Meaning." *Game Developers Congress 2010*. San Francisco, 2010.
- Jones, Matt. "Are Games Design?" *Edge Online*: Future Publishing, 2010. Vol. 2010.
- Jones, Steven E. *The Meaning of Video Games: Gaming and Textual Strategies*. New York: Routledge, 2008.
- Juul, Jesper. *Half-Real. Between Real Rules and Fictional Worlds*. The MIT Press, 2005.
- Kapor, Mitchell. "A Software Design Manifesto". 1991. web article. 15-06-2010 2010. <<http://hci.stanford.edu/publications/bds/1-kapor.html>>.
- Kaynar, Gad. "Pragmatic Dramaturgy: Text as Context as Text." *Theatre Research International* 31 3 (2006): 245-59.
- Kirschenbaum, Matthew G. *Mechanisms: New Media and the Forensic Imagination*. Cambridge, MA: The MIT Press, 2008.
- Koning, Maarten de. "Kellee Santiago over Prototyping En Rapid Iteration." *Bashers* (2010). 16-08-2010 <[http://bashers.nl/festival-of-games-kellee-santiago-prototyping-and-rapid-iteration-for-design-goodness?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+Bashersnl+\(Bashers.nl\)](http://bashers.nl/festival-of-games-kellee-santiago-prototyping-and-rapid-iteration-for-design-goodness?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+Bashersnl+(Bashers.nl))>.
- Kuin, Patjoelah, Debbie Noordijk, Elke Uijtewaal. "Een Gesprek Met Peter Van Kraaij En Bart Van Den Eynde. De Dramaturg Als Een Koning Zonder

- Koninkrijk, of Als Coregisseur?": Theaterdramaturgie.Bank Universiteit Utrecht, 2009. 16. Print.
- Kumar, Matthew. "Gdc: 2d Boy's Carmel Details Indie Fund." *Edge Online* (2010). 23-03-2010 <<http://www.edge-online.com/features/gdc-2d-boy%E2%80%99s-carmel-details-indie-fund>>.
- Luckhurst, Mary. *Dramaturgy: A Revolution in Theatre*. Cambridge: Cambridge University Press, 2008.
- Lunenfeld, Peter. *Design Research: Methods and Perspectives*. Cambridge, MA: The MIT Press, 2003.
- Luton, Will. "Making Better Games through Iteration." *Gamasutra* (2009). 05-08-2010 <http://www.gamasutra.com/view/feature/4166/making_better_games_through_.php>.
- Meier, Sid. "The Psychology of Game Design (Everything You Know It Wrong)." *Game Developers Congress 2010*. San Francisco, 2010.
- Meyrick, Julian. "Cut and Paste: The Nature of Dramaturgical Development in the Theatre." *Theatre Research International* 31 3 (2006): 270-82.
- . "The Ontology of Dramaturgy." LaTrobe University, 2008. Print.
- Montfort, Nick, and Ian Bogost. *Racing the Beam: The Atari Video Computer System*. Platform Studies. Cambridge, MA: The MIT Press, 2009.
- Murray, Janet. *Hamlet on the Holodeck*. Cambridge, MA: The MIT Press, 1998. Print.
- Naafs, Jochem. "Relaties in Het Transdisciplinaire Maakproces." Universiteit Utrecht, 2009.
- Newbury, Darren. "Knowledge and Research in Art and Design " *Design Studies* 17 2 (1996): 215-20.
- Nieborg, David, Joke Hermes. "What Is Game Studies Anyway?" *European Journal of Cultural Studies* 11 2 (2008): 131-47.

- Perez-Gomez, Alberto. "Hermeneutics as Discourse in Design." *Design Issues* 15 2 (1999): 71-79.
- Poole, Steven. "Shell Games." *stevenpoole.net*. (2009). 23-03-2010 <<http://stevenpoole.net/trigger-happy/shell-games/#more-496>>.
- "Profile: Evangelist." *Edge* 2009: 123. Print.
- Redactie. "Gdc 21010: Scrum Niet in Plaats Van Gezond Verstand". Utrecht, 2010. web article. *Control*. Het Redactielokaal. 15-06-2010 2010. <<http://control-online.nl/gamesindustrie/2010/03/15/gdc-2010-scrum-niet-in-plaats-van-gezond-verstand/>>.
- Roessel, Lies van. "Restaging the Epic: Brechtian Epic Elements in Computer Games and Their Use for Computer Game Literacy Education." Universiteit Utrecht, 2008.
- Rollings, Andrew and Ernest Adams. *On Game Design*. United States: New Riders, 2003.
- Rosenberg, Scott. *Dreaming in Code*. New York: Three Rivers Press, 2007.
- Salen, Katie, and Eric Zimmerman. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: The MIT Press, 2003.
- Salen, Katie and Eric Zimmerman. "Game Design and Meaningful Play." *Handbook of Computer Game Studies*. Ed. Raessens, Joost and Jeffery Goldstein. Cambridge, MA: The MIT Press, 2005.
- Schell, Jesse. *The Art of Game Design: A Book of Lenses*. Burlington, MA, 2008.
- Sicart, Miguel. "Defining Game Mechanics." *The International Journal of Computer Game Research* 8 2 (2008).
- Smith, Jonas Heide. "Book Review: Persuasive Game the Expressive Power of Videogames". 2007. web article. *Game Research: The art, business, and science of video games*. (01-10-2007). 15-06-2010 2010. <<http://game-research.com/index.php/book-reviews/book-review-persuasive-games-the-expressive-power-of-videogames/>>.

- Staff. "Postmortem Highlights: Behind the Scenes of Borderlands." *Gamasutra* (2010). <http://www.gamasutra.com/view/news/26966/Postmortem_Highlights_Behind_The_Scenes_of_Borderlands.php>.
- Starr, Paul. "Policy as a Simulation Game." *American Prospect* 5 17 (1994) <<http://www.prospect.org/print/V5/V17/starr-p.html/>>.
- Tronstad, Ragnhild. "The Productive Paradox of Critical Play." *The International Journal of Computer Game Research* 10 1 (2010).
- Turner, Cathy, and Synne K. Behrnt. *Dramaturgy and Performance*. Eds. Turner, Cathy and Synne K. Berhndt. Basingstoke: Palgrave MacMillan, 2008.
- various. "Hard Core Columns - Digital Games Research Association". 2010. webpage. 15-06-2010 2010. <<http://www.digra.org:8080/Plone/hardcore>>.
- Velasco, Sean. "Postmortem: Wayforward's a Boy and His Blob." (2010). <http://www.gamasutra.com/view/feature/4271/postmortem_wayforwards_a_boy_and_.php>.
- Voorhees, Gerald. "The Character of Difference: Procedurality, Rhetoric, and Roleplaying Games." *The International Journal of Computer Game Research* 9 2 (2009).
- Wahlen, Zachary. "Review of Bogost, Ian. Unit Operations: An Approach to Videogame Criticism." *Gameology* (2006). 08-02-2010 <<http://www.gameology.org/node/1066>>.
- . "The Videogame Text: Typography and Textuality." University of Florida, 2008.
- Walz, Steffen P. "Delightful Identification and Persuasion: Towards an Analytical and Applied Rhetoric of Digital Games." *Level Up: Digital Games Research Conference*. Ed. Raessens, Marinka Copier and Joosts.: Utrecht University.
- Wark, McKenzie. *Gamer Theory* Cambridge, MA: Harvard University Press, 2007.
- Winograd, Terry and Fernando Flores. *Understanding Computers and Cognition*. New Jersey: Addison-Wesley Professional, 1987.

Ludography

Blizzard Entertainment. *Starcraft*. Sierra Entertainment, 1998. Multiple.

Blizzard North. *Diablo*. Blizzard, 1997. Multiple.

Bungie. *Halo 3*. Microsoft Game Studios, 2008. Xbox 360.

Epic Games. *Gears of War*. Microsoft Game Studios, 2006. Multiple.

Firaxis Games. *Civilization III*. Infogrames (now Atari), 2001. PC.

---. *Civilization IV*. 2K Games, 2007. Multiple.

Gearbox Software. *Borderlands*. 2K Games, 2009. Multiple

Ion Storm. *Deus Ex*. Eidos Interactive, 2000. Multiple.

Looking Glass Studios. *Thief: The Dark Project*. Eidos Interactive, 1998. PC.

Maxis. *Sim City*. Maxis, 1989. Multiple.

---. *Spore*. Electronic Arts, 2008. Multiple.

MicroProse. *Pirates!* MicroProse, 1987. Multiple.

---. *Railroad Tycoon*. MicroProse, 1990. Multiple.

---. *Civilization*. Microprose, 1991. Multiple.

Nintendo. *The Legend of Zelda: Ocarina of Time*. Nintendo, 1998. Multiple.

Number None, Inc. *Braid*. Microsoft Game Studios, 2008. Xbox 360.

Pajitnov, Alexey. *Tetris*. 1984. Multiple.

Ronimo Games. *Swords & Soldiers* Ronimo Games, 2009. Multiple.

Sumo Digital. *Out-Run 2*. Microsoft Game Studios, 2004. Xbox.

---. *Sonic & Sega All-Stars Racing*. Sega, 2010. Multiple

Team Ico. *Shadow of the Colossus*. Sony Computer Entertainment, 2005. PlayStation

2.

Ubisoft Montpellier. *Beyond Good & Evil*. Ubisoft, 2003. Multiple.

Ubisoft Montreal. *Tom Clancy's Splinter Cell*. Ubisoft, 2002. Multiple.

--- *Assassin's Creed*. Ubisoft, 2007. Multiple.

United Game Artists. *Rez*. Sega, 2001. Multiple.

WayForward Technologies. *A Boy and His Blob*. Majesco Games, 2009. Nintendo
Wii.