Affording Stories and Players

Narratives and Players in Narrative Digital Single-Player Games

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Summary

In this thesis, we wanted to study how players, narratives and game landscapes interrelate in narrative digital single-player games. We aimed to do this by studying how aesthetic object-approaches in combination with qualitative player analysis can aid in the understanding of players' behaviours. To do this we decided to study the fields as individual subjects before finding out how they are connected in games. However, the amount of work that needed to be done for these three parts in themselves proved to be out of scope for the master thesis, resulting in game landscapes getting more or less cut out of the project.

The methods applied for the two remaining subjects, narratives and players, are quite different. Narratives were studied by investigating and attempting to improve methods that allowed for more individual and open perceptions of the game's total storytelling potential. The research was based primarily on a combination of personal experiences and academic research. The results turned out to have a strong focus on choices and optional content, and yielded ideas on a model for classifying choices as well as an improved classification of quests, which had proved to become a more used mechanic in recent games.

Players have been studied as both aesthetic objects and processes by applying Alessandro Canossa's play-persona model as an analytic tool. Afterwards the model was tested against actual players' experiences from playing the same games studied initially. The study showed that while the play-persona model is probably a good design tool, it needs some modifications and further development to work as an analytical tool as well.

The research done for the individual parts turned out to be difficult to combine within the given timeframe and scope of the project. The reason for this was that the study of narratives in games is very much based on theory while the study of players was done using qualitative data in combination with theoretic approaches. When studying games as a result of players' interaction we can see the symptoms of their experiences expressed either on-screen or in their recounting of them. When

studying narratives we cannot deduct any symptoms of their experiences as they all rely on unconscious thought-processes.

Contents

1 Introduction

One of the major differences between analogue and digital games is that in digital games the rules are mainly upheld by the underlying system and the responsibility is thus removed from the players – at least when it comes to single-player games. When talking about multiplayer games, the formal rules of the system and what is actually possible is still up to the system, but the player community also build social codes of conduct, makes up their own games within the game, etc. and thus the sociability that often surrounds games is not at all completely gone (Calleja 2011, chap. 9, "Macro phase").

Looking at digital game studies a division can be made between those who study games and those who study players. Furthermore game scholars can be divided into researchers applying methodologies from empirical and social sciences or researchers from the humanities and critical scholars respectively (Leino 2010, 82; Aarseth 2006). This gives us game scholars who 1) study games as aesthetic objects or 'games-as-texts', 2) those who apply more player-centric approaches, 3) and researchers who study games as systems.

To us, games are a combination of the designers' intentions for the game and players' experiences playing them. That is, games are both objects as well as processes. In an effort to combine these two approaches we will attempt to shed new light on several approaches by answering the following research question:

1.1 Research Question

> *How can aesthetic object-approaches be combined with qualitative player analysis of digital games to create an analysis model which aids the understanding of player-behaviour in 'narrative' digital single-player games?*

1.1.1 The break up

Throughout the initial phases of the thesis work we focused on studying and writing as much as we could in our individual fields; Emil on narratives and Annika on players. When more or less done, we then went on to conduct interviews together, as we still thought we could both use them. This meant that both of our fields of study needed to be accommodated in the questions and thus the data we would collect.

Initially we wanted to combine our different approaches by linking players' experiences as processes to games as aesthetic objects through the use of Canossa's play-persona model, thus ending up with *implied players*. Through only the narrative elements of the same games we wanted to look for *implied readers* in the same way. However, the narrative elements of the games we studied would not have been able to form a narrative at all had they not been combined with the other game elements through play.

After having collected the data there also turned out to be a problem in defining and analysing narrative experiences the interviewee had had through the interviews conducted. Thus on the verge of the analysis we found we needed to split things up in two more separate projects that still have some connections. The thesis still revolves around the same research question, but the different parts (narratives and players) no longer rely on neither the same data nor use any conclusions or work done in the other contributor's part.

1.2 Approaches

In the following we individually account for our approaches to narratives (Emil) and players (Annika).

1.2.1 Narratives

The development of digital games opened up for the realisation of more complex games, including games that 'tell stories' or what will be called *narrative games* in this thesis. Narrative games had been

around before the digitalisation e.g. “Dungeons & Dragons”, however, the developers’ opportunity to rely on a system to uphold the rules made way for the creation of a broader range of narrative games. The goal is to study - and potentially offer suggestions to improve - narrative methods that allows for more individual ways to construct stories that fits a wider and/or more specific amount of players of "narrative digital single-player games", so that the individual player can get what he wants from the game, without the game's story getting "in the way" of those players that might not be as interested in it as others.

In order to do that, I have looked closer at a range of successful narrative digital single-player games that have been played thoroughly. By using examples from these in combination with academic models and approaches to more classic narrative methods – such as *Time, Events, Chronology, Gaps* and *Characters* – as well as some that are more uniquely tied to games – such as *Optional Content* and *Quests* – I aim to find potential ways to improve the theories to better shape the narrative methods. They will all be argued for and used in correlation with each other and backed with an introduction of how narratives have evolved along with the development of new media. I find that these narrative aspects are the most worthwhile in relation to games.

I will be looking at the existing narrative theory and conclusions made within this field of study that I find the most promising. I will look for ways to further alter and evolve the way we can individually experience a story unfold in narrative digital single-player games. I aim to find methods to make room for more dynamic and individual ways of perceiving the story depending on what, and how much detail, of the story you would want to see and experience.

This understanding of narratives and their flexibility could help in being that "aesthetic object-approach" needed in future game studies involving the narrative aspect of games.

1.2.2 Players

Games are designed for players. To be played. Because of this I find it crucial to also study games as a process rather than only as aesthetic objects. Different players will value the aspects of games differently. I believe this will affect their attitude towards games because they - depending on the game - might use the mechanics differently, thus adopting different play-styles which will further affect their experience in the game world.

To answer the research question I have to study games as both objects as well as potential processes before comparing my analysis results to the experiences referred by actual players. To be able to study games it is emphasised by several game researchers (Aarseth 2003; Calleja 2011, chap. 1, "Games as families") that it is important to experience games first-hand as well and therefore I will of course also play the games I am studying.

To study games as both aesthetic objects and processes before doing any qualitative analysis and actually talking to players, I want to look at *implied players*, to combine the two in the analysis itself. Looking at the different users that are implied in games via different elements, I aim to test a somewhat already established model; *play-personas* (Canossa 2009a).

By applying the model to actual games I will test if it can help us better understand and to some extent predict player-behaviour and play-preferences in narrative digital single-player games.

To verify the analysis results gathered by using the play-persona model, I will talk to actual players about their experiences playing games that fit our field of study. We have chosen to do interviews rather than using e.g. questionnaires. Using quantitative methods would enable me to gather a lot more data than the more time consuming interviews would, but it would not enable me to get insights into their *experiences* and what they found important. To be able to deduct if the play-persona method got some of the players' preferences right, I will analyse the interviews through the player involvement model (Calleja 2011, chap. 3, "Structure of the model", figure 3.1).

1.3 Who wrote what

- The above introduction was written by both of us except the parts briefly explaining the methodology applied to our individual parts (Emil; 1.2.1, Annika; 1.2.2). We both conducted the interviews done because we initially thought we could both use them. The conclusions in section 19 was also written in collaboration between the two of us.

- **Emil** has written parts 2-5 (except parts 2.3 “Emergent & embedded narrative” and 4.2 “Hard and soft rules” which were written by Annika) and his reflection on narratives in section 17.

- **Annika** has written parts 6-16 and her reflection on players in section 18.

- Appendix A is Emil’s – the rest is Annika’s.


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Narratives

2 Getting into narratives

The art of storytelling, to narrate, is one of the oldest arts in existence. Narratives can be found in all media. The way these can be told to others, however, have changed drastically. The biggest change in narratives happened when pen & paper role-playing games like *Dungeons & Dragons* (1974), which gave the receiver a way to directly interact with and be more immersed in the story and opened for the potential to have alternative outcomes of said story, or making it necessary to cover more angles than, for example, a book would have to. The point remains that the story-receiver now has a more direct way to potentially interact with the story. Roland Barthes puts it quite well:

> *The narratives of the world are numberless. Narrative is first and foremost a prodigious variety of genres, themselves distributed amongst different substances – as though any material were fit to receive man's stories. Able to be carried by articulated language, spoken or written, fixed or moving images, gestures, and the ordered mixture of all these substances; narrative is present in myth, legend, fable, tale, novella, epic, history, tragedy, drama, comedy, mime, painting, stained-glass windows, cinema, comics, news items, conversation (1966, referred in Abbott 2008, 1).*

Over the course of these sections, I will get into some of the aspects of narratives, which I find relevant, ranging from specific methods, inspirations from other sources and ways these could be applied to improve narratives in games as a whole. Furthermore, my point is not directly to summarise, but rather find connections and appliances that can be used in collaboration with the other subjects.

Over the past year, there have been several happenings to show the importance of good stories in games. The media produces larger and larger articles out of cases where the players do not like the stories – or outcomes of these – presented by games. A prime example is that *Gametrailers* chose the "*Mass Effect 3 Ending*" as being the Biggest News Story related to the Game of the Year Awards 2012 (GameTrailers 2012), which derived from an incredible amount of complains caused by the ending of the game.

Much in the same way, the story of *Far Cry 3* (2012) got a lot of negative feedback from both the gaming community and from reviews, as the story was both "dumb" and "exploitative and pointless". In an article on *Penny Arcade*, the game's lead writer Jeffrey Yohalem answered that notion with the following quote:

> *This all comes from my sense that players shouldn't be talked down to. For me, there's a kind of caustic relationship that's developed between players and developers. It's really a bad, abusive relationship, because developers say 'Players won't get it anyway, so we're just gonna do something that holds their hand.' It doesn't respect them, and then players say 'I hate this,' or 'I hate that,' or 'This game sucks,' and that hurts developers. So it's like a cycle. It also feels like critics aren't looking for meaning in the game, either. So it's like all sides have just stopped listening to each other (Penny Arcade 2012).*

The amount of feedback in regards to games' stories has certainly increased over the past years, and no matter if the mentioned cases – and many others like it – are a result of an actual bad story, it shows that it is important that the "right stories" are conveyed to the "right people" in the "right way". As Yohalem points out, I highly doubt that the problem stems from game-writing getting worse, but more of a misunderstood relationship between how the story is being conveyed from the developers' and the different players' point of view. While this problem can never truly be removed completely, we can strive towards figuring out ways so that a larger player base can enjoy the game's story. It should be better directed towards the individual players, if getting a good story told is what they wish, while still enjoying the non-story elements of the game.

It seems as though, now that games are about to reach a peak in graphics, it takes more than impressive graphics to convince the audience that they have a good game in front of them. Now, they want a good story to go with it as well. As such, the use of narrative techniques are something more and more games are moving towards. This makes narratives in games even more interesting to look closer at, in order for games to appeal to a larger player base.

2.1 Do games contain narratives?

The debate whether or not games contain narratives escalated into the “ludology vs. narrativity”-dispute around year 2000. Gonzalo Frasca published the article "Ludology meets narratology” in 1999, which was followed by the article “What computer games can and cannot do” by Jesper Juul (Frasca 1999). Since then, the topic has been highly debated between game academics. As this has already been discussed a lot, both for and against both sides, I do not wish to get further into it, as I believe the importance of this discussion lies elsewhere.

Gordon Calleja brings up a very good point with the following statement, to emphasise that the important part of narratives is not discussing whether or not games hold narratives, but to find ways to use these the best way.

> *Like Pearce, Katie Salen and Eric Zimmerman (2003) emphasize the experiential dimensions of narrative elements in games. Their book Rules of Play takes game design as its primary focus and, like other practicing game designers, Salen and Zimmerman take the presence of stories in games as a given. Reading through articles on Gamasutra, talks at the annual Games Developers Conference, and various game design books, it is evident that the central question for game designers is not whether games are stories, but how best to convey stories through games (Calleja 2011, chap. 7, “Experiential Narrative”).*

The point that I want to bring forth is that the question should be altered slightly, and instead ask if games have the *potential* to invoke narratives. The answer is obviously yes, but this does not imply that every single game in existence has that potential – exactly in the same way as some types of other media are not fit to invoke it either. The question should not have to be seen in a binary way, as all mediums have the potential, but it does not mean that one can always state that all games either have or does not have narratives. It seems like a much more interesting – and healthy discussion – to look at the various things that allow games to have narratives, how these have evolved and what differences or similarities can be made from existing media’s narratives.

Much related to this discussion, Aarseth's (2012) text on introducing "the Variable Model", with the purpose of classifying the overlap between software that combines games and stories, brings forth the following point:

> *We often commit the mistake of using the metonymic term "games" for software that in reality are integrated crossmedia packages, such as Max Payne (2001) which contains graphic novel pages and movie-like cutscenes (short animated movie clips that interrupt the gameplay), as well as ludic components. Is Max Payne a story or a game? Is it a hybrid? An amalgam? Whatever the answer, it seems clear that it is not purely a game, but a piece of software that does contain, among other things, a game.*

It boils down to how one would define what a game and a narrative is, rather than discussing what methods – that are not purely unique game-mechanic based – is used to make the game tell a story. Do games have to use unique game-based narrative elements that are not seen in other media, to be considered "pure games", rather than "crossmedia packages"? Do games lose some of their gameness by mixing narrative strategies from outside of games – even if it potentially halts the gameplay?

2.2 Narratives through time and media

The best way to explain the line of thought for this section, which heavily builds on the question from the previous chapter, is looking back through time. To do this, we will look at *orality & textuality*, *interactivity* and *transmedia* respectfully.

2.2.1 Orality & textuality

At first, there were stories being told between people – like tales and legends. These would get passed on, and each person would, most likely, tell the story in a slightly different manner. Some would make use of the surroundings, the lighting (or lack thereof), and maybe alter their voices to represent different people, animals or creatures. The point here is that even though the "told tale" certainly has narratives, it does not mean that the simple act of verbal communication always has one.

In the same way as oral communication, written text can have narratives. There are different kinds of written texts, and not all of these are ones which intends to tell a story. This also applies to sounds and music. They can have narratives, but the perception of how it is applied and what story is being told is much more individual.

When continuing to combine semic modes, new possibilities are opened. However, some aspects of a potential narrative are also left out, by letting some aspects of suddenly be visible or known by the receiver. As the reader/listener perceives things individually, suddenly having a clear representation limits this individual perception.

Abbott (2010) refers to this as *over*- and *underreading*. In its essence, it covers how many direct details are left for the readers to figure out themselves or simply imagine them the way they want to. As more and more information is being fed to the reader, as well as more media are being combined, it becomes "harder" to underread. E.g. when describing a person's features on text, it gives the reader a rough idea of how that person looks, whereas this person is shown visually in movies, leaving nothing to the imagination. Overreading – the act of finding details that is not directly visible from the narrative – likewise becomes "harder" to do as more details are shown. Neither of these should come as a surprise, but it is only logical to say that it is always possible to both under- and overread, as there is no possible way to show and/or tell everything, and make sure than nothing can be left completely outside the unthinkable. This becomes relevant in terms of looking at gaps, described in section 3.3 (31).

2.2.2 Interactivity

Now, with all these previously mentioned examples, human interaction has not really been a part of it. Of course, human "interaction" is needed to read, listen or experience, but it does not actively change the potential narrative. With the introduction of *board games* and *sports*, this interaction was suddenly there, but – while opening for the potential of using narratives – did not really have the

proper means to use this human interaction in a narrative manner. Of course, this did not mean that it did not exist, as the roleplaying *Dungeons & Dragons*-styled table-top games and likewise naturally had an enormous potential by having live people constantly altering and elaborating on the narrative, effectively eliminating any restrictions there would have otherwise been with a "static" narrative. The concepts of over- and underreading become highly different, as any doubt from the player can be erased in an instant by the dungeon master, thus altering the narrative.

Digital games have by now existed a while and many of them uses narrative methods existing in almost all of the previously mentioned media, but digital games seems to be the first real media where active human interaction *can* be coupled properly with a narrative. Naturally, human interaction in digital games does not mean that there *is* a live narrative, but it certainly does allow it in games that incorporate sandbox, D&D-styled play and/or are non-linear in terms of progression.

One thing that is specifically obvious is the difficulty of using an omniscient narrative, often found in literature. The implications of coupling this with human interaction (and thus, choice), makes it tricky to use suspense in the logical way, as revealing too much of what is to come gives the player a chance to avoid something that they should not know. Basically, attempting to replicate the "real" sense of suspense from simply not knowing is a much more feasible approach, and then rely on visual and audio instead. In the relation of suspense, Mieke Bal mentions the various types based on differences in knowledge between the *character* and the *reader*, which yield four different scenarios (Bal 1997, 165):

- Both Reader and Character does not know (riddle, detective story, search)
- Reader knows, the Character does not (threat)
- Reader does not know, but the Character does (secret)
- Both the Reader and the Character knows (no suspense)

In relation to video games where the player ("reader") actively controls the avatar ("character"), it would feel strange to use scenarios in which the knowledge of the player and avatar differs, because

of the usual binding of the player to one avatar *at a time*. The player's control of the avatar means that the knowledge of the player is the knowledge of the avatar and the actions taken with the avatar is based on the player's knowledge. Relevant to this is the discussion regarding choice, which I will look closer at in section 3.4 (p. 37).

In the situation of the avatar's untimely death, the player would have to replay an already experienced challenge. As such, the player would then know what would happen "next", but the avatar would still be unaware of the impending threat. This is, however, something that cannot be completely solved, depending on how static the game is. If the threat in question is a highly detailed scripted encounter, compared to the chance of a random dangerous monster or opponent, it would indeed reflect the difference in knowledge, but also be somewhat more of a game mechanic, rather than narrative.

A good way to alter this method slightly, is when other entities knows either less or more than the player, and use this difference in knowledge to formulate bits of information that the player, potentially, would have no chance of knowing or deducting at that current point in the game. For this example, it is naturally necessary to assume the previously mentioned method in which the player already knows the game, but the same can be said about reading a book twice – it is simply something that has to be mostly ignored. A popular way of formulating this information is by using *NPCs* (non-playable characters) as a conductor of the players' intended line of thought or potential lack of knowledge. This use of characters is something we will get further into in section 4.2 (p. 49).

2.2.3 Transmedia

It is also important that we embrace the transmedia form of storytelling that is becoming more and more popular, in which the story-element of the game is found in more than one medium, but centres around a unified universe. Stories directly overlap, in one way or the other. During *DICE2013*, Gabe Newell and J.J. Abrams did the keynote about storytelling across platforms (*D.I.C.E.* 2013). This showed a lot of good points on how the mediums of movies and games differed, by taking examples

and using them against each other. As expected, some worked better in games and some worked better in movies.

However, the use of transmedia storytelling is still something that should *support* narratives in games, rather than being a *necessity* for it to work. It can, in the same way, also be used so that the game does not have to go out of its way to use specific techniques and explain certain events. A subtle reference to a story-arc in another medium might be enough, by letting the players that are interested in the story go and explore them on their own.

2.3 Emergent & embedded narrative

Game designers Katie Salen and Eric Zimmerman (Salen and Zimmerman 2003) do not question whether digital games can be narrative or not. They distinguish between two structures for narrative play: Embedded and emergent.

The embedded narrative resemble classic linear narratives like films and literature the most because the story exists prior to the player's interaction with the game. That is, embedded narratives are pre-coded events that the player has little or no influence on whatsoever.

Emergent narratives are by Salen and Zimmerman described as narratives that arise from the gamesystem's ruleset (Salen and Zimmerman 2003, 383) – what the program are coded to let you do in-game. They write that emergent narrative elements arise during play from interactions that are coupled to other possibly embedded narrative elements and that these interactions are context dependent. That interactions are *coupled* means that they are linked recursively, thus making one seemingly not-narrative action in the game turn into a narrative when linked to other events and elements in the system.

This take on emergent narrative, however, more than imply that the narrative arise post-event in the game making it something the player construct when *reconstructing* the events that took place in the game. This does not mean that games cannot have narratives, but it does leave it to the player to

actively construct the narrative post-potential-narrative event – something not all players may do if it is not 'forced' upon them by e.g. an embedded narrative that helps them put the pieces together the way a designer intended them to be understood (see also Juul 2011, chap. 5).

Game scholar Henry Jenkins finds that digital games can be designed to have four different kinds of narratives: 1) Evocative spaces, 2) Enacting stories (and micro-narratives), 3) Embedded narratives and 4) Emergent narratives (Borries et al. 2007). The two latter follow the same structure as those outlined by Salen and Zimmerman, whereas evocative space is a definitions attempting to account for games' settings being part of the narrative. Enacting stories tries to explain how even the smallest not pre-coded event can still be staged by the designer and thus be part of the overall narrative the same way that Salen and Zimmerman writes how the player creates a narrative when reconstructing interactions and coupling them to the greater picture.

Evocative spaces and enacting stories fall in line with Manovich's idea of navigable space in video games (Manovich 1998). Rather than basing the development of the character through psychological insight as is the European tradition in literature, digital games follow the American tradition of letting the individual discover and develop herself through exploration of space (Manovich 1998, 23–24).

What really seems to be the difference in points of view here is whether one looks at cause or effect when looking at how games can be narrative or not. Those in favour of seeing games as narrative, in part due to emergent narratives, looks at the effect of the games *after they have been played*. Some of those opposing this look to the events *as they take place in-game*. What seem to miss both extremes' attention are the player's preferences in playing a role in how the game is being interpreted.

2.4 Summing up

The basic point is that while it is possible to use narrative theory from other – or rather earlier media – you cannot simply expect them to work flawlessly and unaltered in another medium. Alterations will potentially be needed, but can work if done right, which is something we will get into over the next

chapters. Games can incorporate these theories without ruining the flow and "gameness"; it just depends on how the different methods are experienced by the player.

3 Story, Fabula and Discourse

The most important basics of narratives in games is which parts of the game's story that is intended to be told by the game designer, how it is perceived by the player and what means are used to put it together. As such, I will introduce the concepts of *story*, *fabula* and *discourse*.

As the concepts of story, fabula and discourse have different – and even share – names amongst different scholars, it is rather vital that this confusion is dealt with by setting up some concrete definitions, which I will use consistently:

- **Story:** The order in which the events are delivered by the medium at hand to the receiver. Story is also regarded as the *plot*.
- **Fabula:** The complete sum of all actions and events that has transpired in the *story*. This is ordered depending on our individual logic, as we cannot logical control the order of the events in the story. In essence, there is no consistent order in the fabula – it contains every bit of our known information.
- **Discourse:** Short for *narrative discourse*, describing *how* the story is being delivered, also often regarded as *sjuzet*. It is all the raw material being communicated to the player from the medium, with no implied order or structure – it is only through *story* or *fabula* that we can make sense of it.

These definitions match with the explanations given by Chatman (and thus, Abbott) and Aarseth.

The connection between story and fabula is strong, but is a subset of the dimensions of narratives. The problem that arises from these definitions is that the usage of story can easily be misunderstood with the everyday usage of "telling a story". I believe that the significance of order is important. The relations between story and fabula are much closer in terms of understanding. We tell stories all the

time, and even though the stories are meant to tell the same events might vary a slight bit, their end-result – the fabula – remains the same.

Completely different stories (the order in which the events are presented) can be formed using many of the same elements and events by sharing a common universe. For instance, if the same events are told from two different points of view, it could easily be the same fabula, but completely different stories.

3.1 Time and Events

When discussing how to interpret a story and the order of which certain events or sub-stories are narrated to the player, it is only natural to cover the fundaments of *time* and *events*, in relation to the discourse. In essence, this also means that different stories are made up from the sequence in which these events are perceived in time. However, the fabula remains the same no matter the order in which the story is told – given that the reader perceives and remembers everything. Naturally, the experience will be different, but the net result of knowledge will be the same.

3.1.1 Chronology in games

There is generally a larger tendency in games to go with a more chronological story-aspect, than in non-interactive media, such as books and movies. Using flashbacks as elements becomes harder to properly represent, as they show something that is entirely in the past, yet the player is still in control. On the other hand, this only applies when the flashback is "complete".

Juul (2011, 147) mentions that the problem with a truly interactive flashback leads to the problem that if the player's actions change too much, it could render the current time-line impossible. A problem he refers to as the "time machine problem". Much in the same way, he argues that flash-forwards pose a similar problem, by thus rendering our current actions pointless. If the player's actions do not affect the future, how can our choices matter? He does have a fair point, but it all boils down to how the

concepts of time travel and how actions affect each other – and is, currently, impossible to prove as no time machines exist, to our knowledge.

This does not mean that time travel related stuff is impossible at all, the story designer just needs to be very careful in what connections there is between past, present and future, in a way so that it both makes sense – if that is truly possible with a concept that cannot be explained – and does not rob the player of his feeling that his choices matter.

The point remains, as we want our actions and choices to matter, and that changing events outside of the current time will also mess with the narrative. This is something I will get further into when looking at choice and interactive cut-scenes in section 3.4.3 (40).

3.1.2 Modular storytelling

Lee Sheldon agrees with Juul in why linear – and thus, chronological – storytelling is the traditional way to go in games, by listing a list of reasons to back this up (Sheldon 2004, 300):

- *It is time-tested.*
- *It is successful in a variety of media.*
- *It is familiar to the writer and comfortable to the player.*
- *It guarantees authorial control over the progress of the story.*
- *Traditional stories enjoy the added benefit that lots of people have had experience writing them. The difficulties are limited to the same craft issues found in other media.*

Here, however, also lies the problem with the interactivity that games are meant to provide the player with. Of course, it does not mean that linear games fail at storytelling, but rather that it seems odd that the medium that has the most potential to use alternative methods of storytelling only seems to use existing theories, rather than inventing new ones. Sheldon also quotes Bartle (Sheldon 2004, 297), with a quote I can only agree with:

> *Too much virtual world design is derivative. Designers take one or more existing systems as foundations on which to build, sparing little thought as to why these earlier worlds were constructed the way they were.*

To that extent, Sheldon talks about the idea of modular storytelling (Sheldon 2004, 311). This is interesting in the terms of storytelling, as all segments of the fabula can practically be put together in any order, the goal being to remove all linearity, to let the game's discourse provide many different stories in order to form the same fabula. It certainly opens up for the possibility of using time in a non-chronological way, but in essence, what happens is that most of the events are being put "outside" of time, by letting them happen in any order, and not relying directly on each other. If two segments have direct connections, they either need to be merged into one module, or be able to work individually of each other in any order. However, the size of these modules is highly scalable and can range from a single moment to much longer linear scenes. It should come as no surprise that this also makes the construction of an effective storyline much harder, as many more things have to make sense. We can, however, certainly find types of stories that can benefit from this model, the obvious being detective- and crime-stories, in which each element gives the player a clue, or goes out to interrogate a range of witnesses or suspects.

The connection to story and fabula here is interesting, as it allows us control over the elements of the fabula, while providing the player with a multitude of different stories. That is, the game's discourse becomes highly dynamic and can "produce" a variety of stories as the events can happen in any order. The story-structure makes it easy to make a connection to sandbox games, but there is a distinct difference, in that most of these incorporate the sandbox as a way to open up optional content, rather than following the main narrative.

This approach might not work with all games, or work with games that already incorporate a very definite goal. Just as some would like a new and exciting experience, some do like the linearity. However, if the modular structure is done well, it should very well be possible to hide the structure and make the transition between modules smooth and almost unnoticeable. Sheldon makes an example he calls "A Bad Day at the Office", in which several equally bad things could happen.

Depending on how many, the intensity of how bad the day has been increases, but the order of which these bad events happening is irrelevant (Sheldon 2004, 317).

Naturally, the narrative games do not have to be purely modular or linear. Modules can be nested – in more than one level, even – and we can have clusters of them set up in a more linear path, should we wish to radically change the setting or other aesthetic details in a way that would render some modules implausible or unrealistic. This is, naturally, just some of the narrative challenges that arise. However, they are challenges, not impossible feats.

3.2 Optional elements

In terms of all the elements delivered to the player via the discourse, it becomes apparent that not all of them are essential in order to understand the game's story – this is often referred to as "backstory" or "lore". I find it necessary to introduce the concept of a "game universe", which will cover every aspect of discourse that the game *can* provide. The more practical reason is that we can experience a different story (and thus, fabula) at every play-through, depending on how much we take from the discourse. As such, we are not guaranteed to experience the full game universe after doing a single playthrough. This further means that elements of the universe can be considered optional, but they will still have to be represented in-game in one form or the other. The optional elements are often represented in-game in ways more or less easily obtainable by the player, lying around throughout the game as objects, as journal entries received by defeating a new foe or simply obtained by completing an event or quest. There are many possibilities.

There is, however, a problem with optional elements that lies with the "balance" of how much of game universe that should be funnelled into this type of optional elements – that is, how much of the game's potential discourse should be considered to be unessential to have a coherent and working story. It does not matter how good the writing is, and how cleverly constructed it is, if the majority of the players are unable to make sense of it. There needs to be enough story elements easily available

to understand the game's overall story. Sheldon points out that obviously not all players are explorers, and as such vital parts of the story should never be optional. On the other hand the exploring players would need to be rewarded by doing just that: exploring, which means that these optional elements can be made available both very easily and thoroughly hidden with increased intensity (Sheldon 2004, 189). Sheldon further recommends the use of elements:

> *The method is not nearly as important as the concept of keeping it within the context of the game fiction. Anything we can do to preserve the fourth wall and aid in the player's willing suspension of disbelief, however small, is worth doing! (Sheldon 2004, 238)*

I agree. It is the small things that can be found here and there that add something extra – but it is only one of many different tools. Aarseth mentions the use of *objects* in relation to narratives, and categorises them from most narrative to most ludic as *static non-interactable objects*, *static usable objects*, *destructible*, *changeable* and *creatable* (Aarseth 2012, 132). The usages described here are mostly tied to the "static usable objects"-category, as there is a certain level of interactivity involved in obtaining and using them.

When discussing the game universe, it is also worth mentioning the "extended game universe" that comes from adding transmedia to the mix. As mentioned earlier (2.2.3), this gives a variety of tools to further develop the game universe beyond what, potentially, makes sense to present in the game, and promotes a deeper connection between media.

3.2.1 Examples from games

In the *BioShock*-series, the player can obtain so-called "audio-tapes" which plays a clip of dialogue, elaborating on story-elements relevant to the current transpiring events, given by characters that the player are already familiar with. These are, at any time, replayable so the player can review the information given, should they not make complete sense at the point at which they were obtained, or the player simply wishes to review their contents later, when further information has been obtained.

These audio-tapes are also even used as small side-quests, which is something I will get further into in section 4.4. It is also important to notice that this is in no way a unique feature; it is simply executed very well in this particular case, in my opinion. *BioShock Infinite* (2013) even adds visual versions of these, in the form of kinetoscopes that plays a video-clip instead of a bit of audio.

Even though it is of a slightly other category from the other games mentioned, *Diablo III* (2012) – if we look at it as a narrative single-player game – uses many of these optional element methods as a tie-in to the player's journal. Monsters and new foes, upon being defeated, adds an entry to the journal detailing earlier adventurers' encounters with said foes, or more detailed backstory. This is also often referred to as a bestiary, and has its roots all the way back to the monster compendiums from classic role-playing-games, in terms of usages within a game-related setting. Furthermore, when exploring different places – both easily found and more hidden – as well as completing quests could often reveal items that would provide journal-entries, in a way much familiar to audio-tapes earlier described from the *BioShock*-series. *Diablo III* was, however, not the first game in the series to utilize the mechanics. The first *Diablo* (1996) had various tomes on pedestals shattered about in the game world that provided an experience similar to that of the audio-tapes – the only real flaw was that the player was not able to review these at will at later times, but instead only on the location they were found.

3.3 Gaps

One of the more commonly used elements in general storytelling is the concept of *gaps*. Abbott (2008, 90) defines this as a pause in time and/or space from the narrative, in which details are left out. This is most often done because the given segment of the storyline is deemed uninteresting, uneventful or otherwise unrelated to the reader or player, and is often occurring while the player/reader is sleeping, traveling or otherwise inactive. As mentioned previously (2.2.2, "Interactivity", 20), this is also something that can be heavily used as a method of both under- and overreading, as narratives can come more alive if we leave out certain aspects. Less *can* be more (Abbott 2008, 91).

3.3.1 Schematised pictures & closure

The theory on gaps is not a new thing at all, but exists with many different names. Abbott's definition was based upon the work of Wolfgang Iser (1981), who describes it in context with "schematised pictures", which is something slowly being created when readers work their way through literary works, and slowly build up images in their minds based on what they perceive from the written text. It is important to emphasise that Iser is talking about images in the sense of pictorial language and metaphors, rather than actual visual images. He goes on to discuss that, in order to "see" a described object in its entirety, a lot of these images needs to be created in the mind:

> *But how big should the number of such images be, in order for the literary object to appear completely clear? Apparently, many such images are required in order to imagine the literary object with sufficient clarity. Here we encounter the problem which in this context interests us. Each image actualizes as a rule only one aspect. Therefore it determines the literary object to exactly the same extent as it leaves a new need for a determination. However, it also means that a so-called literary object never exhaustively can be determined. (Olsen 1996, Iser on "Tekstens appelstruktur: Appendix A: Iser on schematised pictures (Olsen 1996, Iser on "Tekstens appelstruktur"), 155)*

Iser further argues that when a multitude of these images has to collide, the collision will leave a form of "incision" behind which resembles the gap theory. By increasing the amount of details regarding any given literary object, the increase in schematised pictures would *potentially* lead to even more gaps that can either be ignored or attempted to be understood by the reader. The reader has no possible way to figure out what the "correct" way of understanding these should be, seeing as more details can often lead to more questions. Furthermore, as a reader reads through the same book again – just as a player who replays a game – he expects to be able to find more details, that he did not notice before, as he now knows the full contents of the book. Iser states that the intentional creation of gaps thus leaves open an opportunity for the reader to "play along" and use this guesswork to make a worthy guess of the "right" way.

By reducing the amount of gaps, the reader is *potentially* left bored, as he cannot actively participate in creating "his own" visual images in the mind. Some people like when all the details are there, some do not.

With games being visual, the creation of these schematised pictures is naturally a different matter. When looking to another visual medium, comic books, McCloud (1994) covers the expression of "closure". While this sounds like the complete opposite of the gap, it is named so because the reader is the one closing the gap, and as such brings closure to the given situation. The following frames summarise McCloud's description well.

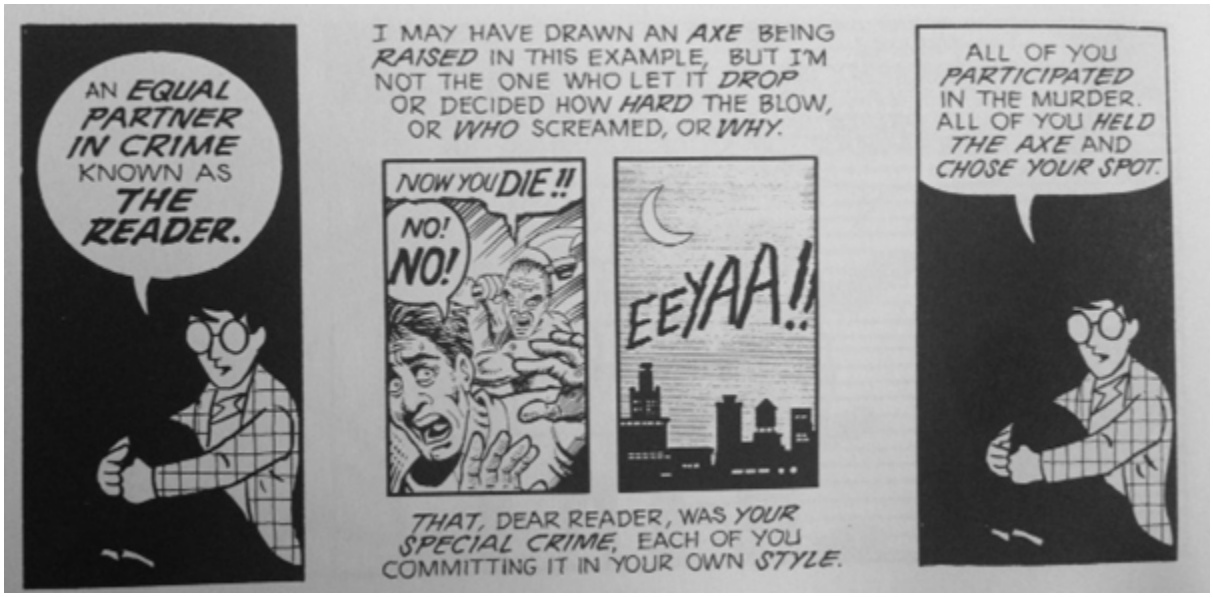

Figure 1: Closure (McCloud 1994, 68)

What happens between the two middle frames is left entirely to the reader, and – as McCloud states it – *"To kill a man between panels is to condemn him to a thousand deaths"* (McCloud 1994, 68). The reason for this is that the situation can be overread in *a lot* of different ways. In truth, the only thing we know is that an axe is potentially being swung, and that *someone* screams out in pain shortly after. While there is a rather obvious implied message – that the man in front is killed with an axe by the man behind him – it is never truly confirmed. The point is that the reader is the one making the conclusions, and what we find to be implied is – potentially – very different between different people.

3.3.2 Gaps used in games

The more traditional uses of gaps being used in video games are primarily of three different categories, which I will explain by using examples derived from the start of *Dragon Age: Origins* (2009) and *BioShock* (2007).

Leaving out the player

At the start of *Dragon Age: Origins*, when the initial dialogue-sets have been completed, the player is told about a meeting that is going to take place – which the player cannot take part in – between the player's father, his good friend Arl Howe and a Grey Warden that has just arrived to seek a recruit, and apparently has his eyes on another person than the player. We know nothing more of what takes place at the meeting. Arl Howe's reaction towards the Grey Warden is notable, as he did not expect him to arrive. When combined with the fact that the player are sent off to do errands, this situation becomes very easy to overread because Arl Howe seems nervous, the Grey Warden's unannounced appearance and the player's dismissal.

In the same way, the very start of *BioShock* has the player take part in a plane crash. The screen turns black, and there is a chaos of sound. It is very obvious that it *is* a plane crash, but no visual indication of what actually takes place is given. The only real thing you are told – and shown – is that you swim towards the surface of the water that the plane crashed in, and breach it to experience the scene of burning oil on water and the sinking tail of the plane. So, in the same way as in the meeting in *Dragon Age: Origins*, we know what has happened, yet we know no exact details, and never will get those, at all. While it is not incredibly important for the storyline, there are many things that can be overread from it.

Gaps in time

Another classic use of a gap, is what happens "during the night", which usually allows for extensive overreading. In *Dragon Age: Origins*, it starts when the player chooses to go to bed early, and ends at some point during the night, where the player is awoken by his dog barking. The player learns that Arl Howe's men are attacking, and soon thereafter that his father did not come to bed that evening, and it becomes quite apparent that he was with Arl Howe. Thus, thoughts about Arl Howe and the player's father become a major source of overreading. On the other hand, it can also be underread, as the details that are important for the narrative are given quite quickly: Arl Howe's men are attacking and your father is missing, presumably while being with Arl Howe.

A similar method is used in *BioShock* when the player injects himself with the first plasmid, causing him to fall over a railing and black out. In this case, there are no *real* sources of over- and underreading, in the same magnitude as in the *Dragon Age: Origins* example, but the type and usage of gap remains the same: The classic sleep-type, here applied in a slightly different way.

The loading screen

The third and final example is the classic "loading screen" type of gap that happens when the player changes areas and/or the game is "forced" to load new assets. In *Dragon Age: Origins* one of the uses is when the player journeys to Ostagar. We do not see what exactly transpires during the journey or how long it *actually* takes. At the same time, the situation of the game world is further explained, as the narrative takes on the form of a cut-scene, to elaborate on what could happen ahead. The risk of over- and underreading here is not as immense as earlier examples, except regarding what the player must be thinking and going through by trying to manage what has just happened. A lot of things do, however, remain unknown from when the player and the Grey Warden take off. For instance, we do not actually know if the player's parents survived.

In *BioShock*, there are two variations of this type of gap, both of which are less of an actual gap than the example from *Dragon Age: Origins*. The first is a rather standard loading sequence that happens when the player enters the Medical Segment, and locks a door behind him, after just being chased by an angry crowd of people. For some reason, in the moments after the loading screen, the following crowd has disappeared and unable to be heard, even though they were more or less attempting to break down the door that the player locked prior to the loading sequence. This gives a quite obvious source of overreading, even though no actual time has passed. Did they give up, take another route, or something entirely different? Will they potentially become a problem later on? We are never told. More closer to the *Dragon Age: Origins* example, is when the player changes location by using a submarine type of craft to travel to another section of the game. In the same way, the player is not told what happened during the trip, how long it took, or what was seen and experienced during it.

3.3.3 Usefulness of gaps in games

While gaps are not unique to games, some of the examples mentioned before are minor alterations of methods already used in both movies and books that still work exactly as they are intended to do. However they need to be used with consideration as they themselves can lead to over- and underreading, thus potentially giving the player an unsupported interpretation of the narrative or breaking the immersion of the player.

As the perception of these gaps is individual the fabula is 'altered' in that the player 'creates' an additional part of the story, that was not constructed when the overall story was created by the game writer. This is even further enforced when the story can be shown in different ways, and giving the reader different parts of the fully designed game universe to base his gaps upon - the otherwise static of elements becomes somehow dynamic sum.

On the other hand, including things like gaps in the story can cause problems, as it will promote different game universes for different players. The argument here, as also mentioned when defining

"game universes" (3.2), is that the game universe should be everything that is completely set in stone by the game writer, not what is meant to have been vague information, details assumed by the player or otherwise inconsistent information between playthroughs, should the player choose to replay the game again – assuming it is a linear game with no alternative endings or paths.

In the end, the reason that gaps are very interesting and relevant to look at, is that they create a great form of individual perception to a medium that already – potentially – has the smallest amount of information available to the receiver that could be over- and underread, compared to other media. Gaps let the player be a more active part of the discourse, by letting him perceive and construct certain details individually. This is standard for all gaps though, no matter the medium.

Things like combat sequences can count as gaps, much in the same way as when used in comic books as by the example from McCloud (Figure 1, 33). We know there was a fight, and that the avatar emerged victorious, but details regarding amount of bullets spent, who died where and likewise details remain largely unimportant in the grand scheme of things. The player is not likely to remember these sequences as important to the overall story either, as it is a repeated game mechanic – a notion that I will look further at when looking at 'soft' choices in section 3.4.1.

3.4 Choice

One of the unique things that games bring to a narrative is the concept of giving the player a choice between taking different actions, choosing different strategies or otherwise attaining the goal of the game in different ways. Throughout this section, I will look at and classify the different kinds of choices, their impacts and examples of usage.

3.4.1 Hard and soft choices

One way of looking at choices is by separating them into the two categories of "hard" and "soft" choices. This categorisation is one I have come up with myself, in an attempt to separate them based on level of story impact.

- **Hard:** The choice actively affects the outcome of the game, and changes certain aspects which results in different endings. For example, choosing whether or not to slay the dragon before rescuing the princess rather than slaying the princess and rescuing the innocent dragon from her manipulating spells.
- **Soft:** The choice is of "minor importance" and while it does make a difference, the fabula is not radically changed. For example, how many forest trolls was killed or not (and how) during the travels to the castle, or if the hero fought his way there with either a broad sword or an axe.

Naturally, the level of importance is intentionally loosely defined, as it would be impossible to clearly state how exactly to divide the two categories, without running into problems and contradictions. A "soft" choice could also be whether or not you snuck past a guard, or simply eliminated him on the spot. You might run into him later, but in the end the outcome of the given situation is the same – it could simply have been another guard. On the other hand, had this been a guard of importance, making it a "hard choice", he could have alerted the owner of the relic that the player is meant to steal, thus letting him get away with it, before the player gets to steal it. The choice could then have a serious impact – depending on the importance of this relic. The point is that these two categories are highly flexible, and it is up to the player to judge whether or not that specific choice had anything to do with the final part of the game's story. On the other hand, as the popular saying goes: it is the journey that matters, not the destination. A well-constructed narrative would potentially not let this choice seem insignificant, even though it has minor importance in the long run.

3.4.2 The illusion of importance

Seeing as games are meant to be interactions, we are constantly faced with choices. While it is impossible to state how the hard and soft choices compare in scope, it can be assumed that most of them are soft, even when we consider that basic gameplay-based choices – like if the player was closer to the left or the right wall when walking down a corridor – could be largely ignored. Proper examples of soft choices can be seen in the dialogue choices in the introduction part of *Dragon Age: Origins*, in which the various options have zero impact on the game in the long run, no matter if the player either tries to be as nice or mean as possible. The end result is the same, yet the immediate reactions fits what was said enough to be a proper conversation, so that the player can be satisfied with his choice, despite it not making a serious impact. Should the player try to skip an otherwise important choice – like whether or not to get the avatar's dog upon the first mention – the player is forced to do it later, so that the end result always involves having the dog. As such, the choice of whether or not to actually get the dog becomes superficial, while when to get the dog becomes insignificant and unimportant. This is, however, potentially only really noticed when or if the player chooses to play through the experience again, which is where the idea of the choice having mattered comes into mind, even though it makes no real impact at all.

Much in the same way, *BioShock Infinite* incorporates the concept of soft choices very well. At various points throughout the game, the player has a choice between two rather different actions – and in some rare situations also a third, by simply not doing either at all, at which point the game "continues" and sees the act of not choosing as not wanting to take sides or remaining neutral. The best example of a soft choice comes at a point where the character Elizabeth asks the player which amulet she should choose. She will wear the amulet for the rest of the game, but the decision changes nothing else than that cosmetic detail. However, the player will sense a change in the game's story detailing how Elizabeth's amulet looks, where the intended part of the game universe refrains from

stating that the player chose her amulet, nothing more. The depth of detail can be seen as a type of gap that the player chooses to fill out with the choice.

Another example is during the first part, where the player gets the choice of throwing a ball at an interracial couple, the announcer or simply not throwing at all. No matter what the player chooses, the guards will identify and restrain him, just before the "effect" of the choice is followed through. There is a twist, however, that somehow changes it from being a definite soft choice, as you meet the very same couple later in the game. Depending on your earlier choice, they will give you a reward. However, should you choose to do the opposite, one of the announcer's men will give you an item at another point in the game. This reward does not have any real effect to the story, but it is an effect, never the less. The charm that *BioShock Infinite* uses, is that the inclusion of these choices are made very deliberately to subtly show the game's underlying point that the player's choices do not matter – everything would turn out the way it did, regardless of what happened or not. This creates a unique result in tying together the linearity of the game with the discourse.

In the end, soft choices can be seen *mostly* as illusions. While the choices made do give a sense of real impact, and could be argued to alter the perceived fabula, they only change minor things that does in fact not change it severely enough. Again, it is a matter of perception of on where the split between a soft and a hard choice goes – which could be tied on how immersed the player is in the story of the game.

3.4.3 Interactive cut-scenes

At several points throughout newer games, scripted events – e.g. in the shape of a dream sequence, flashback or flash-forward (as mentioned in section 3.1.1) or otherwise – the player has to either lose control or be in a situation with very limited ways of interacting with the environment for it to be properly executed, as the story that needs to be told with this method naturally has to be very static. On the other hand, these "illusions" of choice can be argued to be a type of gap that the player brings

closure to by performing the actions in which he has a feeling of having a choice in what to do, or how he experienced it. This is far from impossible to do in an effective way, and can for instance be seen used in games as *Max Payne* (2002) and *BioShock Infinite*. In these, there are certain points where the player temporarily loses his abilities to attack or has a fixed amount of objects to interact with, which acts as triggers for scripted events, letting the player experience a more linear "interactive cut-scene", where the game mechanics ensure that the primary storyline can only happen in one way.

Yet, the player can still take as much time as he wants before starting these events – given he knows what the trigger is or how obvious it is – to explore and get an impression of the surroundings and environment, rather than simply being dragged through it. While both are very linear paths, there is a big difference. The point is that while the player's perception of the story might be slightly different during this, the fabula – like with soft choices – remains the same.

3.4.4 Utilising hard choices

If we look more closely at hard choices, it becomes necessary to further separate these. I have chosen to do this by classifying them, based on the way we interact with the game: whether or not the *action* behind the choice is known or unknown, and if the consequence of said choice is known or unknown. This gives us four different combinations:

- **Known Action, Known Consequence:** These mirror the soft choices in general, in the way that they require a direct interaction from the player in order to be played out. The optimal example would be to let the player choose to blow up a planet or not – naturally given that this planet has/had a meaningful role in the game's story. The player knows what he does, and what the implications are.
- **Known Action, Unknown Consequence:** There are different ways to spin the unknown part of consequences. If we compare to the above example, it would essentially mean that we know we are pushing the button to fire the death ray, but we do not know if we will hit the hostile alien spaceship, the planet, both or none of them.
- **Unknown Action, Known Consequence:** Most often, this would be the classic example of a trap that immediately springs, like when stepping on the hidden tile in a dungeon that flings

deadly darts towards the player. The player took an action by choice, but did not intend to set off the trap by taking the step. The second he did so, he realised the mistake and the implications.

- **Unknown Action, Unknown Consequence:** This is perhaps the trickiest of the combinations to explain, but adds a twist to the action in that it can be regarded as unnoticed, contrary to what a known consequence would be, as the player would then immediately connect the action and consequence. The connection here would then only be noticed by the time the consequence is revealed – and a logical connection between the two can be made.

Obviously, these descriptions should be taken with a grain of salt, as the different aspects can be perceived in different ways. They do not make massive changes, but rather elaborate on the different ways they can be understood and used.

Actions

In terms of actions, there are several ways to look at the known aspects, which basically roots in whether or not the choice includes the option of refraining from taking action. In the case that it is not an option, the player would be in a situation where he is *forced* to make a choice. This should not be confused being forced to do an action, which would imply that there was no choice to begin with. If we include the option of not doing anything at all, we have the deliberate choice, which is done purposefully as the player has the option of simply not doing it. It is important to include the possible dimension of postponing a choice indefinitely, which some games support – and this should be ignored when considering the choice of not doing anything, as postponing the choice does not change the fact that it has to be made.

When looking at unknown actions, there is an interesting dimension in noticing them or not. Of course, if the player noticed it right the second it had happened, it would still have been unknown as well. This can, as mentioned above, only really happen when the consequence is also unknown, as the player would notice that an action had happened, when realising the consequence.

Consequences

When talking about consequences, it is worth to notice that these can be further broken down into parts based on realisation on the consequence in question. Essentially, we have the *expected* and the *actual* consequence. Let us imagine that the player is holding a gun and pointing it at an enemy and open fire at it. The expected consequence would be that the enemy would be hit – and take damage. However, if the enemy in question suddenly dodged or caught the bullet in mid-air, or it simply passed right through, as if nothing had happened, the actual consequence suddenly does not fit that of the expected consequence.

Replayability of games is also an important factor to bring forth again. As mentioned when talking about interactivity and suspense, the unknown choice can suddenly become known to the player (2.2.2, "Interactivity", 20), which further alters how consequences in general are perceived. This naturally also implies that the consequence is not random, and thus that the unknown consequence suddenly becomes a case of the actual and expected consequences to be identical. Either way, the differences between player and avatar knowledge creates a very interesting dimension to the choices here that could be immensely developed by having dynamic outcomes of choices with unknown consequences.

There might even be cases that has both known and unknown consequences. If we look at the example of blowing up the planet, the known consequence is fairly straight forward. The player might, however, not know that the planet was not empty of life, and the player thus caused an entire species to go extinct. It is a fairly extreme example, but it shows the point rather well.

Alignment and reputation

The best way to describe the notion of alignment and reputation is by comparing it to what happens "behind the scenes", making the *D&D Alignment*-system (The Hypertext d20 SRD, 2013) the most fitting parallel, along with reputation-based systems. Obviously, the player needs to make choices to

affect these, but the choices do not *actively* change anything at the given time but would still make a difference. The player might even be aware that such systems are in place, but rather be judged based on them at a later point. It is hard to directly classify these according to the presented system, as there are so many variations. The most obvious change would be whether or not the player has knowledge – either from being told earlier or when performing the act – that the given choice had the implication, which would make it either a known action with either known or unknown consequences. If he had no prior knowledge to the action at hand or had any way to track what the action implied, it would be an unknown with, again, either known or unknown consequences.

As such, such a system can span the entire spectrum of the model, depending on the gameplay mechanics. That does not mean that it cannot be a great tool for narratives as well, as it can be used very effectively to make open games seem a lot livelier and make the stories seem much more alive and dynamic.

A fairly straightforward connection can be made to modular storytelling (3.1.2, 27), and tie the different types of choices very well together to form a functional system. After all, a game which has its narrative built to be modular would need to have an underlying system to track every choice made. As the definition of a choice with known action and consequence would suggest, such would be made every time the player started a new module. If that was not the case, then a sense of linearity would be present, and the story would not be truly modular.

Unforeseen consequences

In the start of *Half-Life*, the player is tasked with pushing the cart with the unknown sample into the Anti-Mass Spectrometer. In this case the action is known, but the player does not really know what to expect of the consequences, except that the actual and expected was certainly different – unless if that chosen consequence was "*not* as the scientists expected". Next thing we know is that all hell breaks loose. It is worth to mention that there is not really an *actual* choice going on – which also

highlights an interesting point: the description of this model even supports when there is no choice at all, and even that this works for all four branches of the model. Action leads to consequence, known or unknown to us.

3.4.5 Summing up choices

To sum up on choices, the structures of narratives will need to evolve past the more linear structures, in order for the player to make his choices matter, and reinforce the interactivity that makes games all the more unique from other media. It is a high demand to put on games, but whenever we ask ourselves "Why am I limited to these actions?", when there is potential for so many more interesting choices, it becomes all the more apparent that the player is *always* limited – no matter how open the discourse allows the story to be.

It is also very interesting to note that the model introduced in relation to the hard choices can basically be applied to choices in general, and thus covers both the soft, hard and purely gameplay related choices. It would even work outside games, for that matter.

3.5 Summing up

As indicated throughout the above sections, there are certain similarities between the nature of gaps and soft choices, in relation to how they should be tackled on a game universe level. The reason hard choices separates from this, is that they radically change something that has to be tackled differently based on the given choice, on a deeper level. It all comes down to which parts of the game universe are set in stone, and to what degree various details are meant to matter. On that note, it is also interesting to see which parts of the game universe are needed in order for the story to make sense (3.2, "Optional elements", 29).

In the end it does go to show that narratives in games are tricky in relations to the whole fact of choice, which is also what is so special with games. Choices *can* be made, but *all* the different

branches (of "meaningful" choices) and the various details have to be dealt with by the game designers before the game is played. It is important to emphasise that this is in relation to the overall narrative and nothing else – as choices naturally always matter in terms of the actual gameplay, otherwise the interactivity would be completely absent.

The concepts of gaps and choices is furthermore subjects that will be explored more thoroughly as part of the concepts of quests (section 4) and characters (section 5), which should help underline the further importance and usage of these.

4 Quests

The notion of quests is a concept that is based on the old pen & paper role-playing games - which started out taking place in somewhat medieval setting, hence the word "quest" - which was the main driving force by giving the players a goal that they had to fulfil. The concept of quests has, over time, been introduced to digital games, in a variety of ways. It is far from unique to standard fantasy role-playing games. The only difference in more modern settings is in the name, the most popular alternatives being "missions", "goals", "tasks" or "scenarios". Despite different settings and names, the main use of quests remains the same throughout various games.

The main point of this chapter is to explore quests as a narrative method and how this is applied in a variety of ways throughout different games in order to figure out ways that quests can be used to further improve game narratives. I find that it is important to consider quests as both the basic goal that the player is required to achieve, as well as the aesthetic elements that exist to supplement the quest and/or help to guide the player towards the end-goal. As Aarseth mentions in his article on Quest-Games: "Instead of looking at games as stories, we might benefit from looking at some games (games with specific goals) as quest games" (2004, 14). Before looking at what a "quest game" is, it is

important to find a fitting definition of quests that I will adhere to. Tosca provides such definition based on pen & paper roleplaying games:

> *From the designer's point of view, a quest is a set of parameters in the game world (making use of the game's rules and gameplay) that specifies the nature and order of events that make up a challenge for the player, including its resolution. From the player's point of view, a quest is a set of specific instructions for action, they can be as vague as a general goal (overthrow the evil king) or extremely precise (take this bucket to the well, fill it up and bring it back to me); after the quest has been completed it can be narrated as a story (2003, 1).*

She further argues that a story in general can only be narrated *after* it has happened, as it is not really possible to narrate while participating in a given story, because the quest is a combination of events. These events are not stories while they take place – but they are events that can be narrated and thus turned into stories afterwards. While it is correct that – if we look at quests purely based on the acts that they want the player to follow – the quests alone only have two points where they, by themselves, can pass on a message to the player: at the start, and at the end. A quest can be made up from several events that actively narrates the story, which in turn will mean that a quest can be narrated while taking place. This is something I will elaborate on in section 4.4.1 ("Sub-quests and quest-lines", 52).

Tosca also refers to the work of M. Wibroe, K.K. Nygaard and P. Bøgh Andersen (Tosca 2003, 3) that looks at quests in *Diablo* (Blizzard North 1996), in relation to the game's story. The arguments used, according to Tosca, are that because the quests are optional, that the monsters seem static and that there seems to be a lack of choice, then the story fails. While I do agree that the quest-structure of *Diablo* is not the best – which I will look at more in depth later – I find it ignorant to use that as a base to state that the story itself is bad. As mentioned earlier (3.2.1, "Examples from games", 30), *Diablo* uses a variety of optional ways to tell its story, rather than building the foundation of the story on a driving main quest.

However, the real problem with their approach is assuming that the game's story should rely completely on the quests – or even that the player actually needs a fair amount of choices – in order to be good and successful. As I mentioned when describing choices (3.4, 37), it is – along with a more open story with multiple outcomes – certainly a way forward, but on the other hand, *Diablo* is not newest of games. The point is that while quests certainly have the potential to drive a game's story and main narrative, it does not necessarily have to be the *only* way of delivering it. Games like *Diablo* shows that a game can deliver a solid story, even while having it not being as obvious and shoved at the player, primarily by using aesthetic elements and optional content, while not requiring the player to follow the deeper path of the story in order to beat the game.

The definition of a quest Tosca uses is precise and covers how I will perceive quests through these sections, and while I can agree that a quest can only really turn into a story after it has been completed, this should not be understood as quests only being able to add depth to that story at the start and at the end – there are many possible approaches to include aesthetic elements that works to supplement that story and narrate a story throughout the course of the quests.

4.1 Defining quest games

Now that we have a more concrete perception of what a quest is from Tosca, it is only logical to take a closer look at games in which these are specifically used. In *From Hunt the Wumpus to EverQuest*, Aarseth (2005, 497) takes a new look at defining what a "quest game" is:

> *A game with a concrete and attainable goal, which supercedes performance or the accumulation of points. Such goals can be nested (hierarchic), concurrent, or serial, or a combination of the above.*

The first part of this definition basically nullifies the problem with being able to call most games for quest games, as the quest-part of these games is much closer to the actual goal of the game, and relies much more on the player's performance. Aarseth even goes as far as to simplify it to the much

more minimalistic definition: "A game which depends on mere movement from position A to position B." (Aarseth 2005, 497)

Aarseth's argument for this definition being just as useful as the longer version is that the short definition overlaps with the types of narrative games that contain "a fixed sequence of predetermined events that cannot be circumlocuted through gameplay" (Aarseth 2005, 497). While this has some merits to it, I will stick to Aarseth's longer and broader definition for the sake of simplicity, and to be able to separate quests from goals. The longer definition also has the benefit of elaborating on the different ways these quests can happen, and that multiple can be in place at the same time. That is, there can be a main quest line, and several side-quests, some of which can be obtained at any given point during the game, and do not necessarily have any direct connection to the main quest line – e.g. the structure found in *The Elder Scrolls V: Skyrim* (2011).

Another important point to emphasise here is also that quests are not always actively shown, and might be more subtle so that the player has to figure it out for himself. If we look back to the pen & paper example, it would fit with the overall final quest not being obvious at first, but how it slowly gets revealed through the progress of sub-quests (4.4.1, "Sub-quests and quest-lines", 52).

4.2 Hard and soft rules

Rather than using the narrative-creating methods found in classic narratives (films and literature), Tosca uses the structure found in pen & paper roleplaying games to account for the origin of quests in digital (and according to Tosca, mainly single-player) games. Roleplaying games have a set of *hard rules* that describe how to deal with all possible player-behaviour in the game; character creation, the game world etc. These rules are the foundation of all actions within the game and can only be changed if all participants agree upon it (Tosca 2003).

Within the framework provided by the hard rules, we find the quest structure as described above (4, "Quests", 46) to be the *soft rules*. These are instructions for a particular quest or an overall story in the

game world, describing elements of the game in detail (characters, places objects etc.). These structures can be more or less open (like digital games) and some may constrain the players' choice to only be how to deal with predefined events and challenges whereas others less linear ones may simply present the players with what is going on in the setting and leave it to the players to go find their own quests.

What differs greatly from pen & paper roleplaying games' hard and soft rules, when compared to digital games' ditto, is that the analogue game has a living breathing human game master who tweaks and adjusts the game as the players progress through it. Digital games are much more set in their structures than their analogue counterparts and are not tailored to a specific group of people, but an entire segment of potential buyers.

Do the soft rules of digital games make way for them to be narrative? As Tosca points out, the term 'narrative' imply a static structure whereas she would rather use 'storytelling' as it can merely "[…] mean pre-dispositions of elements" (Tosca 2003). The elements that can aid storytelling in games are quests and the way they are structured. The most linear ones are probably going to be the ones most easily narrated after each quest and after the completion of the entire game. When more open game worlds are in question, it relies more on the player's tendency to see narrative patterns or on the game designers to be able to structure the overall story in such a way so that even very different experiences can be bound up in a storyline throughout or at the end of the game.

Quests – and thus soft rules – do seem to be the obvious way of planting elements and events in games that may end up becoming a story to some players. However, some players may hate the linearity that other players love, whereas the open world is too much freedom for others to ever be able to construct a sensible story from. Others again do not even care for stories at all.

As mentioned before (2.3, "Emergent & embedded narrative", 23) some academics look at the effect of some games and find that yes, games can definitely be narrative. Others look at what actually happens in-game and concludes that it is only post-game event that the game can become narrative

and thus concludes that games are in fact not. However, players' preferences determine how they will experience the game and whether or not they will end up seeing the narrative structure or not. Some players may see the soft rules of some games as narrative, but it is not a given simply because story elements are in the game.

4.3 From gameplay element to storytelling tool

Sometimes quests are used very purposefully in games that obviously were not designed to incorporate or even use them in a narrative manner. At the very least, they were not like that in the first place. The early *First-Person Shooter* (FPS) games were the pillar archetype of games that we now call narrative digital single-player games. Back then, the usage of quests were a lot more based on the gameplay element, rather than being a narrative element. *Doom* (ID Software 1993), one of real genre-defining classics of the FPS-genre, did not utilize many storytelling elements in the actual game, but it was obvious that the game was telling a story, that a setting was set in stone, and that there was a progression towards *something*. The prelude-story and details were found in the manual, and between each of the game's episodes. Quest-usage was very simple, as every level would be as Aarseth's shorter definition of a quest-game, mentioned earlier (4.1, "Defining quest games", 48): Getting from A to B. There were slight variations, in that key-cards sometimes had to be found in order to open doors, and sometimes a specific monster had to be defeated in order to progress.

While not being a FPS, *Tomb Raider* (1996) had some of the same goals, but here the game style was better tailored with a type of progress that would fit the quest-structure better, as it also included more advanced riddles, using switches, keys and keeping an overview. Everything had to be done by the player though, which probably gave more emergence than what a quest-overlay would have done. The player was prompted to go exploring and adventuring, getting no real clues on how to solve the various riddles and the like – and yet, the goal was always clear.

Much in the same way as Tomb Raider, Half-Life (1998) did similar things, but kept the quest hidden from the player, and instead took advantage of aesthetic ways to formulate the deeper story, by having characters have conversations and things like the memorable long train-ride in the start of the game to set the setting. On top of that, the player being introduced to the different game mechanics was well interwoven into a more scripted story.

In *BioShock* (2007), a simple – and actively visible – quest system was in place, in which the player was constantly given a new *goal* to strive for, updating whenever the previous goal was completed. It was always described as being told to the player, without really giving away how exactly to complete it, but was reviewable, if the player somehow became stuck. Because of that system, it became easier to introduce optional goals (which I will get into in section 4.4.3, "Push and pull", 55). What really became obvious within *BioShock*, was that the games of this type had adopted a more direct approach to quests, and were utilising them both to control and/or guide the player, as well as combining it with ways to formulate the story to the player.

4.4 Quest structures

Quests come in many different forms and types. In order to figure out the best ways to use them as narrative tools – as well as their basic game based mechanics – it is only relevant to take a closer look at different ways to classify them, and how they can be used to trigger aesthetic tools that use narrative elements to, essentially, make the quest tell a story and provide narration.

4.4.1 Sub-quests and quest-lines

One of the ways to trigger narration during a quest is when a dialogue is spoken by an external character to the player after a certain progression-point in the quest has been reached, which can be anything that the game can keep track of (amount of stuff collected, a certain spatial point passed, etc.). After all, these potential narrative events or elements would not happen if the quest in question

was not started, so it would only make sense to say that the potential narrative is a part of the quest itself.

However, if we see a given quest as several quests built into one (sub-quests), and that each hidden trigger – or completion of part of an objective – in the overall quest is a completion of a sub-quest, then the completion of said sub-quest would correspond to completing a series of identical quests. With that logic, Tosca's statement on narration only being present at the start and end of quests still works, as sub-quests are being completed much more often. Following this, it makes sense to question what is generally meant by the course of a given quest, as it is indeed possible to narrate a story while completing a quest, if the completion of these sub-quests provides an addition to the story.

If we look back to the pen & paper origins, they all start out with a primary objective, in the form of the "main quest". After all, if that was not there, why was the adventure even started in the first place? If we take the cliché quest of saving the princess in the castle, we are usually not told about the dragon and the henchmen that we have to defeat to get there, and the magic potion we have to produce to wake her up. These would be classic examples of sub-quests, which will thus drive the narration of the primary quest.

One could argue that the main quest only really tells the story of the hero being triumphant at the end, but on the other hand the sub-quests would never really happen unless the main quest was not started as well. This is where the concept of a quest-line is introduced, which is exactly what it sounds like: A series of quests. The connection to a quest and sub-quests is somehow the same, with the primary exception being that sub-quests are meant as different types of actions taking part *simultaneously* (if different types of quest-criteria can be completed at once, in any order), while the actions in a quest-line is done *serially*, as the first part has to be completed in order to start the next one. This will be the foundation which I will base a newer quest structure-model upon, in section 4.4.4, "A new quest model", 57.

4.4.2 The TOP-model

Aarseth's TOP-model (Aarseth 2005, 498) builds on the premise that all quests are made from one or more of three main aspects: *Time*, *Objective* and *Place*. As per "From Hunt the Wumpus" (Aarseth 2005, 498), these main elements are shortly described in the following ways:

- *Place*-oriented quests are the simplest type, where the player typically has to move the avatar from a starting position in the game world to a target position […], but in its most basic form the place-oriented quest is a labyrinth, where the players simply have to find their way.
- *Time*-oriented quests may seem rare in pure form, but they do exist, usually as part of a larger game. A typical example is found more than once in games like *Call of Duty* (2003), where sometimes the only quest-task is to stay alive for a fixed number of minutes.
- The third basic type is the *objective*-oriented quest, where the task is to achieve a concrete result, such as an object that must be taken by force from a non-player character. This object may not be in the same place, but could be moving freely in the game world.

While time- and place-quests are rather simple, the objective-type basically ranges over *anything* that can be measured by the game system. As such, it can be slightly difficult not to mix it up with the other categories, simply because it could – in theory – easily also include these types in itself. It is important to stress this point, as objectives are so much more often used than the other two types. The easy way to explain it is simply to say that if it is not directly related to either time or a place, then it is an objective. This distinction does however, become more tricky when the point of combining the types is introduced, essentially making 7 different types of quests, as seen on the figure.

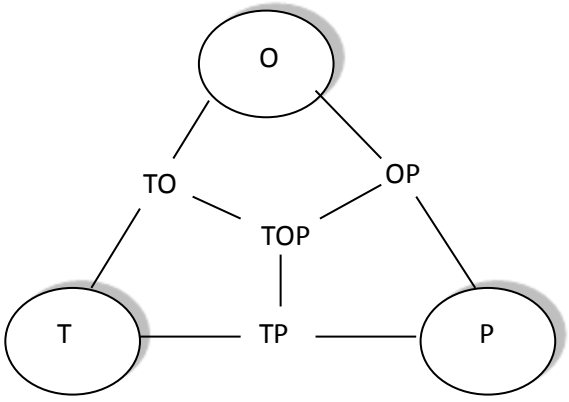

Figure 2: Aarseth's TOP-model (Time, Objective and Place)

With that said, in my eyes the only real downside to the current classification is the issue with objectives being so broad, because anything can basically be called an

objective as it is technically just another word for a quest. But, luckily, I believe a solution is rather easy to construct, simply by splitting objectives into subtypes of dynamic and static objectives, in the following way:

- **Dynamic:** Anything that involves objectives that are moving, which would normally be the killing of hostile NPCs, escorting/conversing friendly NPCs or gather/pickpocket things that either of these carry on them. In short, these revolve around "living" goals.
- **Static:** Finding objects lying about, solving a riddle or finding a hidden leaver to open a passage to further advance the progress. Completely opposite of dynamic, these would cover "inanimate" goals.

Of course, the overlap can easily happen as well, and it does increase the total quest-variation by a lot, especially if you consider that quests can essentially have objectives that are both dynamic and static. This, when taking the thoughts on sub-quests earlier mentioned (4.4.1, "Sub-quests and quest-lines", 52) into account, shows that quests have continued to evolve over the past years, and have begun to incorporate more and more different mechanics to both track and show the progress of the quests, based on player location and others.

This classification is relevant, as the need for clarification means that the game mechanics have evolved to support more advanced quest integration – games can simply track and do many more things now than they could earlier, and make more active use of it. This provides a great opportunity for scripted triggers, making narrative elements much easier to apply during quests, rather than simply when starting and ending.

4.4.3 Push and pull

Sheldon has also done some classification on quests, which goes in a different direction than Aarseth's, by using a different dimension as the foundation for his classification. It is based on the

simple – and yet rather vital – premise of the terms *push* and *pull quests*, which he defines as follows (Sheldon 2004, 225):

- **Pull** quests are uncovered by an overt action of the player.
- **Push** quests are thrust upon the player while he is going merrily about her own business.

It is quite apparent that push-quests are the main driving force of linear quest games, in which the purpose of the quest is to guide and lead the player. It even fits the whole definition of quest games in itself, as the idea of forcing the player to accept the task of the quest, is setting up the whole goal for the player. With that said, the nature of push-quests does not mean that a game *has* to be linear – as these quests could just as easily be to take a vital and permanent choice, which would branch into two or more new push-quests. It would not be completely out of the way to say that push-quests had more of a – as per Tosca – "hard rule" (4.2, "Hard and soft rules", 49)) feel to it, as they would *generally* feel a lot more static in nature than pull-quests, because their very nature is to be thrust at the player, thus being a more integrated part of the game system. Push-quests can also be thought of in relation to quest-lines (4.4.1, "Sub-quests and quest-lines", 52). Follow-up quests that are given after a specific quest is completed could very well be considered a push-quest, as it is thrust upon you, leading you further towards the real goal. For example, in order to defeat the mighty dragon, the hero has to forge a special sword first – this quest-line eventually ending in the dragon's defeat, but consisting of several quests.

Pull-quests on the other hand are directly tied to optional elements, (3.2, "Optional elements", 29), as it is completely up to the player if he wishes to accept the quests or not. Much in the same way as hard rules could be somehow tied to push-quests; the relation to Tosca's "soft rules" (4.2, "Hard and soft rules", 49) can be made with pull-quests, as them being a bit more open. As mentioned when both of these types of rules was introduced, all types of quests are more likely to be called soft rules, but the connection can still be made, regardless.

If we look at the optionality of side-quests in regards to pull-quests, while keeping in mind that the area in which the quest in question takes place at, simply being able to be at that very place at another point – and have nothing happen there otherwise – it proves that it is the quest itself that triggers the actions. This point can apply regardless of the quest being a pull- or push-quest; it only really requires that the specific area is accessible outside of the given quest. In some cases, the part of the objectives can even be present outside of the quest, but their context might be hard to figure out. The quest itself adds a whole new layer to the area, and can often create aesthetic elements that were not there in the first place, and these to enriching the added narration, if such is present. For instance, some of the audio-tapes from *BioShock* (section 3.2.1, "Examples from games", 30) actually trigger small optional side-quests that yield small bonuses, by giving the player access to hidden areas via a piece of information, that lets the player interact with hidden objects, that would otherwise be uninteractable.

4.4.4 A new quest model

Sheldon's description on *pull* and *push* makes sense to include in a greater model, as they signify a very important difference between the mandatory and optional, which is relevant to the interactive aspects of choice in digital games. Besides that, Aarseth's TOP-model gives a much better overall distinctive description of the various types, potentially making the separation of the objective-category less open, as per my suggestion with the dynamic and static subtypes (4.4.2, "The TOP-model", 54). If the further theory of sub-quests and quest-lines are applied, we get a very detailed – and yet simple – method to describe quests, which will then also show its complexity in the number of sub-quests and combinations of time, place and objectives.

As an example, let me illustrate using a small quest-line which will combine the various methods mentioned throughout the section:

> *The hero is out exploring in the wilds, and is attacked by a particularly aggressive wolf. Upon defeating the wolf, he finds that its eyes seem to glow with demonic possession. He decides that it would be wise to show this to the local town's medicine man, and chooses to gather more of these eyes from the local wildlife, as it seems to be unique to this region. After having gathered a few additional samples, the hero notices that the glow from the first eyes have begun to fade, and decides to hurry to the witch doctor, before they all fade.*

This quest-line is made up from three parts, described as follows:

- **Pull, Dynamic-Objective:** The optional acceptance of the quest from the dropped item.
- **Push, Static-Objective & Place:** Hunt local wildlife for additional dropped items.
- **Push, Time & Place:** Deliver the items to the NPC before time runs out.

One could argue that the delivery of the item to the NPC could be considered a dynamic objective (or even both), but seeing as the primary goal here is getting the item in quest to another destination (the NPC) within a limited time, the act of conversing with said NPC becomes an irrelevant part of the quest. If the quest had been a true "Time & Place & Dynamic Objective"-combination, then we would have to use the items on said NPC to poison him, as we had figured out he was responsible for doing it to the wildlife. The addition of making simple errand-quests from one NPC to another a type of place-quest also adds depth to that category – while staying true to the description originally given by Aarseth – by getting the player from one place to another.

4.5 Summing up

In the end, quests can be a successful part of a narrative. To put this into perspective, it is worth to look at a how Aarseth wraps up his article "Quest-games as Post-Narrative Discourse":

> *Are there "narrative games" that are not also quests? If not, the current focus on storytelling in computer game theory might be replaced by a more productive focus on questing. Clearly, games and game engines can also be*

> *used to tell stories, but this is probably an extreme end of a spectrum that runs between narration and free play, with rule-based games and quest games somewhere in between. When we take phenomena such as multiplayer and "massively multiplayer" games into account, the likelihood that the narrative end of the spectrum will come to dominate games seems very small. But only time will tell (Aarseth 2004, 15).*

This could very well signify that even as Aarseth's own later introduced TOP-model had been fitting at the time (2005) for describing quest-types, quests had already evolved to become much more than that, and now have many more tools at their disposal – both as game mechanics and as narrative tools.

Quests are an important part, when looking at narrative games – but it should not be everything there is. It can be the backbone and *main* driving force, but the narrative games should not rely purely on them – even though it might still be fitting to call them *quest games*. With the increased integration with the game's aesthetic elements and usage of scripted events, quests have also become increasingly dynamic and flexible, rather than the more obvious overlay from previous days.

5 Characters

People are an important part of games. Not just the ones that play them, but the characters we play as, with or against – be they controlled by the game, the player or others. The player is often put in the role of a character, which he controls throughout the course if a given video game. In the types of games we have taken a closer look at, this is also a consistent case, and this particular character will be referred to as the avatar, as it is the in-game representation of the player controlling it. This avatar is the focus of section 5.2 (61). However, characters are much more than simply the roles which the player takes, as there are generally two major groups: the player avatar, and those of non-playable characters (NPCs) which will be covered in section 5.3 (64).

The uniqueness in these characters – which applies to both types – is the addition of the possible interaction with the characters, which often requires using a more non-linear and lesser scripted personality and dialogues than what is as portrayed in various other media. Characters *can* work by being completely scripted, but it does put a limit on their level of interactivity, by being presented purely static.

5.1 The importance of characters

In his paper "A Narrative Theory of Games", Aarseth introduces "The Variable Model" (Aarseth 2012), which is used to describe different parts of games, scaled on either being more narrative or more ludic, in four categories: *world*, *objects*, *characters* and *events*. His conclusions with the model suggest that characters have the most importance:

> *As seen here, the example profiles seem to suggest that the most important dimension for storytelling in games is that of agents/characters. This indicates that the most effective way of creating ludo-narrative content is to invest in character-creation, by making the characters rich, deep and interesting (Aarseth 2012, 132).*

Aarseth further suggests that characters specifically are an important element in potential transmedia-productions, as they are one of the only things that are really present in all media, save for the universe itself (Aarseth 2012, 132). This transmedia connection was also something I touched upon earlier (2.2.3, "Transmedia", 22). However, Aarseth also mentions that having deep and rich characters is not necessary in order to have a game narrative:

> *The removal of agency is not a measure of narrativity, even if it is compatible with story production. This also means that a linear world cannot be classified as "more narrative" than an open-field one, or that games with limited player-object agency by necessity are more narrative than others. It merely means that linear-world, static, object systems pose fewer challenges to ludo-narrative projects (Aarseth 2012, 133).*

This goes well in hand with the earlier mentioned points on chronology in games (3.1.1, "Chronology in games", 26). The mentioning of static objects is also something that will be iterated on in section 5.3.1 ("Guides and companions – the active NPCs", 65), as the earlier mentioned audio-tapes (3.2, "Optional elements", 29) have a very close tie with characters as well because they are usually narrated by characters known by the player.

It goes to show that characters – and the player avatar itself – has a ton of potential to provide depth to the game's story, and is therefore worth taking a closer look at.

5.2 The player as a character

In relation to narrative digital single-player games, it should come as no surprise that the player avatar is a character that should be heavily focused upon, in order to use characters as an effective narrative element – and this applies to all media. As Sheldon states, this is also the hardest part:

> *Whether human being, furry animal, alien creature, faceless general or smiley yellow bag that eats dots and has reason to fear ghosts, the character controlled by the player is the most complicated and challenging character there is to write (Sheldon 2004, 44).*

With that said, the player character is usually made in two different types: a completely pre-defined character and one character made by the player by being able to customise characteristics of the avatar. Is the player-controlled hero a "nobody", an actual meaningful person in more manners than the story the game presents, or something entirely else?

5.2.1 **Playing a role**

When talking about characters that are already set, meaning that the player cannot alter their looks or background, this can be applied in different ways. The difference is the degree to which the player avatar is described, and thus also how deep the character can be described from the game's story. To show this, I have taken three examples, from already mentioned games.

- In the case of *Doom*, the player is "just a soldier". No background info is given, and no further elaboration on his personality, traits or anything is given – save perhaps from the face shown to indicate his health and general state of mind. This was, however, done very deliberately, according to John Romero: *"There was never a name for the DOOM marine because it's supposed to be YOU"* (Romero 2002). The avatar was an extension of the player.
- In *Half-Life*, the player was set in the role of Gordon Freeman. A fair bit of his background information is set and it is obvious that he has an established role, is known by other characters by name and is not just an "average Joe", as in the case of *Doom*. If this had been the case, the story would most likely not have been able to take place either, due to the role he plays in the story. After that, however, the role of Gordon is the player, and his actions seem to be those of the player, entirely.
- Lastly, there is the case of Booker DeWitt from *BioShock Infinite*. His character is set in stone, both in terms of personality, visuals and how the character fits with the story. With this much of the avatar being set and not made-up from the player, it does however open up for more detailed stories.

The logic behind these definitions is supported by what Aarseth states by saying that by making richer and deeper characters, we achieve the most effective way of creating ludo-narrative content (5.1, "The importance of characters", 60).

On the other hand, the above also underlines that when the avatar is more detailed, it leaves less room for the player to imagine that it is himself he is playing as, which would lower the emotional involvement with the player. In much the same way, there is less usage of gaps (3.3, "Gaps", 31), which also leaves less room for the player's imagination.

It is also worth to notice what the difference between playing in first-person and third-person means. In the latter, the player is constantly looking at the avatar, and thus noticing that he obviously is not the person being represented on the screen. That problem is much smaller when looking through the eyes of the avatar, even though we might prior have had an idea of how the avatar we play as looks or is. The two obvious comparisons here are *Tomb Raider* and *Half-Life*, as they share a similar level or story-depth, but have the obvious difference of perspective.

5.2.2 Customised characters

Sometimes the player has the possibility to customise the avatar's background and physical looks, rather than having some of those details appearing to be unknown in the game. This customisation would mean more personal involvement from the player in relation to his avatar, compared to a character set in stone; however, this could also mean that some traits – primarily race – would not fit with the story and universe of the given game, if too much variety is allowed. In relation to the race-aspect in particular, Sheldon takes note that this does not refer to how we normally look at it, because most games that let the player choose these things also have a significant array of different races – and we humans are obviously only used to one, and subsets of that (Sheldon 2004, 97).

The optimal example in this aspect is that of *Dragon Age: Origins*. The player can fully customise his looks and race, and is put into an introduction story based on either race and/or classes chosen. But, why was the introduction not simply the same for all combinations? This could very obviously be that some of the combinations would simply not make any sense at all, in the setting of the game. As a human, for instance, we are put in the role of the king's son – which would be fairly problematic had the avatar been an elf or dwarf, given that the king is human. In much the same way, another of the introductions are for players of the mage class, taking place in a place for mages only – making it rather problematic and illogical for non-mage players. Differences like these limits the different introduction stories, but also provide a well thought-out framework for the story to advance. We actually figure out that all of the different introductions comes together to the same storyline, with everything coming together to put us on the same path.

5.2.3 Communication and choices

Another thing to consider is if player choices should be considered a customisation. Rather than forging our own background, we take part in shaping the current time, the avatar's influence and

persona. *Dragon Age: Origins* does something similar to this when the avatar has conversations with other characters in the game, as mentioned back when talking about choice (3.4.2). Communication and choices in general should actually be seen as a form of customisation, which naturally also makes the game's story more complex, much in the same way as more open characters makes the writing harder.

In essence, the interaction becomes a worth-while layer in player customisation, as this also includes interaction with other characters, which becomes difficult when there is not much to be done with the avatar, and "it" simply stays quiet, rather than – at the very least – states something neutral, or builds the character we know, but have an otherwise more loose relationship to. This interaction can apply even though the player's background and everything is completely fleshed out; so that the player can still feel the immersion and feel that he changes the story.

5.3 The roles of NPCs

NPCs naturally also have a very important role when it comes to story and interaction with the player, and potentially has a lot of different uses to fill besides being elements in the story.

When looking at these characters gameplay-wise, certain elements have the advantage of being somewhat ignored. The most eye-catching one is what these characters do when the player avatar is simply idling, and nothing happens? It can seem odd and dysfunctional – but then again, so is the player's behaviour by doing that in the first place. *Bioshock Infinite* does this quite well with the player's companion Elizabeth, as she usually do not idle, but rather spends the time walking around and exploring, rather than simply standing still and awaiting the player's moves. The obvious solution is to regard this idle-time as time that simply is not happening, and is merely existing as a gameplay technique.

In combination with "The Variable Model", Aarseth mentions three levels of characters to describe their level of narrative potential: *Bots* as well as *shallow* and *deep* characters (Aarseth 2012, 132).

While all of them are a significant and important part of games, I will avoid looking closer at the *bots*-category, as these are the ones that have the least – if any – direct narrative potential. As such, the categories of NPCs will be based on both *shallow* and *deep* characters.

Sheldon also mentions a variety of different types, which will also be mentioned throughout the subsections.

5.3.1 Guides and companions – the active NPCs

The most interesting usage of NPCs is in the form of guides or companions of the player avatar, as they are then guaranteed to be tied into the story and provide and supplement with character and story depth, while still providing the game with a useful guidance-element, in one way or the other. These characters should be deep in order to succeed in that, but can be present in different forms. I realize that not all types of companions necessarily provide any narrative supplement, but merely function as gameplay support, but I want to focus on what they *can* supplement with, rather than what all of them do with certainty. I coupled them under an active category, because they – unlike other NPCs – dynamically change their location in respect to the player.

Sheldon refers to guides and companions with the concepts of mentors and sidekicks, respectfully, with two very fitting descriptions:

> ***Mentors (Guides):*** *Where would Cinderella be without her fairy godmother? Still at home doing the floors. Where would Luke be with Obi-Wan Kenobi? Still on Tatooine raising crops (Sheldon 2004, 77).*

> ***Sidekicks (Companions):*** *Sidekicks provide comic relief, the occasional helping hand, sometimes useful exposition, or just a foil to bounce ideas off. Sometimes they're just there to make the hero look good. Robin isn't all that wonderful if all he does is ask questions so Batman can patiently explain what his Boy Wonder brain is unable to grasp (Sheldon 2004, 81).*

In *BioShock*, the player avatar is introduced to the character called Atlas very early in the game when the player picks up a short-wave radio. This also ties directly to the start of the game's quest-system

(4.3, "From gameplay element to storytelling tool", 51), making the connection to this very obvious, and marking him directly as a guide-type, as we would be helpless without his assistance. However, it takes a while before we actually meet this character, yet we instantly have a way for him to communicate to the avatar at all times and thus follow the player, without actually being present. Because of that, he is not very well put to provide any real form of companionship.

Diablo 3 has a system of followers, which is interesting as well. The player has a choice between three different ones, each being a different personality and offer different gameplay-based ways to support the player avatar, thus fitting very well with the mentioned description of companions. They certainly provide a lot to the story and the universe, as well as gameplay value.

The player avatar of Booker DeWitt in *BioShock Infinite* is accompanied by the character of Elizabeth throughout most of the game. Unlike Atlas, Elizabeth is physically present and she exchanges stories and conversations with Booker. This works well, as they have a different knowledge-base. It works well that Booker does not know the place and setting, which Elizabeth can then explain – or vice versa. They both know things the other one does not. Besides that, she offers a fair amount of gameplay additions, which makes her the perfect example of a guide/companion-hybrid.

While it may seem counter-intuitive at first to mention here, we should also consider the antagonist – or bosses in general – as a type of guide, especially when taking Sheldon's above definition into consideration. After all, where would Cinderella be without her stepsisters? Where would Luke be without Darth Vader? The antagonist(s) have a very similar approach to guiding the player forward – with the obvious difference that he drags the player towards a goal (deliberately or not), rather than the ordinary guide that would shove the player towards the goal. In relation to antagonists, Sheldon brings forth an important point, which should be followed by writers, if we wish to have an interesting antagonist:

> *The antagonist must be every bit as intelligent and powerful as the protagonist. A weak adversary creates a weak hero. Never ever* ever *make*

> *the mistake of giving the villain an obvious weakness in the same way we lame a tragic hero with an Achilles heel (Sheldon 2004, 75).*

As the mentioned examples underline, these types of NPCs provide a very dynamic connection to the player avatar, and can – in the case of the guide – be a very vital part of the game's story or – in the cases of the companions – simply a nice optional element that can add content (3.2, "Optional elements", 29). They can even provide both.

5.3.2 Vendors and bystanders – the inactive NPCs

The inactive NPCs actually cover a fairly large group of different roles, and should not be neglected in their level of potential story importance, just because they – unlike the guides and companions – are immobile, and often left behind by the player. While many of them would normally go under the category of bots in most games, they can easily be evolved to shallow – and even deep – characters, by introducing the simple option of asking them about the quest at hand, or simple gossip. This is an aspect that is very well done in both *Diablo* and *Diablo 3*, in which the majority of the various townsfolk are named and provide optional information for the player, much in the same way as the companion.

Sheldon further refers to "minor characters and extras", with ways to make these inactive NPCs be noticeable to the player, as they have a smaller change of being properly noticed, by either making their roles seem very obvious, giving them a unique look, accent, turns of phrase or likewise (Sheldon 2004, 54). *Diablo* provides several examples of this, with the townsfolk of Tristram – which also all cover the various roles of quest givers, vendors and likewise things. The phrase of "minor characters" is, however, slightly misplaced here, as I think all of these can provide a certain character depth, but they are still minor compared to the major characters after all.

I am hesitating a bit with including quest givers in this overall category, but seeing as these can naturally be inactive in the sense of staying behind and not following the avatar around, it goes to

show that there are naturally hybrids as well. The guide would fit the role of the more active quest giver, but it is still a hard line to draw. The real point to draw from this is that inactive NPCs can be just as important as the active ones, even though the active provide a better premise for being a dynamic part of the story.

5.4 Summing up

Characters are a very useful mechanic to use to tell the story, and there are much more potential than simply putting everything in the hands of the player avatar, and/or one or more supporting characters. In digital games, characters have a unique ability to provide a variety of roles, while still providing both important and optional parts of the game's story. As such, it is safe to say that Aarseth was completely right by stating that characters are the potentially most important part of a game's narrative, and that they can also meanwhile be tied to game mechanics.


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Players

6 Player-behaviour

I once had the opportunity to watch as a very experienced 'hardcore gamer' played *Hitman: Absolution* (IO Interactive 2012). Besides it being interesting to see how other players tackle games, it was also an eye-opening experience because of this player's (to me) rather curious approach to completing the levels. He would start the level and try to be as stealthy as possible, but quite quickly he would fail at it because it simply did not suit him to play that way. He was too eager to move forward in the game world to sneak about so much. When he thus failed and became exposed to enemy NPCs he would brawl his way through the rest of the level. After having completed the level he would start over to live up to the play style he felt the game expected of him: a silent assassin. It should be noted that the only reason he could do this is because the NPCs' paths are predetermined in this particular game. Had the artificial intelligence (AI) been different he might not have been able to learn how to complete the level 'the right way' from the trial and error approach.

As I have shared and discussed this anecdote with Emil, we came to discuss and wonder if the players' behaviour is something they bring from their personality and into games or if play-preferences lie latently within the games themselves?

If in-game behaviour is entirely brought to the game by the players it will render categorising players more difficult and more reliant on pure psychology. But if the game somehow triggers different behaviours and attitudes then the behaviour becomes something that can be analysed and aimed for during the design of games.

In this chapter I define how I want to approach players as a crucial element in describing games. To do this I will study how players have been described and categorised in earlier game studies. I will study Alessandro Canossa's (2009) work on play-personas because I wish to apply his approach to players in my own analysis model. I also want to study different types of player involvement as presented by Gordon Calleja (2011) to lay out the basic structure of our approach to analysing player-behaviour in digital single-player games.

7 Player-typologies

7.1 Player-types

Richard Bartle, one of the creators behind MUD1 (Multiuser Dungeon 1) - the first MUD ever – introduced a qualitative, informal model of players participating in this early online world (Bartle 1996). His work grew from the question, "What do people want out of a MUD?" This was discussed on a commercial UK based MUD for half a year, the debate ending in May 1992, mainly between highly experienced participants. From the hundreds of bulletin board posts Bartle identified four different player-types: *Achievers, explorers, socialisers and killers*.

> ***1) Achievement within the game context. [Achievers]***
> *Players give themselves game-related goals, and vigorously set out to achieve them. This usually means accumulating and disposing of large quantities of high-value treasure, or cutting a swathe through hordes of mobiles (ie. monsters built in to the virtual world).*
>
> ***2) Exploration of the game. [Explorers]***
> *Players try to find out as much as they can about the virtual world. Although initially this means mapping its topology (ie. exploring the MUD's breadth), later it advances to experimentation with its physics (ie. exploring the MUD's depth).*
>
> ***3) Socialising with others. [Socialisers]***
> *Players use the game's communicative facilities, and apply the role-playing that these engender, as a context in which to converse (and otherwise interact) with their fellow players.*
>
> ***4) Imposition upon others. [Killers]***
> *Players use the tools provided by the game to cause distress to (or, in rare circumstances, to help) other players. Where permitted, this usually involves acquiring some weapon and applying it enthusiastically to the persona of another player in the game world.*
> *(Bartle 1996).*

Bartle places the four player-types in what he calls an interest graph (Appendix B: Bartle's Interest Graph 155) composed of two dimensions with opposite playing styles at each extreme of the

spectrum. On one axis Bartle places action as opposed to interaction and on the other axis he puts world-oriented as opposed to player oriented play styles (Bartle 1996).

The major critique I have to raise about Bartle's work and his player-types is that they were constructed from a discussion among users of MUD1 and are thus based on what Bartle could subtract and label in an abstracted way from this debate. Bartle's take on gathering data may seem like that of an interview or a focus group and as such be categorised as empirical data. However, any of those two would be controlled and lead by the researcher. In the debate regarding MUD1 Bartle simply asked, "What do people want out of a MUD?", and let the users of the forum answer without taking further control. The debate was mainly driven by 15 experienced players. Because the debate took place online, Bartle had no way of knowing how the different players' opinions affected that of the other participants.

Nicholas Yee (2002) have also criticised; the uncorrelated nature of the types, that the player-types may be overlapping and thus are not distinct types, and lastly he calls it purely theoretical because Bartle did not come up with any way to figure out what types players belong to.

The lack of data gathered from a more established, well-tested method (rather than a sort of focus group interview on a forum during several months) also lets Bartle's idea of players being quite settled in their primary style stand unquestioned:

> *Naturally, these areas cross over, and players will often drift between all four, depending on their mood or current playing style. However, my experience having observed players in the light of this research suggests that many (if not most) players do have a primary style, and will only switch to other styles as a (deliberate or subconscious) means to advance their main interest (Bartle 1996).*

As Canossa suggests (Canossa 2009a and 2009b), I believe that players' play-personas are affected by the affordances (8.1, "Affordances", 78) they are met with in games and as such are not something barely unchangeable like Bartle sees them. He might have seen this too, had he done actual interviews

with individual players about different games. Instead he concluded from his own in-game observations that most players have a primary style they play by.

7.1.1 Player-types in single-player games

In the chapter "Computer Games as Narratives" (Ryan 2006) Marie-Laure Ryan seeks to explain different attitudes towards narratives in digital games by dividing Bartle's four player-types (Ryan 2006, 198–199; Bartle 1996) in two categories which she calls *ludus* players and *paidia* players.

Killers and achievers are ludus players and are placed at the action end of the dimension whereas explorers and socialisers are paidia players and belong at the interacting end, according to Ryan. The division in ludus and paidia is based on Roger Caillois' work in his book *Man, Play and Games* (Caillois 1958).

According to Ryan killers and achievers supposedly quickly leave the story behind while explorers and socialisers more or less swell in it. I do not find this distinction particularly valid because Ryan does not have any data to support her distinction between ludus and paidia players and thus her suggested model is at its best only statistically unsupported, but at its worst pure guesswork with no foundation in reality.

There are several other problems with the way Ryan apply the player-types. Firstly, the application of Bartle's types to both single and multiplayer games seems problematic as the theory was made for "players who suit MUDs" (Bartle 1996) – *multiuser* dungeons. It becomes problematic to apply them to single-player games because the two types, killers and socialisers, no longer apply in their original form.

Another problem with Ryan's theory is whether players exist independent of games or not. Following both Stenros and Waern (2010, 5) and to some extent Aarseth (Aarseth 2003, 3) one could even ask if games exist independent of players.

To me the question remains whether players' preferences exist at all times and thus lies with the players or if the possibilities for interaction provided by the game shapes the way players interact in the game world.

To assume that there is a fixed disposition in players for a specific playing style regardless of the game in question is probably to assume way too much. What I can take from this example is that I cannot just go on and apply Bartle's player-types to other games as the types were created for MUD 1, a *multiplayer* game – at least without some modifications.

7.2 From Types to Player Motivation

Social scientist Nicholas Yee, whose main interest in digital games lies with people's behaviour and interaction in online games and virtual worlds, also criticized Bartle's player-types for their lack of empirical data to back them up. Still, Yee used them as inspiration to form a questionnaire looking for behaviours and motivations in gamers playing Massive Multiplayer Online Role Playing Games (MMORPGs):

What the questionnaire ended up showing is by Yee himself described as:

> *The important thing to remember is that these are not player types. It is not the case that we have found a way to categorize players into different boxes. Rather, we have found several distinct motivational facets that are meaningful and empirically tested constructs. Each individual player has a score for each factor, and it is after looking at the scores of all 5 factors that we can get a good idea of what part of an MMORPG appeals to them (Yee 2002, 13).*

From his surveys spanning multiple MMORPGs, Yee was able to isolate five factors by grouping his original 40 variables that players are motivated by when playing: Relationship, immersion, grief, achievement and leadership (Appendix C: Yee's Five Factors 155).

The quantitative data Yee gathered from his online questionnaires confirmed three of Bartle's four types to be somewhat correct if few adjustments were made. Bartle found that the socialiser was both

interested in the roleplaying aspect and in talking to other players. Yee's survey revealed that the roleplaying was placed with a different player motivation entirely and thus divided Bartle's socialiser into the two motivations *Immersion* and *relationship*.

Yee's factor labelled achievement has some resemblance with Bartle's achiever. However, rather than mainly focussing on point accumulation as the achievers supposedly do, players motivated by achievement strive for feeling powerful in the game world. The point accumulation that Bartle found to be essential to achievers may just be a means to feeling powerful and not an end in itself for players motivated by achievement.

The killer type is also represented among Yee's motivations, however, in a more subdued version. The causing distress to other players is at the extreme end whereas most players who are motivated by grief – as Yee calls this motivation – "(...) gains satisfaction from using other players for one's own gains" (Yee 2002, 10).

Surprisingly, the combination of a player who liked to explore the game world as well as the game mechanics did not exist – even when a second survey was made. Thus Bartle's explorer was not validated. The play preferences the explorer encompassed were instead divided between achievers who use knowledge about the mechanics and e.g. class-balancing issues to increase their power in the game. The exploration of the world along with the roleplaying preferences where accumulated in the motivation called immersion (Yee 2002, 9–10).

Yee partially highlights what could be criticized about his own model, when he advocates for using factors rather than a complete division like the one Bartle came up with:

> *There are 2 features of Factor Analysis to be aware of. First of all, the extraction of factors depends on the measured variables fed to the analysis. Thus, if the measured variables do not represent the entire spectrum of variation, then the extracted factors will not cover the entire range of possible motivations. In other words, you cannot carve a pie so that you end up with more of it than you began with (Yee 2002, 6).*

Yee's factors does not make players choose between two or more sides of a point, but rather rate how much the player is influenced by different motivations. As such it is not a self-fulfilling questionnaire that makes players choose between argument A or B. However, the motivations to check for were still something that Yee came up with – even inspired by Bartle's initial findings. A questionnaire survey will most likely only reveal what the researcher has created it to find out (unless there are room for participants writing and there actually are people willing to do that participating in the survey).

8 Designing for behaviours

Alessandro Canossa does not believe in universal player-types that once deduced from various games studies will cover all player-behaviours that can possibly emerge from digital games (Canossa 2009a). Instead he suggests a method which is based on the structure of the game in question. By analysing the affordances provided in the games' mechanics, Canossa maps out all the possible play-personas players are likely to adapt in the particular game in question. By focusing on the three to five most interesting and different personas, a game designer can cater specifically to the extremes selected and thus also cater to players whose play styles are situated between the extremes in the dimension spectrum created. Before elaborating with specific examples, I will take a look at the theories Canossa applies to reach the play-persona model.

8.1 Affordances

Canossa's work is based on the belief that the players' behaviour are encoded into the game via the mechanics, that the *affordances* of the game are what create 'player-types'. The idea of affordances was coined by psychologist James J. Gibson in 1979:

> *I suggest that the affordance of anything is a specific combination of the properties of its substance and its surfaces taken with reference to an animal (Shaw and Bransford 1977, 67).*

The substances and surfaces are physical properties, but rather than see them for their physics, an animal, a human, will see the properties – the affordances - as they are related to her specifically. One species of animal may see one use of an object whereas another find other uses for it.

The possibly many affordances provided by an environment or an object do not depend on the animal, they are always there. However, the animal depends on the affordances provided by the environment (Shaw and Bransford 1977, 70). Which affordances the animal in question chooses to take advantage of depend on which affordances of that substance and its surface suit the animal and the situation. Subject, object and context matter.

Humans have altered the natural environment and have created things to suit a purpose; however, this does not mean that an object created for one situation cannot come in handy in another. A bottle e.g.: great for holding liquids, but also quite suitable to hit someone – for humans.

Gibson writes that the most elaborate affordances are provided by other animals because we can *interact* with them rather than merely act upon them. Other humans provide a multitude of affordances, and how we behave towards them depends on our perception of the affordances they provide us in that particular situation. Gibson does not elaborate on what determines how we perceive other people's affordances, but I am assuming that it depends highly on cultural background and influence as well as personality. The same things that go into how players behave in games in general.

What is interesting about games and affordances in relation to how other people also provide affordances is that in single-player games with an avatar for the player to control, the player will perceive the affordances of the environment through her beliefs about the avatar's abilities (9.1.1, "Kinaesthetic Involvement", 93). Through the avatar, the player can perceive the affordances provided by NPCs in a number of ways: e.g. depending on how much the player empathise with the avatar's character the player will act according to the affordances in relation to the narrative (the way the player experiences it) despite the ludic affordances possibly being much broader.

8.2 Behind play-personas

8.2.1 **Aesthetics**

Canossa believes that the aesthetic perspective of games has a significant meaning in creating a deeper mode of involvement for the player. It is important to note that he means every sensory-perceptual phenomenon the game has to offer and not merely the visual (Canossa 2009a, 27–28). Canossa sees the aesthetics as a way to engage the player by grounding mechanics, goals, characters etc. in players' emotions created by the game. He sees the different aesthetic elements as always interacting thus creating "resonance-reverberation doublets" (Canossa 2009a, 28).

> *Resonance and reverberation together can produce identification between the player and the aesthetic image by triggering a subversion of the subject-object duality. This subversion anchors game goals, locations and characters in the personal history of each player (Canossa 2009a, 28).*

This attitude towards the interpretation of visual elements in digital games goes well with both Barthes', Iser's and Eco's ideas of how the reader has an active role in the creative process (Canossa 2009a, 28–29). However, a player's interpretation relies heavily on his or her cultural background. Thus while empowering the player to bring her own interpretations to the game one must also consider the game from which the interpretation stems. Canossa recommends that Eco's idea of 'intentio operis' is kept in mind and says that, "If an interpretation cannot be denied by the literal meaning of any part of the text or the cultural frame from which it was produced, then it is considered to be valid" (Canossa 2009a, 29).

Canossa's play-personas work in the field between the intention of the game designer and the interpretation of the game player. By analysing the mechanics and choosing the most interesting and diverted player-behaviours that are most likely to arise from those mechanics and then designing specifically for those players, the game designer can "partly close the field of interpretation and guide the implied player towards a set of assumptions that will eventually result in resonant and

reverberating meanings" (Canossa 2009a, 29). After the game has been made and needs testing, the designer can incorporate game metrics and thus verify the presence of the play-personas when the game is actually played (p. 85).

8.2.2 Inscribed players

Canossa uses Jakobson's communication model (Canossa 2009a, 39 + 50–51) to make a model that depicts the communication flow in games:

Figure 3: Canossa's application of Jakobson's communication models to games (Canossa 2009a, 39).

Game designers provide the game environment, both aesthetic and ludic affordances, and players interpret that environment and take action within it according to the affordances they have been given. This leads to Canossa concluding that where texts hold implied readers, Canossa's research is based on games holding *inscribed players* (Canossa 2009a, 40) through the affordances given to the player. Unlike earlier player-behaviour research (7, "Player-typologies",73) Canossa does not believe that he can decipher the reason behind players' choices in-game, but suggest a tool, the play-personas, through which game designers can imply play-styles through the affordances they provide players with during the game.

> *Play-personas are clusters of preferential interaction (what) and navigation (where) attitudes, temporally expressed (when), that coalesce around different kinds of inscribed affordances in the artifacts provided by designers (Canossa 2009a, 40).*

As Bartle also observed (7.1.1, "Player-types in single-player games", 74), Canossa notes that players may change their play-behaviour quite drastically during a game (Canossa 2009a, 46–47). He ascribes this to *subpersonalities* as well as uses them to reason why players' motivations, desires etc. may change during a game. Canossa borrows the term from psychosynthesis where it is believed that personality is not stable. Rather it is a whole collection of personalities, or subpersonalities if you will, that fight each other for dominance and a chance to affect the definition of the self and along with it motivations, behaviour etc. (Canossa 2009a, 44).

8.2.3 Five Factor Model & Personas

To create play-personas, Canossa applies the Five Factor Model (FFM) to games. The FFM belongs to trait psychology (Corr and Matthews 2009, chap. 6 & 9). In the FFM people are not categorised in rigid boxes, but rather they are measured on five different parameters. By not categorising people, but instead adapting a method that allows for more blurred lines between different 'types', Canossa claims to be able to apply the method to all games – because the outcome is based on the games' mechanics. In the FFM individual people score between 0 and 100 per cent on each of the five dimensions:

- Openness to experience
- Conscientiousness
- Extraversion
- Agreeableness
- Emotional stability

The five parameters are constituted by six different facets each (Appendix D: Five Factor Model: Factors & Facets, 157). The general idea behind the FFM is that language has the most important personality traits encoded into the words themselves. The more a trait stands out the more likely it is to get a word of its own (Canossa 2009a, 42). Canossa calls this "lexical hypothesis."

Canossa states that it is impossible to use the FFM's dimensions to create play-personas for games as the affordances provided by a game are so very few compared to real life which the FFM is built from. However, Canossa finds a loophole because of the lexical hypothesis. If language holds the affordances of life encoded into words, then it is through the interaction with a games' mechanics that players are allowed to express themselves in a game - as they express themselves with words in real life. Canossa thinks of games' mechanics as the core language and thus reaches the conclusion that the FFM can be applied with some moderations using groupings of the mechanics to guide the definition of personas to test against the FFM (Canossa 2009a, 43). By grouping every mechanic of a game with similar ones, various *dimensions*[1] (Table 1: All mechanics grouped in dimensions. 86) can be found and behavioural patterns can be deduced (Canossa 2009a, 43).

8.2.4 Players as expressions

Inspired by semiotician Peirce's trichotomy, Canossa creates a trilateral model, the "aesthetic-ludic-player", to describe what goes into the player's experience (Canossa 2009a, 52). The triad is made from the *aesthetic code* and *ludic code* which together form the *player expression* (Figure 4: The triad "aesthetic-ludic-player" (Canossa 2009a, 52) 84). Canossa bases his division of what goes into the ludic and aesthetic code on The Frankfurt School's definition of *erfahrung* and *erlebnis*. Erlebnis can best be described as 'perceptive experience' (Canossa 2009a, 70). Canossa applies this kind of experience to the aesthetic code (and thus Peirce's firstness in Peirce's Trichotomy.) Erfahrung is more of a 'reflective experience' and is assigned to the ludic code (and Peirce's secondness).

As an example of how a player's experience is built from both the aesthetic and ludic code, 'moods' (aesthetic) and 'emotions' (ludic), one which leads to the other being triggered according to the model, serve as a good example. The aesthetic code covers the player's immediate response to the current game situation. Whatever mood the game sets the player in will trigger a corresponding

[1] Dimensions encompass several of a game's mechanics the designer imagines a certain kind of player will use the most if able to choose among various approaches

emotion that has been formed through the player's previous experiences in life. Different emotions are, according to Canossa, response patterns triggered by different events (Canossa 2009a, 70).

It is important to note that the ludic and aesthetic codes or affordances are *in the game* to be interpreted by the player. This is why Canossa can call it 'unconscious' (aesthetic) and 'conscious' (ludic). The emotional patterns triggered by various elements in the game are probably not a conscious act in itself, but we recognise the patterns in ourselves and in interactions with other people. Thus the emotions become something designers can aim for through affecting e.g. the mood of the player.

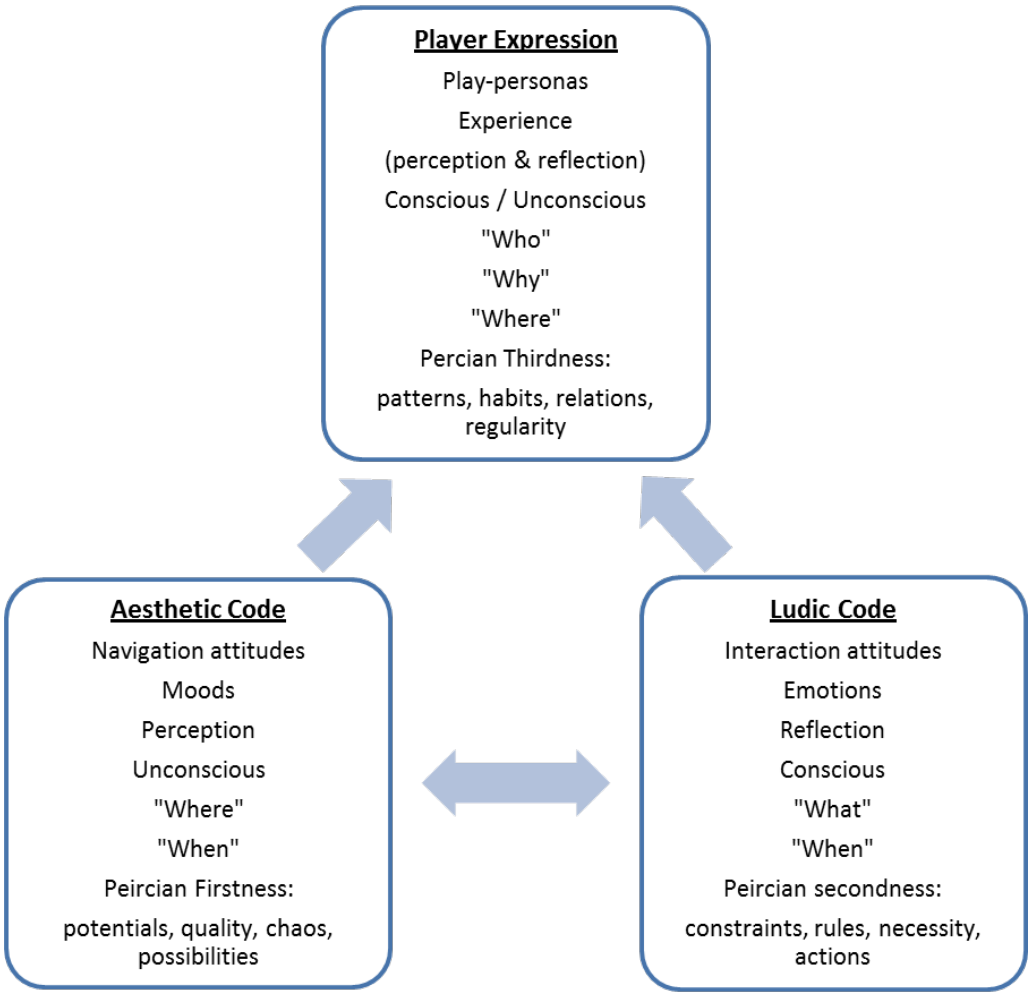

Figure 4: The triad "aesthetic-ludic-player" (Canossa 2009a, 52)

Canossa sees the player's expression as a result of her interaction with the game's aesthetic and ludic codes (Canossa 2009a, 53). With the triad "aesthetic-ludic-player" Canossa concludes that games first and foremost are games-as-expression (and experiences) thus 'overruling' the games-as-system versus games-as-stories debate entirely because the player-expression occurs as a result of the combination of the ludic and aesthetic code. You cannot have a game that only holds one of the two.

This conclusion about games takes the point of view of the players' experiences rather than the elements that go into creating the experiences. It fits quite well with Gibson's idea of affordances as the players do not see the various elements that go into games, but rather focus on how it can relate to their properties, their affordances. The ludic code would be the substance and the aesthetic code the surface.

8.2.5 Game metrics

Canossa's work on play-personas is based on the use of game metrics. In short, metrics is a way to track players' various paths and use of game mechanics at different locations in any game that has been set up to track them. With gameplay metrics designers can track e.g. what path a player takes through a game level, what weapons she uses when, where she dies etc. by logging the coordinates and some sort of code related to whatever action the player is taking at that particular moment. In order for mere mortals to be able to understand it, visualising the data using heat-maps is a common way to go.

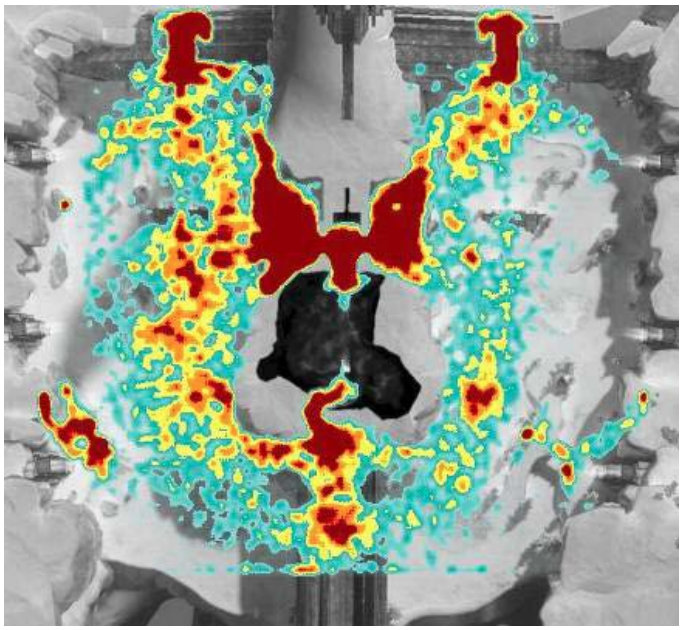

Figure 5: Heatmap from the game Halo 3 (Canossa 2009a, 118)

The heat map shows where players die a lot (red), where fewer deaths take place (yellow) and where the fewest players die (blue) in the game *Halo 3*.

8.3 Creating play-personas

To sum up Canossa's work on play-personas let us have a look at how to actually create them. The example I have chosen to work with is based on prior work by me (Holme 2012) for Canossa's course 'Game Worlds as Fields of Expression' in December 2012. Thus the details on how to actually create play-personas are a combination of Canossa's writings as well as what he taught during the course. After having come up with the initial game idea, having decided on a setting and the gameplay, the designer must list all of the core mechanics available in the game. From the list the designer will be able to group them into a number of main parameters of behaviour:

Move	Attack	Stealth	Information	Survive
Walk	Feed	Crouch	Pick up	Feed
Run	Bite	Sneak	Read	Heal
Sprint	Scratch	Feed	Zombie sense	Clear view
Jump	Hit	Equip	Communicate	Inject control drug
Climb	Hit with equipped item	Zombie sense		
Sneak	Clear view	Clear view		
		Trail of smell		
		Inject control drug		
		Assassinate		

Table 1: All mechanics grouped in dimensions.

The mechanics grouped as 'move' mechanics are something you will find in most 3D games and thus it would not make sense to use them to find out more about a particular game's players as the move dimension is not a defining dimension in this game (because all players are required to move about to be able to play).

The mechanics grouped as survival mechanics are something that Holme wanted all players to experience no matter their play style. Thus the mechanics in this group are as unavoidable as the ones found under move. This leaves us with the dimension spectrum for mechanics found in the diagram

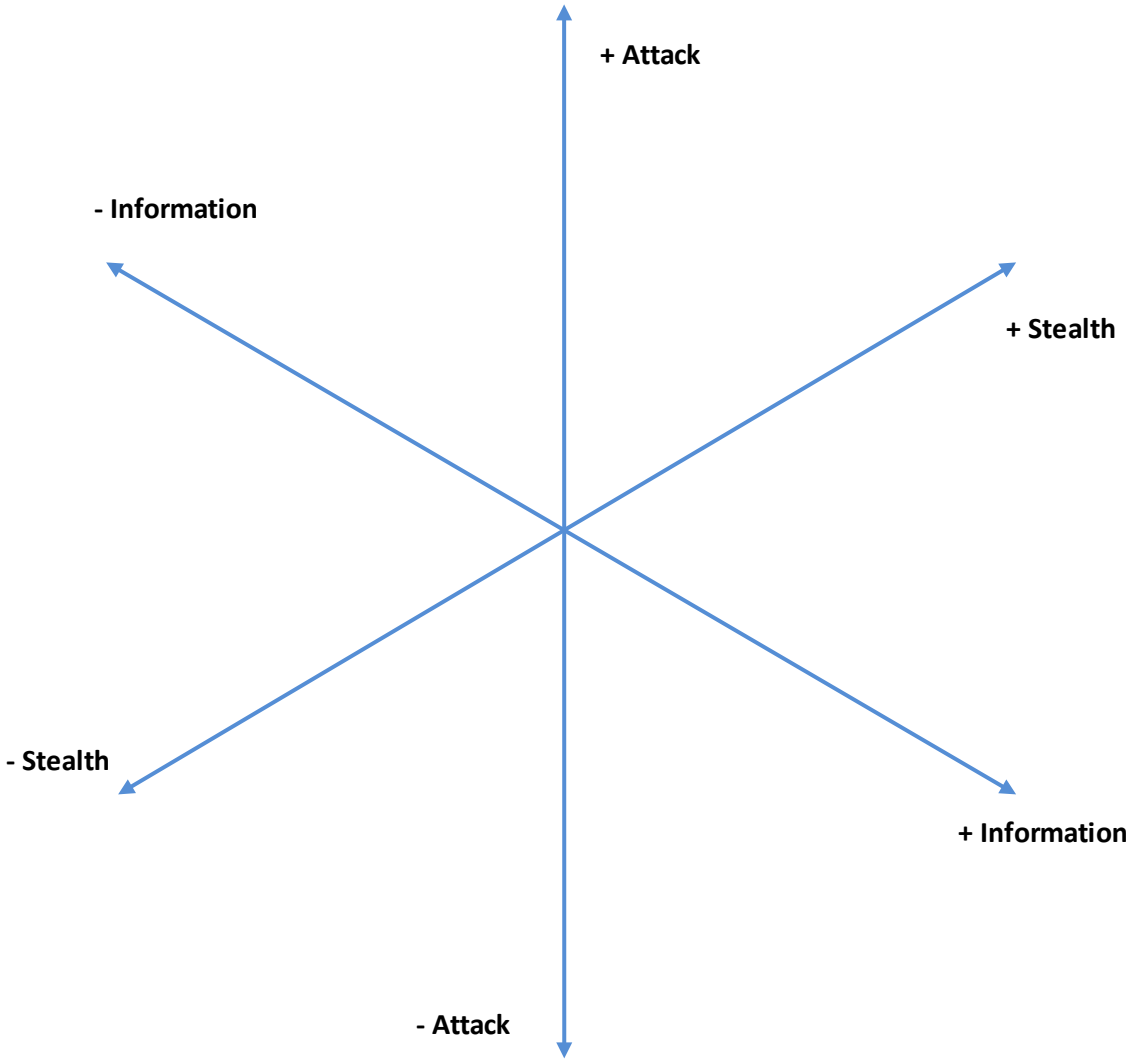

Figure 6: Dimension spectrum for mechanics

below:

The dimension spectrum's resemblance to Bartle's interest graph (Appendix B: Bartle's Interest Graph (Bartle 1996) 155) is interesting, but while Bartle did not see that possibly all players were represented across the two axis, Canossa claims that in designing for all the extreme ends one also design for players that mix and match their play styles more than Bartle imagined players would do. While

Bartle's depiction of the player-types puts types as opposites to each other, Canossa's dimension spectrum represents all possible play-personas that lie within the boundaries of the extremes of the axis.

From the dimension spectrum, the game designer is then able to create a table containing all possible combinations of the three dimensions and come up with suitable names for each of them (Canossa 2009a, 36) (if there are many dimensions and thus many combinations designers do not have to name them all as quite a few will be rather repetitive). In the table a '+' marks that this possible persona does incorporate most of the elements in the dimension while a '-' means that she does not.

Dimension / Persona	Attack	Stealth	Information
Sleeper	-	-	-
Brawler	+	-	-
Lurker	-	+	-
Researcher	-	-	+
Assassin	+	+	-
Marco Polo	-	+	+
Lara Croft	+	-	+
Horder	+	+	+

Table 2: Possible play-personas based on the dimension spectrum

The designer will then choose three to five quite different play-personas to cater specifically to in the game. As in Canossa's article "Psychology of Personality and Play Personas: Designing for Experience" (Canossa 2009a, 229) Holme looked for affordances rather than looking into typologies, e.g. the Myers Briggs typologi. To get an estimate of the psychological profile behind the selected play-personas a short form for the IPIP-NEO (International Personality Item Pool Representation of the NEO PI-R™) (Johnson 2013) was filled out as she thought the corresponding persona would. Not as the persona in real life, but as the in-game persona.

Admittedly, this is where the method gets a little 'soft', because the designer is supposed to imagine what a hypothetical person would do. To gain some statistic validity from this 'guesswork' one can

have several designers take the FFM test pretending to be a player who prefers the mechanics listed in the different dimensions and incorporated in the different personas.

After a FFM profile has been created for each persona, the designer can then write a short psychological profile elaborating on the personas preferences based on the FFM's findings. A mood-board for each persona is a visual tool that can also help a game development team better understand what colours, challenges etc. to use to get that particular personas attention throughout the game.

By knowing the assumed preferences of the personas one is supposed to cater to in the design, the designers can 'teach' the players who prefer different play-styles what to look for in the game environment to get the experience they prefer.

During testing (even tests of early builds) a way to look for these player-types – to see if they are actually catered for and more importantly *properly* catered for – in the game is to track predefined metrics that look for specific traits associated with the different personas (8.2.5, "Game metrics", 85). E.g. to look for the brawler one could look at damage dealt versus damage received as one expects the brawler to engage in lots of 'open' fights maybe with several opponents at the same time. Thus she will inevitably receive more damage from opponents, but she will also be the one that overall deals the most damage and kills of most enemies when comparing the different personas.

8.4 In short

I will use Canossa's approach to try to define play-behaviour based on the affordances given the players in different games rather than applying a universal type. However, I will not create my very own game designed for different personas based on the game's mechanics. Instead I will analyse already released video games using Canossa's approach to figure out what personas are most prevalent and then compare my findings to interviews conducted with actual players.

9 Player involvement

With his book, "In-Game – from immersion to incorporation" (2011), Gordon Calleja seeks to rethink the concepts of *presence* and *immersion* because the overuse of the terms has reduced their analytical value. To narrow the scope of his studies, Calleja will only look into games,

> *[…] that occur within virtual environments. Virtual environments and digital games share some common elements that interact to express different configurations of games. These elements are the human player, the representational sign, the structural properties of game and environment, and the material medium which instantiates the combination of these elements (Calleja 2011, chap. 1, "Digital game elements").*

Calleja wishes to study the intersection where games and virtual environments meet and creates *virtual game environments*. He does not consider digital versions of card games or puzzle games such as crosswords etc. to be virtual environments and thus the model he builds to study games does not take them into consideration. Rather he will focus on, "games that present the player with a virtual world in which to participate in a variety of activities, as do games such as *Half-Life 2* (Valve Corporation 2004) and *World of Warcraft* (Blizzard Entertainment 2004)," (Calleja 2011, chap. 1, "Digital games as hybrids").

To break down what leads to players feeling either immersed or present in digital games, Calleja studies six dimensions which he believes covers the various modes of involvement players may be presented with (in the sort of digital games, which he is studying). The division of players' involvement is the exact reason I have decided to include Calleja's study in the thesis. By looking at what engages players during game time as well as the continuous engagement in selected games by using the *Player Involvement Model* (Calleja 2011, chap. 1, "Structure of the model", figure 3.1) I aim to incorporate the model in my analysis. I hope this will help determine what dimension different interviewees focus on when playing games – perhaps there is a pattern to be found.

Calleja's study of player's involvement aims to elaborate on what experiences go into players feeling immersed or present and he ends up creating the new term '*incorporation*'. The term has two axes:

1. The player incorporates the game environment through internalisation, e.g. internalising kinaesthetic mechanics.
2. The player is incorporated into the game environment through e.g. an avatar.

Both processes need to occur at the same time for the player to experience incorporation, "Put in another way, incorporation occurs when the game world is present to the player while the player is simultaneously present, via her avatar, to the virtual environment" (Calleja 2011, chap. 10).

Incorporation is a combination of the dimensions outlined in the involvement model. Calleja states that while many combinations occur and result in incorporation the two dimensions kinaesthetic (Calleja 2011, chap. 4, "Kinesthetic Involvement"; 9.1.1, 93) and spatial involvement (Calleja 2011, cahp. 5, "Spatial Involvement"; 9.1.2, 94) must be present for the player to experience incorporation because it is through the internalisation of these two dimensions that the player internalise the game environment thus inhabiting it. Incorporation is not constant, but often turns back into involvement where one dimension requires all of the player's attention. The more skilled the player is, the easier it is to achieve incorporation.

That not all modes of involvement are required goes well with players having different attitudes towards games and thus having different opinions about what is interesting and what is not.

9.1 The Player Involvement Model

Calleja's player involvement model consists of six different kinds of involvement. Because digital games are experiential phenomena, the player involvement model is limited to look only at the specific possibilities found in *digital* virtual game environments (see p. 90 for details).

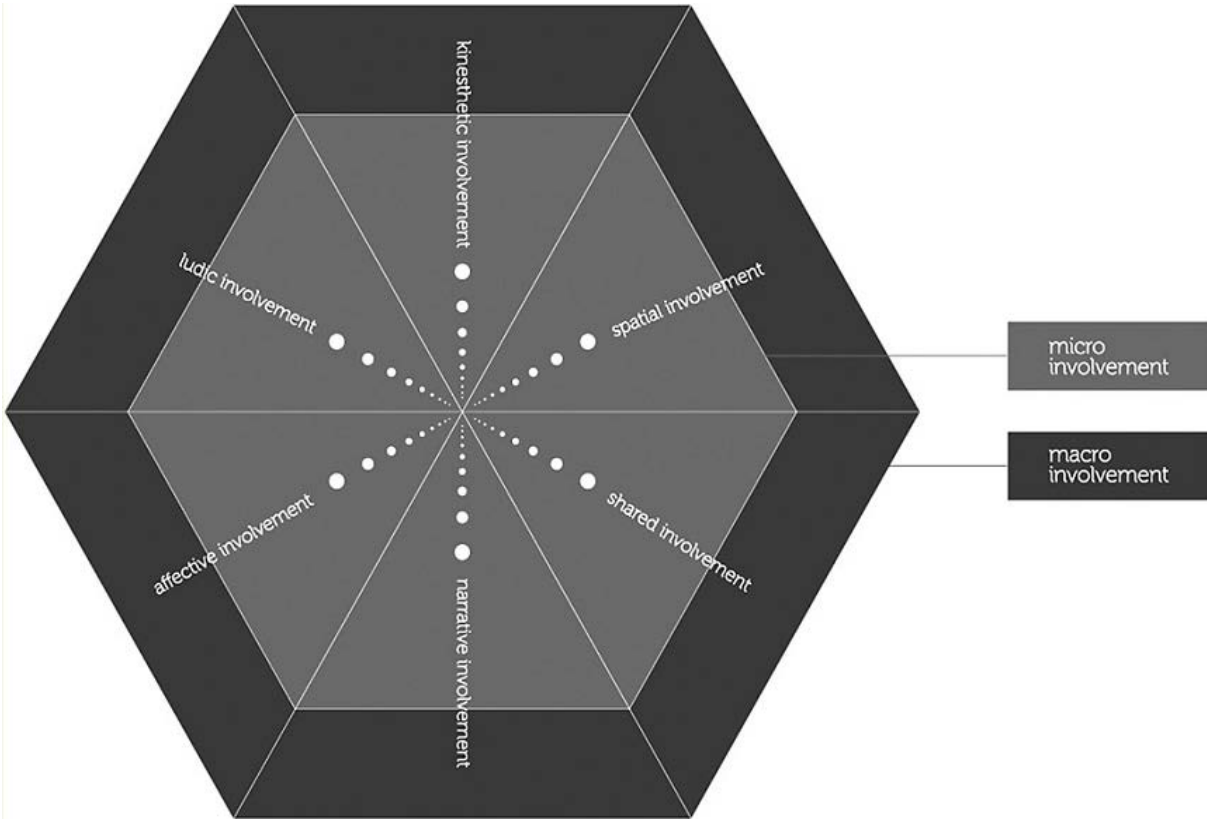

Figure 7: The player involvement model (Calleja 2011, chap. 3, "Structure of the model", figure 3.1)

Let us take a look at the different aspects and levels of involvements that go into Calleja's model. He divides players' continuous attraction to and engagement in digital games in two aspects: *macro- and micro-involvement*. Macro-involvement describes the continuous engagement with digital games over time between actual sessions of play (Calleja 2011, chap. 3, "Macro–involvement"). The micro-involvement aspect concerns itself with "[…] the moment-by-moment engagement of gameplay" (Calleja 2011, chap. 3, "Micro–involvement").

To visualise his idea of involvement Calleja uses the above model. At the outer edge of each triangle the players pays full attention to that particular dimension of involvement. The further one gets to the centre, the more internalised that dimension has become and thus it needs less active attention from the player. The internalisation of dimensions leads to the players attending multiple dimensions simultaneously (Calleja 2011, chap. 3, "Applying the model").

9.1.1 Kinaesthetic Involvement

The macro aspect of the kinaesthetic involvement has to do with the player being able to influence what happens in the game environment through her actions. The actions performed by the player can have both intended as well as unintended and unknown consequences. This contingency in digital games is what can make the same game seem very different when played by different players – or even the same player making different choices when playing the game again. As Calleja sees it, contingency is what makes games interesting in the first place (Calleja 2011, chap. 4, "Macro phase").

The micro phase of kinaesthetic involvement is about how the player in-game controls the movements of whatever entity represents the player on-screen. Calleja makes a distinction between two types of entities: the *avatar* and *miniatures*. The avatar is a single entity whereas the miniatures are a number of entities controlled either simultaneously or individually.

The miniatures do not represent the player the same way the avatar does because games that give the player one single avatar to control at a time anchors the player to that character thus making the avatar the "primary, if not only, locus of agency within the game environment" (Calleja 2011, chap. 4, "Micro phase").

Calleja claims that the representational form of the avatar does not matter – it is the fact that the avatar represents the player's exertion of agency in the game environment that creates a strong relationship between the player and avatar. About representation among humans, the micro sociologist, Erwing Goffman, wrote that,

> *Information about the individual helps to define the situation, enabling others to know in advance what he will expect of them and what they may expect of him. Informed in these ways, the others will know how to best act in order to call forth a desired response from him (Goffman 1959, 13).*

Using this in games would mean that the representational form does indeed matter and informs the player about what to expect from the avatar she is controlling. Of course what the player does end up reading into the avatar depends on her cultural background, experiences etc.

Despite Calleja not mentioning this himself, I believe he only finds these two kinds of game entities for the player to control because he is only looking at games set in virtual game environments (9, "Player involvement", 90). A lot of games do not have avatars or miniatures, e.g. Tetris, but are considered games none the less.

When it comes to kinaesthetic involvement the possibilities for internalisation has to do with, how 'fluent' the player is in the controls provided by the game. In fact it is not until the controls are fully internalised that the player can actually focus on playing the game rather than learning the controls. Calleja's research revealed the disappearance of movement mediation as a very important factor in gaming pleasure.

9.1.2 Spatial Involvement

The macro aspect of spatial involvement is built around the desire to explore unknown territory. According to Calleja, humans long the most to explore places different from those of our everyday environment (Calleja 2011, chap. 5, "Macro phase"). However, due to numerous facts people cannot just visit whatever place they find exotic and thus games provide the means to explore these fascinating environments without the need to travel, spend a lot of money or risking anything dangerous.

Calleja presents the following five types of spatial structures featured in today's digital games when he talks about the micro aspect of spatial involvement:

- **Unicursal Corridors or Labyrinths:** The game landscape may appear open and it may look as if it is possible to go anywhere in the game, but through various means the designers limits the path the player can actually traverse the game space.
- **Multicursal Corridors or Mazes:** There are multiple ways to traverse the game landscape, but they have all been predesigned by the level designer and are as predetermined as the unicursal corridor.
- **Rhizomatic Zones:** Game spaces are not contiguous. Various locations can only be reached by teleporting the player from one location to another. Another word for this spatial structure is

'hub-landscape' where the players travel to various locations from the same point of entry every time.

- **Open Landscapes:** The landscape is more or less completely open for the player to explore, with few restrictions to guide the player through predefined paths.
- **Arenas:** Smaller game areas such as maps in FPS, or tracks in racing games. They can have any of the structures mentioned above, but more than being something to traverse they are the setting for a performance. This often leads to players getting to know them better than the other structures – because it will give them an advantage over their opponents.

  (Calleja 2011, chap. 5, "Micro phase")

Calleja describes the spatial involvement to be concerned with 1) how the player through navigation learns the game environment, 2) how the player mentally maps the space she has navigated through, and 3) how tactical interventions lets the player control miniature space (Calleja 2011, chap. 5, "Micro phase").

By learning the game environment through play and thus navigating through it, the player step by step creates a mental map of the game and learns where she is currently at and how to travel to another location. In order for the game environment to change from space to place a shift from the conceptual to the inhabited needs to occur within the player. This happens through actually navigating the environment. This process of internalising the layout of the game environment leads to the player inhabiting the game space rather than merely traversing it.

9.1.3 Shared Involvement

The macro aspect of shared involvement revolves around the various forms of socialising in games, but also outside the game world where social bonds have been created as a result of initial digital engagement. The lack of intelligence on shared involvement in single-player games is quite puzzling as our interviews have shown a great deal of shared involvement in single-player games as well - in the macro phase at least. Despite the socialising surrounding single-player games for obvious reasons does not stem from in game relations, the shared involvement outside the game world may be what brought the player to the game in the first place and what keeps them coming back.

The micro aspect of this type of involvement is about how players cohabitate, collaborate and compete in the game world during gameplay – with both NPCs and other real life players (Calleja 2011, chap. 6, "Micro phase"). Calleja mainly focuses on shared involvement in multiplayer games, however, he does go into some useful modes of shared involvement that also applies to single-player games. Players experience other players and NPCs differently and will have different attitudes towards them. NPCs in a single-player game can make an otherwise empty game space come to life and bring the player to 'forget' that she is merely interacting with a simulation. Cohabitation also applies to spectatorship, according to Calleja, and can thus affect how a player performs in a game knowing that other people are watching, to either make it more interesting or impressive.

Collaboration is by Calleja only accounted for in multiplayer games. Despite players having different attitudes towards NPCs, Calleja himself concluded that they could make a player feel less alone in a single-player game. Thus I will assume that the same goes for games in which the player is to collaborate with NPCs rather than other real life players. Collaboration with NPCs can have great impact on the game and is both a way to aid a player through difficult situations as well as a way to drive the narrative forward through the interaction with a NPC character, e.g. *The Last of Us* (Naughty Dog 2013).

A lot of possibilities for competition are present in multiplayer games. In single-player games the competition is between the game's AI and the player. Thus the challenge depends on the player's skills and experience and how sophisticated the AI is.

9.1.4 Narrative Involvement

When it comes to the macro phase of narrative involvement, Calleja mainly concerns himself with describing the various (often opposing) approaches to narratives that different game scholars have presented.

As his involvement model reflects, his approach to narratives is, like all six aspects, centred on the player's experiences:

> *Arguing that narratives are not particularly important to the gaming experience is a nontenable, normative assumption that predetermines how players experience game environments. On the other hand, attributing every aspect of the gaming experience to narrative is equally unproductive (Calleja 2011, chap. 7, "Macro phase").*

While still acknowledging the formal aspects of narratives in games, Calleja wants to primarily focus on how these features shape the player's narrative experience in combination with other aspects of the game environment.

The same way Salen and Zimmerman and Jenkins (Salen and Zimmerman 2003; Borries et al. 2007; 2.3, "Emergent & embedded narrative", 23) see game narrative as made up by both embedded and emergent narratives, Calleja has a similar take on stories generated by the moment-to-moment action in combination with pre-scripted events or sequences. In the micro phase he describes a division of narratives in digital games in two broad categories: 1) *alterbiography* is used to describe the story created by each individual player's actions and 2) *scripted narrative* is used to account for pre-scripted events that convey story elements to the player. It is important to understand that these two different ways for the player to experience narrative are not exclusive and thus the scripted narrative can easily become part of the alterbiography because the alterbiography can include parts of the scripted narrative which the player focus on.

Overall, it seems that Calleja, despite claiming to look into the player's experience when it comes to narratives, is a bit biased towards finding games to be narrative as a standard without considering how players' attitude may affect the narrative experience lived by each player.

9.1.5 Affective Involvement

When it comes to affective involvement, Calleja accounts for two factors that contribute to games' potential to emotionally move players in the macro phase: Escapism and affect. Because the players

themselves are situated in the game environment through either an avatar or miniatures the potential for a more intense emotional experience lies within games – when compared to more classic media such as films and books (Calleja 2011, chap. 8, "Macro phase").

Players tend to choose games that give them the kind of excitement they lack in their everyday lives – to even out their level of excitement so to speak.

Seeking out experiences that one does not encounter in everyday life through the use of any medium may be considered escapist – games are by no means an exception. The escapist cannot better her situation by taking some time off playing a video game, but she can hope for an improvement of the real life situation when she is done playing.

When it comes to affecting players emotionally in the micro phase, Calleja believes that the design will encourage one or several different reactions and emotional responses in players. Because players are affected by non-interactable media content, Calleja believes that some players see games as a way to act upon a setting they have previously only been able to observe (Calleja 2011, chap. 8, "Aesthetics and affect"). He does not make a distinction between whether players are predisposed to certain emotional reactions because of their expectations based on other media or if player affect is formed by the affordances provided by the game. His examples imply that both situations may be the case. Players will bring expectations and emotions from other cultural phenomena into the game. Emotional affect is a result of many elements working together from visual cues and style to the use of mechanics.

9.1.6 Ludic Involvement

Even though games are programmed and thus 'closed' in the understanding that the programming is what determines what the player can and cannot do, Calleja found that players do think of themselves as interacting directly with a game's coded rules. Rather they interact with the digital world's 'wrapping' so to speak (Calleja 2011, chap. 9, "Macro phase").

Goals

One of games' most prominent features is the possibility for the player to make interesting choices. Calleja describes choices to be something the player makes in order to achieve a goal – either a personal one or a goal implemented in the rule system. In narrative games the latter is most often what drives the narrative forward. The type and variety of personal goals a player can strive for depends on the open-endedness of the game environment.

Game goals can be divided further between higher and lower order goals in a hierarchy – or sometimes referred to as primary goals and subgoals (Calleja 2011, 2649). Higher order goals are often divided in lower order goals which are more immediately achieved and thus keep the player motivated to reach the higher order goal. If the player is aware of the link and the way the outcome of lower order goals affect higher order goals, the player will experience the subgoals as more meaningful.

The micro phase of ludic involvement is about choices and the perceived consequences they may have in the game world. Because of games' interactivity the player can only plan ahead based on what she already knows. Through feedback from the game system and through the emerging game situation the player will alter her plans accordingly to reach higher order goals. Calleja makes a distinction between plans through which the player strives to achieve goals in the goal hierarchy:

- ***Strategies***: applied in pursuit of primary goals
- ***Tactics***: applied in pursuit of subgoals (acknowledging that there are multiple levels of subgoals)
- ***Microtactics***: planning during moment-to-moment actions (leads to achieving subgoals)

(Calleja 2011, chap. 9, "Strategies, tactics, and microtactics").

Even though reaching a long strived for goal often feels like a reward in itself, games often lure the player into taking specific actions (e.g. to drive the game's narrative forward) with in-game rewards. Depending on the player in question different rewards will be valued differently.

9.2 In short

Calleja's model is designed to give a full picture of the potential experience a player can have when engaging in a digital game. However, a player is most likely not to engage with all of the six modes of involvements described by Calleja – at least she will focus more on one or several rather than distribute her attention equally between them. Therefore I find the model to be more useful to me when analysing the interviews conducted. I will use the model to determine which mode(s) of involvement(s) the player in question found most engaging.

10 Involvement & Play-Personas

All theorists here presented have taken insights gathered from some kind of communication with actual players to create their methods for categorising players one way or another. Canossa, however, has based his approach on what possibilities the players are actually provided with rather than direct communication with the end user. After having analysed what play-personas a game holds, they have been tested for, not by asking players, but by tracking various metrics in-game.

Despite Canossa finding play-personas to be quite a solid way to design for various players and afterwards also test for their presence, I still find it unlikely that players are merely a product of a game's affordances. When looking back at the example that sparked the interest to study the causes behind player-behaviour (6, "Player-behaviour", 70), it is obvious that the player somehow felt he needed to adapt to another play-style to live up to the game's expectations of its player. The game clearly allowed for his initial brawler style, but somehow did not manage to adapt that persona's

behaviour into the overall story. I assume this would have been revealed in a combination of metrics and interviews.

Seeing that metrics are completely out of scope for this thesis I will analyse players' interviews and see what modes of involvement they find the most engaging. Then I will compare the findings to the personas I have been able to deduct from the games and see whether it is a match or not.

Canossa's and Calleja's methods go well together for this particular purpose because they both analyse what modes of involvement engage players in any game in question. Calleja has proposed six dimensions that can involve players in various ways whereas Canossa looks for the affordances provided by the game in question. I believe that the dimensions the interviewed players self-report to be the most engaged with will reveal what play-persona they are most likely to play as during a game. I also believe that the preferred modes of involvement will not only apply to one game, but be across different games – that have similarities, of course. Which similarities may be revealed through the analysis.

Methodology

11 Qualitative or quantitative data gathering?

Canossa used game metrics and live play-tests to track the play-personas he found during the initial analysis of the games he studied (8.2.5, “Game metrics”, 85). To be able to use metrics one needs to have access to the code of the game to be able to log players’ actions. On top of that a lot of data have to be gathered to be able to say something general about the play-personas of that particular game. The scope of such an amount of data and data gathering is not suited for a mere master thesis and thus we from the start decided to do interviews instead. This leaves me with a lot less data; however, I will be able to obtain what Canossa’s work lacks: An insight into the minds of the players that the play-personas and metrics try to pinpoint. It is important to note that Canossa does not reject the idea that there are thoughts and motivations behind every player’s actions in a game and that he does support the use of qualitative data as well (Canossa 2009a, 36). Thus I am not going against his method – I am testing it from another point of view.

11.1 Perceptive & reflective experience

As mentioned when describing players as expressions (8.2.4,”Players as expressions”, 83), Canossa bases his division in ludic and aesthetic affordances on The Frankfurt School’s *erfahrung* and *erlebnis*. Erfahrung translates best to ‘*reflective experience*’ and erlebnis to ‘*perceptive experience*’. Perceptive experience is what the player lives *here and now* while playing, whereas reflective experience represents the player’s thoughts about the experience in retrospect.

I can make a somewhat similar distinction when it comes to data gathering. Interviews and questionnaires fall into the reflective experience category while metrics and live observations of players can be considered perceptive.

Calleja used interviews to confirm his analysis of what go into the micro and macro involvement of engaging players. However, it seems that while he was studying the various ways games can

potentially engage players, he did not take into consideration what actions players were actually able to choose to perform from the single game in question.

To build on these two researchers' approaches, but still gather new knowledge, I will apply Calleja's use of interviews to validate or invalidate play-personas created using Canossa's method. The reason for using interviews rather than metrics is mainly because it would be out of scope for a master thesis, but also to test the play-persona model against reflective experiences rather than only perceptive.

12 Data gathering

The interviews were designed before we concluded we needed to split the thesis in two more separate subjects (narratives and players) and thus it encompass questions that is focussed on both subjects rather than merely players' experiences. In retrospect I would have constructed the questions from Calleja's involvement model, but I was not in charge of the methodology before the division in two more separate projects.

When choosing among the many different methods to gather qualitative data we put emphasis on our possibility to somewhat control the subject of the engagement and - due to time resources – the amount of time we would spend gathering the data. Hence the method of our choice was semi-structured interviews.

The reason we went with semi-structured interviews was that we did not want to be limited by having a strict set of questions that would have to be answered in a certain order. The flexibility that the semi-structured form allows for, enabled us to change the order of questions, leaving out some if we felt they had already been answered as part of an earlier question, or simply to change the pace of the interview. In the same way we could add elaborative questions where the conversation invited us to do so when the interviewee arrived at an important point. The aim of choosing the semi-structured

interview was to make it feel like more of a conversation to the interviewee despite that it might make it more difficult for us to analyse the data later on.

Before we did the actual interviews or constructed the questionnaire we studied the subject we wanted to talk to interviewees about as strongly recommended by Kvale (2009, 102–103).

Because we went with semi-structured interviews that took different twist and turns depending on the interviewee, the interview analysis method applied to determine which modes of involvement the players seemed most interested in (in talking about, at least) is what Kvale refers to as *ad hoc*. This means that no specific method is used but that the analyst will apply whatever method she finds useful for that particular interview or part of interview.

Because the interviews are quite extensive and we were originally supposed to be two to analyse them there were not resources to transcribe all of the full length interviews. However, I do not find it to be a great loss as I doubt anything would come from it that I would not have picked up during the careful listening of the interviews conducted instead.

As the data is too limited to generalise from, I will not aim to fit players' experiences into any larger patterns deducted from the findings of the analysis. I can of course still point those out that I might see, but they do not hold any statistic validity.

12.1 Interviewees and form

We have in total interviewed 13 people for this thesis, sadly only four of the interviews can be used to actually deduct a somewhat consistent preference for certain modes of involvement. The interviews I can use are those done with adults who reported playing single-player games. Three of them were conducted by my-self (Annika) using Skype due to distance. The fourth was done during a visit to the youth club were we also interviewed children, the rest of the interviewees.

The reason I could not use the interviews with the children was only discovered too late to redo them – during the analysis. The interviews with the children were conducted at a youth club over two visits.

The first was at night when only older members (14-18) are allowed access. This night, Emil did the interviews and I took notes. Two adults were interviewed this evening and only three children. During the interviews, one with a boy, 16, and one with two girls, 14 and 15, it became clear that these children, or teenagers, are very conscious about how they conduct themselves and what they tell other people. It seemed as if they were afraid to act out of character and thus the data gathered during these interviews are not at all useful. One of the interviews with the pedagogues is very useful whereas the other turned out not to play single-player games we could use after all.

The second visit was planned in cooperation with one of the pedagogues to be conducted during the daytime when younger children were in the club. The pedagogue even found five boys who wanted to talk to us about the video games they play, so they were more than ready to talk when we arrived. I conducted these interviews while Emil took notes.

The boys were 12-13 years old and, compared to the teenagers, extremely talkative. As we talked to them more gathered around just to listen. It really was a pleasure to interview these children.

However, compared to the adults and the teenagers, the children may not understand everything that goes on in games because of the quite serious content in many of the games they had played. On top of that, they are not as reflective of their experiences yet, or may not be able to talk about it quite as well as an older person. Therefore analysing their data proved more difficult and too much was left for me to guess about what could have caused this or that experience.

Because they were so eager to share all of their experiences it was difficult to make them only talk about one game. Thus we touched different aspects of many different games during our talk, but failed to get in detail knowledge about every aspect of one game. It proved to be impossible to piece together all of their different accounts of gaming to one or more coherent preferred modes of involvement.

The four adults, whose interviews I will be analysing, also filled out the FFM test (Johnson 2013). After having created the play-personas and analysed the interviews I look at their test scores as well to see if their scores fit with the personas deducted from the play-persona method.

12.2 Games to be analysed

The choice of which games I would analyse for this thesis was left with the players who we interviewed, meaning that I played the games they decided to talk about. I chose to do it this way because I did not want to limit neither who I could potentially interview nor what games they were 'allowed' to talk about. During the interview, the players mentioned several games and we suggested that they talked about games that either other players had already talked about in detail during interviews or games we knew we had access to play – but only after they had mentioned them themselves first.

Thus the two games *Far Cry 3* (Ubisoft Montreal 2012) and *Dishonored* (Bethesda Game Studios 2012) was chosen because they often came up during interviews and because they both fit the description 'narrative single-player games'. The games have similarities and differences: both allow for several different approaches to complete missions, but while *Dishonored* is built as a multicursal corridors/hub-shaped game world, *Far Cry 3* is a completely open world.

12.3 Validity

To gather qualitative data to accurately validate or invalidate the play-persona method I would need a lot of interviews. Often it is so that researchers either choose to go with quantitative data to be able to generalise and have some statistic validity or chose qualitative methods to be able to deduct the reasons behind people's choices (Kvale and Brinkmann 2009). As resources are often of the essence you cannot have both; that is so much qualitative data that you can both say something general from all of the e.g. interviews and at the same time know why people have chosen as they did.

In the same way, the interviews we have conducted for this thesis do not hold much statistic validity as they are too few in numbers and too few interviewees talk about the same game. Therefor the results are to be seen as an indication of whether or not the play-persona method is valid when looked at from a more qualitative point of view. If it turns out to be so, of course more extended research would have to be done to gain some statistic validity and of course to validate the findings. No females are among the interviewees whose interview could be used for analysis. Thus the interviews are in no way gender balanced and as long as gender plays such a large role in people's behaviour I find it necessary to make up for this in possible future research into this area.

13 Analysis methods

Looking back at the play observation that initially spurred my interest in player-behaviour (6, "Player-behaviour", 70), I still find it unlikely that players are simply a result of the possibilities games have – despite our study of play-personas and games' affordances. The player clearly felt, what was expected of him from the game, but at the same time found it hard to live up to that role. Despite Canossa identifying several play-personas for the game in question (Canossa 2009a, 120ff), Hitman: Blood Money (IO Interactive 2005), the player may have happened to play as one of the possible play-personas, but it did not feel 'natural' to do so. To test Canossa's aesthetic object approach to games I will create play-personas for the games in question and test them against players' reflective experiences playing these games.

13.1 Games as aesthetic objects

To analyse the games chosen I will follow the method outlined previously(8.3, "Creating play-personas", 86):

1. Group list of core mechanics into main parameters of behaviour.

2. Create a dimension spectrum for the game using the main parameters of behaviour. Each parameter gets an axis with the extremes of the dimension in each end of the axis.
3. Create a table of the possible play-personas by combining the selected parameters from the dimension spectrum in any possible way.
4. Choose three to five possible play-personas from the play-persona table that I find the most interesting, but also find to be present in the game's affordances.
5. Do the FFM test (Johnson 2013) for all chosen play-personas and briefly outline a psychological profile for each of them based on their scores. When creating the profile from an analysis of the FFM scores it is important to hold the scores up against which parameters the persona encompasses as this will give insight into how to interpret the broad FFM scores in the narrower scope of the particular game in question.

The above of course entails that I have played the game in question myself.

After having created the play-personas and analysed the interviews, I will look at the four adults' FFM test scores as well to see if they fit with the scores for the different personas in the game I find them to incorporate the most in their (self-reported) play style.

13.2 Games as a result of players' interaction

As mentioned earlier (12, "Data gathering", 105), no particular method will be used to analyse or present the data gathered from the interviews. Rather, the chosen interviews will be scrutinised by careful listening to determine what modes of involvement (Figure 7, "The player involvement model (Calleja 2011, chap. 3, "Structure of the model", figure 3.1) 92) the player is most engaged with.

As Calleja believes both kinaesthetic and spatial involvement to be the cornerstones of incorporation, the players interviewed may not mention these modes of involvement at all – that is, if Calleja is right – and they are used to using the type of controls the game provide.


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Analysis

14 Cry Far 3

Far Cry 3 (Ubisoft Montreal 2012) is an open world FPS set on a tropical island in present time. The main character's, Jason Brody, vacation with his girlfriend, brothers and friends undergoes an unwelcome change when they are kidnapped by pirates. Jason escapes and it is left to him to save the others aided by the native population of the island and their magic.

14.1 Personal experience

I have never really played FPSes before and thus was very sceptical when having to play *Far Cry 3* for the thesis. The fact that I rarely play games on PC only edged my scepticism on. However, I was pleasantly surprised as it quickly became one of my favourite games.

Deducting my own play-style from the top of my head I would say that because I am not at all used to the controls or navigating the game world in first person, I do not really have a play-style yet as I am merely moving about learning. I do tend to try the stealthier solutions to dispatching enemies, and I tend to want to get everything sorted out in one area before moving on in the narrative progression missions. I thought I would be more into the story of the game, but it seems to merely be an excuse for letting the player loose in this open world. In *Far Cry 3* I feel more put in a setting than in a narrative.

14.2 Play-persona

14.2.1 Mechanics grouped

Below I have grouped the core mechanics in four different parameters of behaviour. Some of the mechanics are present in several of the parameters because in the end it is (in general) not the single mechanic, but the combinations of several that make the difference in play-style. I had doubts as to whether both direct and hidden confrontation should be represented instead of simple 'confrontation' with 'direct' on one end of the axis and 'hidden' on the other. However, not actively seeking out direct

confrontation does not lead to hidden confrontation instead. A player cannot go through the game without killing off enemies, but that does not imply that the player have to actively seek out any of the two types of confrontation willingly. Therefore it was important to me that the grouping and the following dimension spectrum made room for players that do not in any way want confrontation unless forced upon them by the task at hand.

Direct confrontation	Hidden confrontation	Exploration	Collect
Stand		Stand	
	Crouch	Crouch	Crouch
Walk		Walk	Walk
	Walk while crouching	Walk while crouching	Walk while crouching
Sprint	Sprint	Sprint	
	Swim	Swim	Swim
	Swim fast	Swim fast	Swim fast
	Dive	Dive	Dive
	Jump	Jump	Jump
	Climb	Climb	Climb
Drive vehicle		Drive vehicle	
Fast travel	Fast travel		
Melee attack			
Ranged attack			
	Stealth melee attack		
	Stealth ranged attack		
Narrative progression missions	Narrative progression missions		Narrative progression missions
Race missions (side mission)			Race missions (side mission)
Hunt missions (side mission)	Hunt missions (side mission)		Hunt missions (side mission)
	Assassin missions (side mission)		Assassin missions (side mission)
	Free radio towers	Free radio towers	Free radio towers
Clean out pirate camps	Clean out pirate camps		
Craft	Craft		Craft
		Collect items	Collect items
Distribute experience points	Distribute experience points		Distribute experience points
Customise weapons	Customise weapons		
Buy weapons	Buy weapons		

Table 3: Far Cry 3's core mechanics grouped in main parameters

14.2.2 Dimension spectrum

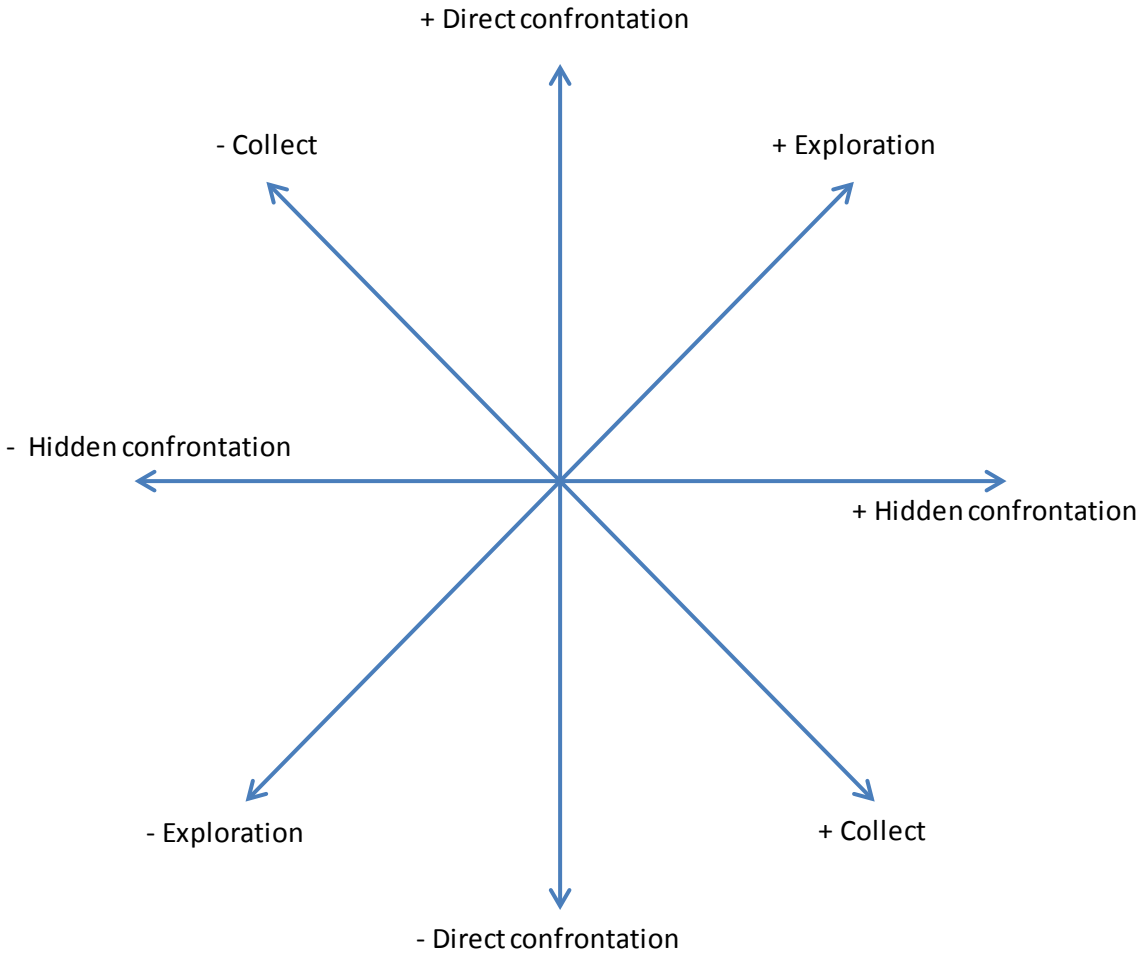


Figure 8: Dimension spectrum for Far Cry 3 based on the chosen parameters

14.2.3 Possible play-personas

Dimension / Persona	Direct confrontation	Hidden confrontation	Exploration	Collect
Achiever	+	+	+	+
Rambo	+	-	-	-
Assassin	-	+	-	-
Explorer	-	-	+	-
Collector	-	-	-	+
S.W.A.T.	+	+	-	-
Brawler	+	-	+	-
Thief	-	+	+	+
Ghost	-	+	+	-
Columbus	+	-	+	+
Pacifist	-	-	+	+
12	-	+	-	+
13	+	+	+	-
14	+	+	-	+
15	+	-	-	+
Fell asleep	-	-	-	-

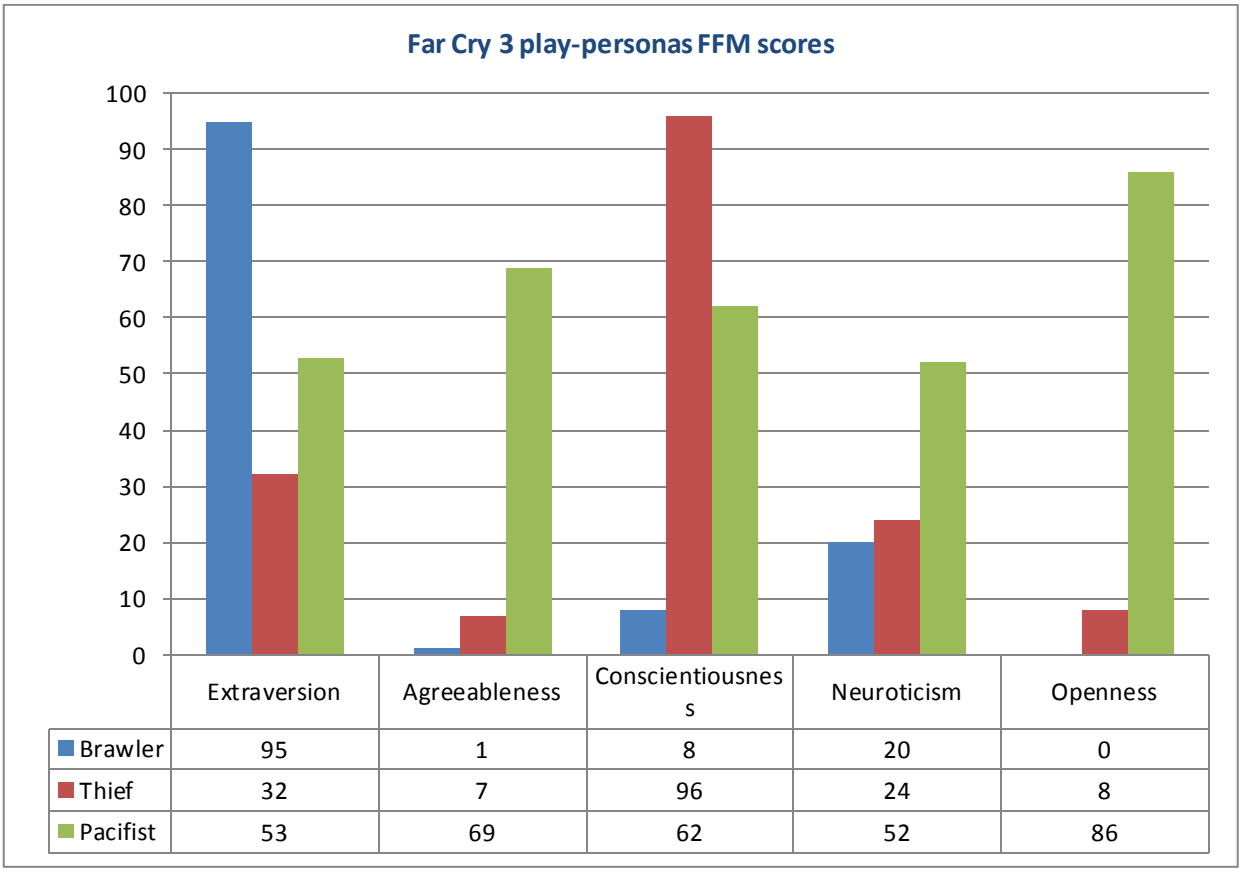
Table 4: Far Cry 3's possible play-personas based on the selected main parameters

14.2.4 Five factor scores

I have chosen to elaborate the three play-personas marked with grey in the table, but choosing which personas to work with here was really difficult as I think that most of them are quite interesting as I see them all possible to play as in the game.

The scores from the FFM test (Johnson 2013) are categorised as low, 0-30 per cent, average, 30-70 per cent, and high, 70-100 per cent. The percentages are calculated by comparing the scores to that of the average score of the same test group belonging to that segment (age, gender, nationality).

When deciding which personas to elaborate on I have aimed to choose as varied a spectrum as possible because it will be possible to find a middle ground between two play-personas for players encompassing several of them.



	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Brawler	95	1	8	20	0
Thief	32	7	96	24	8
Pacifist	53	69	62	52	86

Figure 9: Far Cry 3's selected play-personas FFM-test scores

14.2.5 Psychological profiles

Brawler

The Brawler persona's (Table 7, 170) high score on extraversion on combination with the minimal score in agreeableness (with *Far Cry 3* in mind) give us a play-persona that enjoys open fire gun fights and being confronted by multiple enemies at once. This is indeed confirmed by the score of zero in the facet cautiousness under the conscientiousness factor. The overall low score on conscientiousness, neuroticism and openness to experience adds to the solidity of this persona being a true brawler who likes adventures without overthinking things. A persona who lives in the now.

Thief

The Thief persona (Table 8, 171) is somewhat the opposite of the brawler. Because of its preference for stealth attacks it scores low on extraversion overall, but does peak on a few facets e.g. activity level. The low score in the agreeableness factor goes well with a stealthy persona who mostly stays hidden. I interpret the high score in cooperation as a sign that the persona goes out of its way to stay out of NPCs' paths if possible. Of course this person scores high in most of conscientiousness' facets as it needs to be disciplined to stay hidden. The high score in achievement-striving is a result of this persona also preferring to collect and explore (mainly collect). The low score in neuroticism fit my overall idea of the thief being a cool and collected stealthy explorer, however, the low score in openness to experience is surprising as I thought this would be the place to find the eagerness to explore the game world. I assume it is because of the formulation of the questions in the used FFM test (21.6, "Appendix E: Questions used for interviews", 168) that this trait does not really show up anywhere in the FFM scores.

Pacifist

The Pacifist scores (Table 9, 171) an average in extraversion due it not being assertive or seeking excitement. However, it cannot avoid running into NPCs when exploring the islands and potentially the narrative – and it does not mind. The high level of agreeableness supports this description. Conscientiousness is somewhat ambivalent in this persona because the persona aims for collecting the most, but at the same time wish to explore. That means that the score for the facet achievement-striving is high, but it is accompanied by a low score in self-discipline which allows for distractions to lead the persona in another direction to explore some more rather than go after a certain relic as planned. This is further supported by the high score in immoderation under the neuroticism factor. The pacifist is the persona to score highest in the openness to experience factor. I see this as a result

of it wanting to explore and a sign that it wants to find out more about the narrative and the stories the game holds than the average player.

14.3 Interviews

14.3.1 Male, 23

The first player interviewed using Skype was a 23 year old male who mainly plays multiplayer games and thus is quite selective as to what he spends time on single-player-wise. When talking about *Far Cry 3* – the most recent 3D single-player game he had played – he mostly focused on ludic and spatial modes of involvements himself and had and understanding of the narrative involvement without it seemingly affecting his fascination with this particular game.

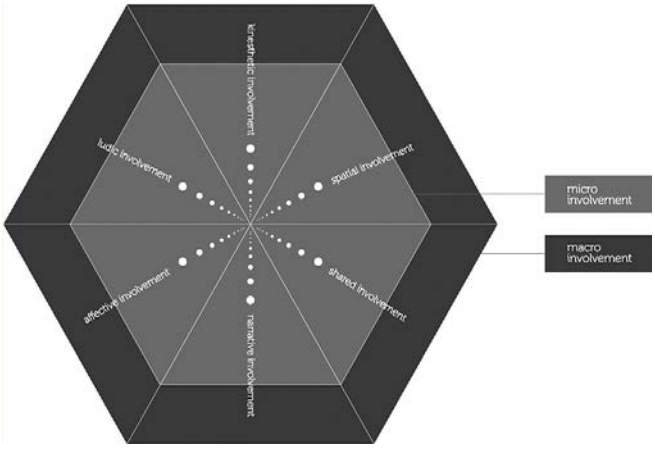


Figure 10: The player involvement model (Calleja 2011, chap. 3, "Structure of the model", figure 3.1)

When asked what the game was about he quickly summed up the main points of the plot ending with the conclusion that after having connected with the local, the player is set free to roam the island and look for his friends. The missions to find them are wrapped in small stories where the player in order to receive help needs to help others first.

The player greatly valued the open world structure of the game because it allowed him to e.g. play around with weapons obtained during a mission rather than being restricted to *only* that mission as in GTA (Rockstar Games 2008).

When asked about being able to empathise with the main character, the player told me that there are a few situations where the player is granted an altering choice and that whatever one chooses depends on one's frame of mind at that time. This answer does not indicate that the player empathises with the avatar, but that he is aware of being able to play the game using different tactics. He has not played the game more than once, but like other players (15.3.2, "Male, 21", 133) he assumes that the initial play through is a phase where one plays as one-self. After the first play-

through a player can apply more concrete tactics. Using examples from other games, the player concluded that it is not so much of a roleplaying activity to play the game again with another frame of mind. Rather, it is a personal goal or challenge to e.g. only use one type of weapon. At least this is true when looking at FPS games, as the player does call it role-play when he has played Skyrim (Bethesda Game Studios 2011b) 4 times. However, as I see it, for him, it has nothing to do with the character, but rather he experiments with different approaches.

Looking at the possible play-personas for *Far Cry 3* I would categorise this player as a '13' – one of the personas I have chosen not to elaborate on as it is encompassed by a combination of the three I have studied in detail. However, I do not think that any of the possible personas fully encompass this player as he very much seems to explore what he can and cannot do in the game rather than explore the game itself – something I did not think of when grouping the mechanics. It could also be a sign of him over-thinking his approach when self-reporting which is a likely situation when using qualitative, and thus reflective, data from life-long gamers.

The player's FFM scores (Table 10, 172) do not correlate with any of the elaborated play-personas (Figure 11, 123) and thus it does not seem that the player as such projects himself into the game and adapted play style – at least when applying the FFM.

14.3.2 **Male, 21**

The second player to have talked to me about *Far Cry 3* started out mentioning a lot of other 3D single-player games which to a greater extent than *Far Cry 3* holds the potential to tell a story. The player mostly focused on the narrative and ludic modes of involvements during the interview.

When asked what the game was about, he retold the plot and the background setting for the game, and concluded that he could easily empathise with the character despite him being depicted as a full character with personality and dialogue. When asked if there was a particular mission or place in the game the player thought stood out, he mentioned a mission where the avatar instead of being scared

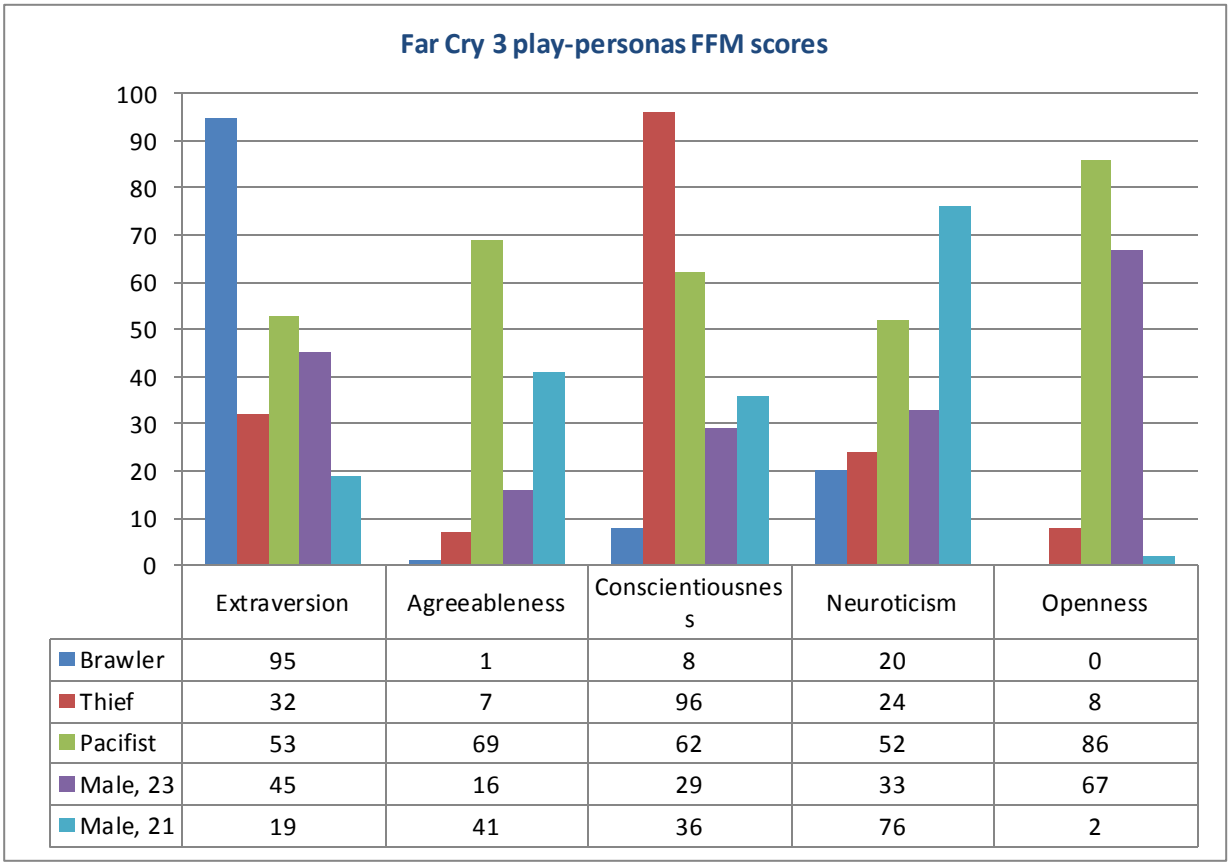
of the whole situation and doing it just to save his friends, is starting to enjoy his new way of being. This was depicted through the game-play, the monologue spoken by the avatar throughout the mission, but also using the music to set the mood. This shows narrative involvement as the player through a journey and actions in combination with prescripted monologue can end up with a story element standing quite strong in his memory.

When talking about the story, the skill three depicted by the tattoo on the avatar's arm was mentioned as a good way to combine the ludic with the narrative.

The best thing about the game for this player was that it is possible to play it using different tactics so that one can both brawl and sneak about depending on mood. He mentions how he liked everything about the game, but that he did not really spend a lot of time exploring or gathering collectibles. So why did he bother freeing the radio towers if not to explore and get details about collectibles on the map? Because it granted him free weapons. The fact that the player would rather drive around the island than traverse it by foot supports the initial idea that he is not really interested in other modes of involvement than the narrative and ludic.

Categorising this player according to one of the possible play-personas (Table 4, 117) this player is a combination of the Brawler and the Thief persona as he during his two play-throughs used elements from both of them. The grouping of mechanics into the four chosen mechanics does not specifically allow for focussing on the narrative involvement that this player experienced, however, I still do not see any mechanics that in particular advocates for this mode of involvement. This could indicate a flaw in the play-persona approach to defining players' experiences.

As with the other interviewee, the player's scores in the FFM test (Table 11, 172) do not indicate any direct correlation between real life person and preferred play style.



	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Brawler	95	1	8	20	0
Thief	32	7	96	24	8
Pacifist	53	69	62	52	86
Male, 23	45	16	29	33	67
Male, 21	19	41	36	76	2

Figure 11: Far Cry 3's selected play-personas FFM-test scores compared to that of the two interviewees

14.4 Conclusion

The two interviewees did not seem to take their real life FFM personality with them when applying different tactics in *Far Cry 3*. Rather they both understand the various ways one can engage with the game clearly, but still choses to have fun 'playing as themselves'.

15 Dishonored

Dishonored (Bethesda Game Studios 2012) is a first-person stealth game set in a 17th century London rat-plagued inspired city in a somewhat undeterminable period of time due to the steam-punk inspired technology found in the game. The player controls Corvo Attano who was once the empress' bodyguard. However, after being accused of killing her and kidnapping her daughter, he escapes from prison and becomes and assassin out to save the empress' daughter and take his revenge on those who killed the empress and smeared his name.

15.1 Personal experience

After having gotten used to the whole first-person thing from playing *Far Cry 3* I was quite excited to start playing *Dishonered* as I usually enjoy playing stealth games with more story than an open world can provide. However, I was disappointed and quite annoyed with it being so linear and bound in a cliché of a story. Only during my analysis of it after having played it, I have found new curiosity to play it again to see how the different play-style approaches affect the game world, NPCs' reactions towards Corvo and the promised different endings.

My play-style in *Dishonored* is an attempt at being stealthy without completely mastering the controls just yet. It usually starts with me trying to sneak past an enemy or take him out without getting noticed, I then push the wrong button and end up having to shoot my way through a whole bunch of enemies to sort things out. I could of course just restart at my last save game – but I think that is cheating.

15.2 Play-persona

15.2.1 Mechanics grouped

The table below contains all seven parameters of behaviour with possible preferred mechanics. Of course a lot of the parameters will inevitably cross over as you cannot play using only one of the

parameters, but these are the extremes and the play-personas catered to specifically will be a combination.

Unseen lethal	Unseen non-lethal	Seen lethal	Seen non-lethal	Collect	Side-missions
	Melee attack		Melee attack		
Melee lethal attack		Melee lethal attack			
				Scavenge for everything	
					Do side-missions
			Ranged attack	Use the Heart to listen to surroundings	Use the Heart to listen to surroundings
		Ranged lethal attack			
	Ranged stealth attack				
Ranged lethal stealth attack					
Spring razor		Spring razor			
Rewire tool	Rewire tool	Rewire tool	Rewire tool		
Hide body					
	Hide unconscious enemy				
		Blood Thirsty			
Shadow Kill					
Agility	Agility			Agility	
Vitality	Vitality	Vitality	Vitality	Vitality	Vitality
Windblast	Windblast	Windblast	Windblast		
Bend Time	Bend Time		Bend Time		
Possession	Possession			Possession	Possession
Devouring Swarm		Devouring Swarm			
Dark Vision	Dark Vision				Dark Vision
Blink	Blink		Blink	Blink	Blink

Table 5: Dishonoered's core mechanics grouped in main parameters

15.2.2 Dimension spectrum

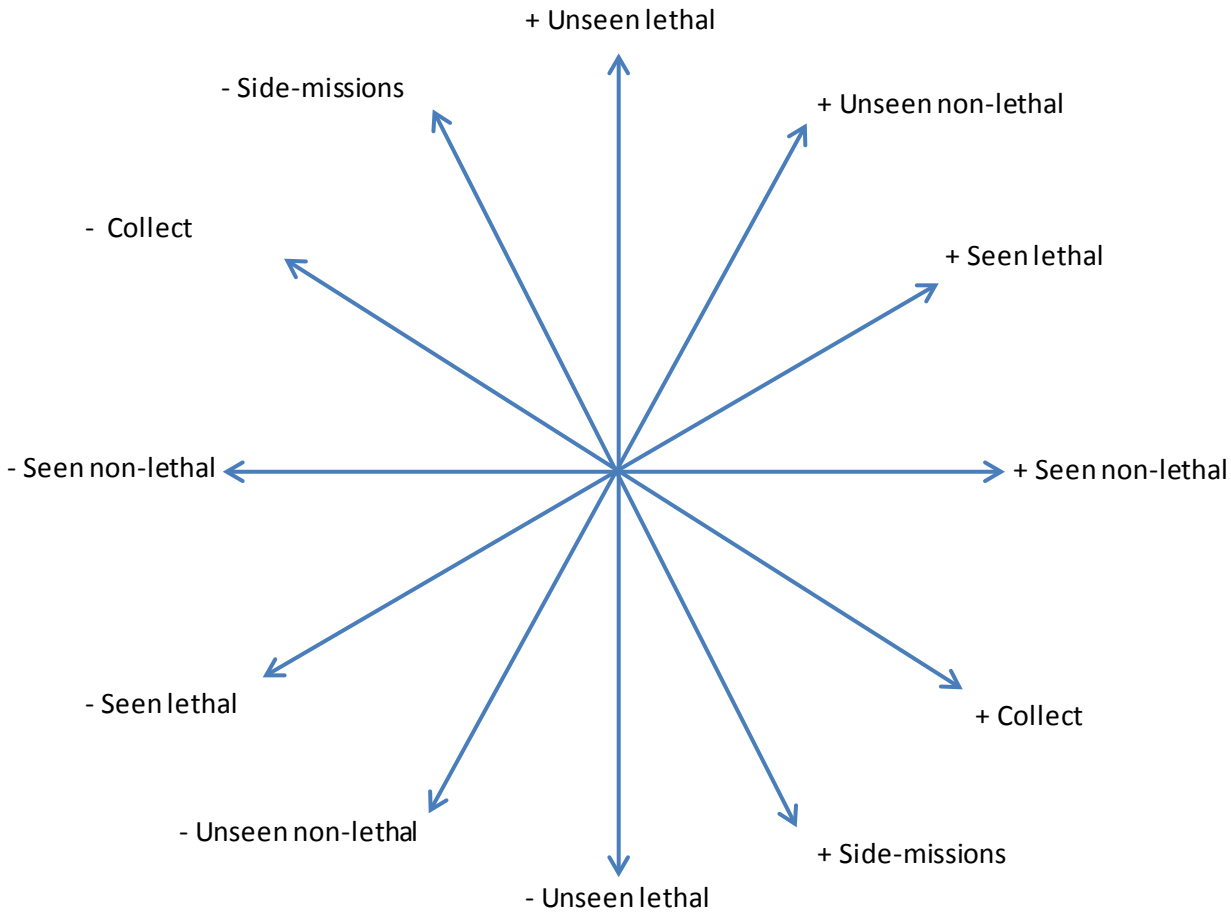


Figure 12: Dimension spectrum for Dishonored based on the chosen parameters

15.2.3 Possible play-personas

The table containing all the possible play-personas found in *Dishonored* using the parameters I have chosen has some quite impossible combinations. The obvious one being adapting a both lethal and non-lethal play-style at the same time. Of course players can vary their play-style any number of ways throughout a game, but when it comes to play-personas it is interesting to cater to the extremes as you will then (in theory) also cater to the players in-between the extremes.

The play-persona I found the most interesting is one I cannot analyse using this method. It is the achiever who encompasses all six parameters. The only reason I find this persona relevant is *Dishonored's* replayability.

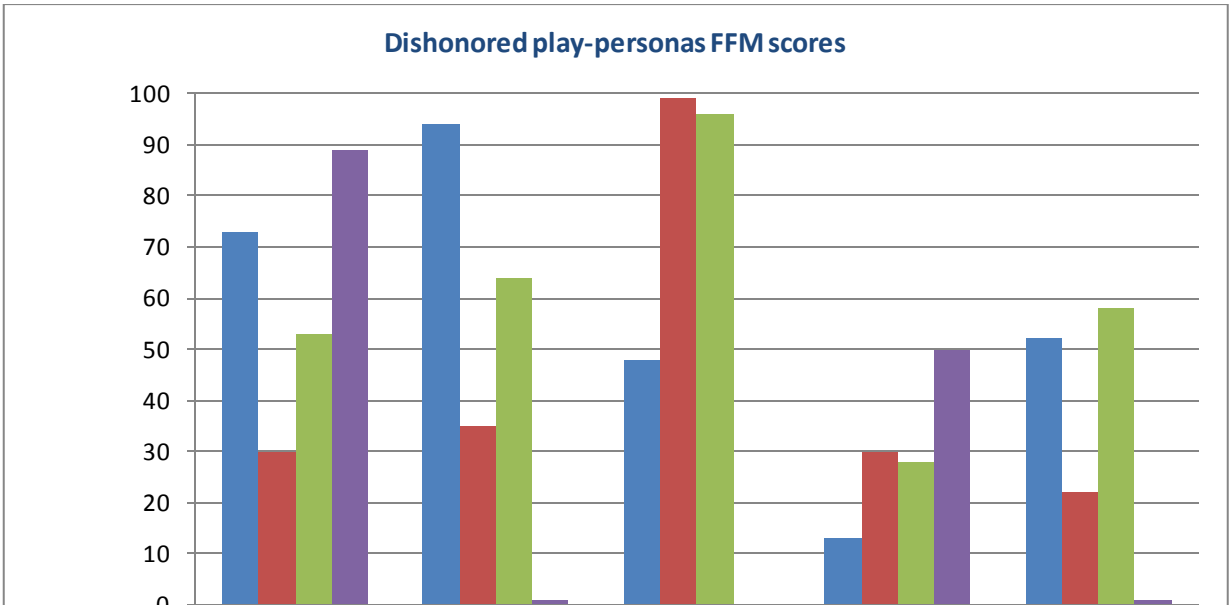
Dimension / Persona	Unseen lethal	Unseen non-lethal	Seen lethal	Seen non-lethal	Collect	Side-missions
Achiever	+	+	+	+	+	+
Assassin	+	-	-	-	-	-
1	+	+	-	-	-	-
2	+	+	+	-	-	-
3	+	+	+	+	-	-
4	+	+	+	+	+	-
Ghost	-	+	-	-	-	-
5	-	+	+	-	-	-
6	-	+	+	+	-	-
7	-	+	+	+	+	-
8	-	+	+	+	+	+
Brawler	-	-	+	-	-	-
9	-	-	+	+	-	-
10	-	-	+	+	+	-
11	-	-	+	+	+	+
Runner	-	-	-	+	-	-
Collector	-	-	-	+	+	-
Friend	-	-	-	+	+	+
RPG	-	-	-	-	+	-
Narrative explorer	-	-	-	-	+	+
Listener	-	-	-	-	-	+
13	+	-	-	-	-	+
14	+	+	-	-	-	+
15	+	+	+	-	-	+
16	+	+	+	+	-	+
Thief	+	-	-	-	+	+
17	+	+	-	-	+	+
18	+	+	+	-	+	+
19	-	+	+	-	-	+
20	-	-	+	-	-	+
21	-	-	+	+	-	+
22	-	-	-	+	-	+
23	+	-	-	+	-	+
24	+	-	+	-	+	-
25	-	+	-	+	-	+
Ninja	+	-	-	-	+	-
Stealthy explorer	-	+	-	-	+	-
Detective	-	+	-	-	+	+
Columbus	-	-	+	-	+	-
Gun for hire	-	-	+	-	+	+
Fell asleep	-	-	-	-	-	-

Table 6: Dishonored's possible play-personas based on the selected main parameters

15.2.4 Five factor scores

I have chosen to elaborate the four personas marked with grey in the above table. I have chosen those I found the most diverse, but still able to fit the four overall play-styles that I feel is planned for in the game. The four overall play-styles that *Dishonored* is designed for are, as I experienced the game, 1) Lethal unseen, 2) lethal seen, 3) lethal seen and 4) non-lethal seen. Whether or not players choose to follow anything but the main quest line does not alter the fabula designed by the creators and thus the ending. Doing side-quests only elaborate the story further. What can alter the ending displayed is the most dominant play-style – thus my aim to try to get at least the four covered with my choice of personas.

The scores from the FFM test (Johnson 2013) are categorised as low, 0-30 per cent, average, 30-70 per cent, and high, 70-100 per cent. The percentages are calculated by comparing the scores to that of the average score of the same test group belonging to that segment (age, gender, nationality).



	Extraversion	Aggreeableness	Conscientiousness	Neuroticism	Openness
Friend	73	94	48	13	52
Thief	30	35	99	30	22
Detective	53	64	96	28	58
Columbus	89	1	0	50	1

Figure 13: Dishonered's selected play-personas FFM-test scores

15.2.5 Psychological profiles

Friend

The Friend persona (Table 12, 173) scores high in every extraversion facet concerned with positive interaction with others – in this case pursuing elaborating missions and the like in-game to learn more about the game world's story and characters. The high score in agreeableness was expected from this persona as I see it as a persona that really takes an interest in the characters and narrative of the game. The persona's average score in conscientiousness should be seen in the light that it has the discipline to follow through with a plan to obtain all possible collectibles – and help NPCs with whatever task they present - while still being curious enough to explore as much as possible and do a lot of side missions. The low score in neuroticism is interesting, but could be explained by the persona not being afraid to e.g. be seen by enemy NPCs. It is quite interesting that despite the persona scoring high in the facet vulnerability still appears extroverted and interested in the game's characters and game world. I suspect the curiosity overcomes the neuroticism. The score between average to high in most facets of the openness to experience factor supports the previous findings. Maybe the low score in imagination is why the persona lets NPCs see him?

Thief

The Thief persona (Table 13, 173) may turn out to be a challenge for the FFM to encompass as it needs to be able to show that the persona is both introvert as it seeks to stay unseen by enemy NPCs, but yet extrovert towards characters holding side-missions and the like. The score in extraversion is low indicating that this persona does seek solitude (when sneaking past enemies), but scores high on activity level indicating that it keeps busy finding ways past enemies and in general seeking out more than the main-missions. The score in agreeableness is average with high scores in cooperation and sympathy. This gives a persona that is interested in the other characters' stories and who seeks out the narrative. Of course a player striving to be unseen has a high score in conscientiousness. The high

score in the achievement-striving facet is due to the desire to gather collectibles. The low score on neuroticism goes well with a stealthy persona that needs to remain calm in any situation to stay unseen. The high score on the self-consciousness facet is interesting and could be ascribed to the player being so involved with the game's characters that he actually tries to live up to their expectations to him. It could of course also just be due to me feeling that this player is kind of a blue persona and thus filling out the persona as more concerned about other's opinions. Again I find myself puzzled by the low score on openness to experience (as with the Thief persona in *Far Cry 3*, 14.2.5, "Psychological profiles",117) as I would have expected the personas desire to explore to show up in this factor.

Detective

The detective persona encompasses the unseen non-lethal, collect and side-missions parameters. Thus its average score in extraversion needs to be seen as the result of wanting to stay hidden from enemies while still happily interacting with the game's characters in pursuit of collectibles and possibly extra narrative missions. This assumption is further supported by the scores in the agreeableness factor and neuroticism. The high scores in conscientiousness are to be expected of a persona that prefers to stay hidden from enemies while still striving to collect everything possible. The average score in the openness to experience factor does not raise any alarms.

Columbus

The Columbus persona expectably scores high in extraversion due to its preference for straight forward attacks on enemies without second thoughts about being spotted or not or the amount of kills. As this is a persona that does not care for side-missions it scores low in agreeableness, conscientiousness and openness alike because of its lack of interest in details of the storyline that those can provide. I am curious as to why it scores high on self-discipline rather than achievement-

striving. The self-discipline must stem from the persona not getting distracted by other things when looking for collectibles. As I see it, the lack of achievement-striving can only be due to the formulation of the questions in the FFM test (21.6, 168) as this persona should be interested in gathering the most collectibles possible.

15.3 Interviews

15.3.1 **Male, 52**

The first player we interviewed was a 52 year old male who preferred to play single-player games. Most of the games he mentioned when asked which games he had played and liked were also what some would define as narrative. The player mainly focussed on the spatial, ludic and affective involvement of the game. The ludic and spatial involvements are mainly seen in combination when he talked about how you can apply different tactics or play-styles towards enemies to traverse the game environment and reach the goal. A goal which he funnily enough never mentioned. He did make a distinction between using only one play-style, e.g. staying stealthy the whole time or the combination of different play-styles for different challenges. He thus must have picked up on it changing something, but he simply did not value the different outcomes of the narrative that the application of different play-styles leads to. His preferred play-style was to "sneak about and hide in the dark and wait for the opportune moment". He started out as somewhat of a brawler, as he described it, but quickly found out, that "it didn't pay off."

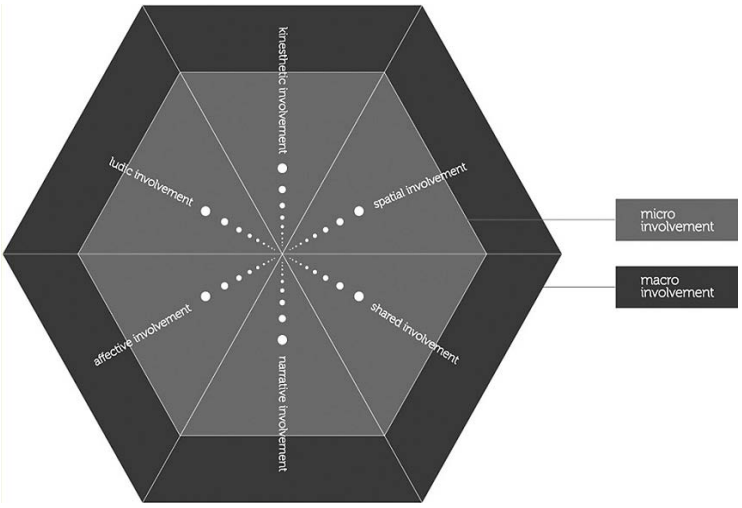


Figure 14: The player involvement mode (Calleja 2011, chap. 3, "Structure of the model", figure 3.1)

The player was very fascinated by being able to choose between several ways through the game environment that catered to different play-styles' needs. When asked if he recalled a scene or place in the game, he mentioned the masquerade because he found it cool and exciting to be able to walk among the enemies without getting caught due to the inherent assassin mask. He did not mention why he was at the masquerade story-wise and in general did not mention the scripted narrative at all. He was more interested in being put in a setting, however, not in the way Calleja described (9.1.5 "Affective Involvement," 97). Because the player at first had trouble figuring out exactly what setting he was in and when he did find out he found it to be entirely new. His fascination with being in this new world did not stem from him only having been able to observe it in non-interactive media previously. Another sign of affective involvement was a sudden outburst towards the end of the interview, where he proclaimed that the game was fun because he got to murder in a lot of different ways. That is, we are not dealing with a potential killer, but with somebody escaping the grind of everyday life by doing something he finds exotic and impossible to do in real life.

Just as the player did not mention the story of the game, he did not mention any characters either. Neither did he pick up on the clue when asked about characters nor narrative, so he really did not care for it at all.

When looking at the possible play-personas, I would judge this player to be an 'Assassin' – one of the possible play-personas that I chose not to elaborate on, of course (15.2.3, "Possible play-personas", 126) – because his main focus when looking at the affordances provided is definitely staying hidden and killing enemies off from the shadows.

When looking at his test scores from the FFM test (Table 16, 175) we get a completely different picture. The assassin persona would probably lie close to the thief in extraversion and conscientiousness and close to the brawler in everything else, but the player's scores do not fit. This indicates that the player-behaviour does not stem from their offline personality – when analysed using the FFM at least.

15.3.2 Male, 21

The other player interviewed about *Dishonored* was a 21 year old male. He mentioned many different single-player games, all of which contains a narrative of some sort when asked about what games he had recently played.

When discussing Dishonered in particular, two modes of involvement seemed to be the main focus points of most of the player's actions: narrative and ludic involvement – a combination I did not expect to come across. When asked what the game was about, the player outlined the game's main plot and continued to directly describe how the most interesting thing about the game is how you can play it in different ways and that you can actually play it without killing one single enemy.

He himself has played through the game three times applying three different play-styles to experience the changes his behaviour has on the game world. The first time he played 'in his own way' just to get a feel for it and experience the story without having to concentrate on behaving in a certain way. He did not kill off every enemy, but still some. The second time he killed every enemy he could and did not care for being seen by enemies or not to get to experience the bad ending. The third time he played it without killing anything and without being seen by any enemies at all to experience the good ending.

Because he seemed quite proud to have accomplished the third play-through I asked what he gained from that. As he does not have it on Steam, nobody else can see his achievements in the game, his own knowledge will have to suffice – although I got the distinct feeling he would have loved for other players to be able to see what he had accomplished.

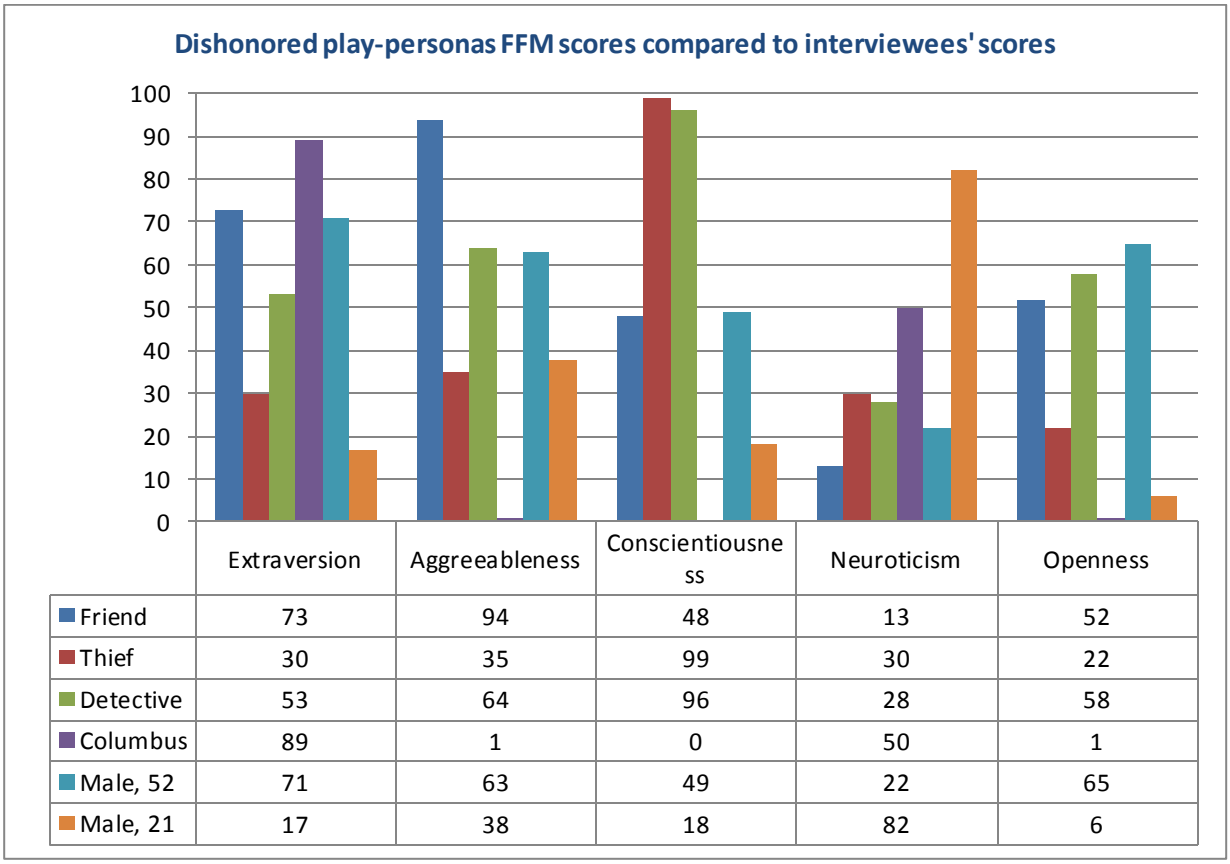
The thing this player self-reports to like the most about *Dishonored* is the diversity in possible approaches and the fact that the one chosen influences the game world. He mentions that one can both brawl and sneak through it and that the change is quite easy as the mechanics are solid and easy to adapt to. "One does not need to learn how to beat a specific challenge through multiple trial and

errors – like in Hitman (IO Interactive 2012) – because the mechanics are easy and adaptable." When inquired to, the player shows in-depth understanding on how the game also allows for many other play-styles e.g. exploring due to a lot of side-missions and the possibility to collect runes and bone-charms – the last part being something the player has not really focussed on.

When comparing what the player tells about *Dishonored* to what he says about e.g. The Walking Dead (Telltale Games 2012), there seems to be a consistency in play-style and attitude towards the games as he plans to play The Walking Dead again to end up with a different ending. In general he plays through games several times to try applying a different approach. Still, he does seem to find ludic joy in playing the games several times to obtain different achievements from various adapted play-styles and narrative fulfilment as he learns more about the story and setting during each play-through.

Looking at the possible play-personas for *Dishonored* I once again find that the interviewee does not fit one of the personas I chose to elaborate further on. I think this player fits the 'Achiever' persona quite well due to his several play-through focusing on different play-styles and aspects of the games each time. This goes well with his self-reported play-style in general.

Just as the previous persona, there is no consistency between player-behaviour in game and in real life (Table 17, 175). Again, at least when using the FFM to look for resemblances.



	Extraversion	Aggreeableness	Conscientiousness	Neuroticism	Openness
Friend	73	94	48	13	52
Thief	30	35	99	30	22
Detective	53	64	96	28	58
Columbus	89	1	0	50	1
Male, 52	71	63	49	22	65
Male, 21	17	38	18	82	6

Figure 15: Dishonered's selected play-personas FFM-test scores compared to that of the two interviewees

15.4 Conclusion

Looking at the two interviewees' FFM scores in comparison to their reported play-styles it seems that they use digital games to escape everyday life and try different behaviours in new surroundings rather than projecting their personality into their actions in-game.

16 Play-personas as analytic method

When creating the play-personas I found it very difficult to fill out the FFM test (21.6, 168) for each possible persona I had chosen to study in detail. When answering as a persona that e.g. prefers a stealthy approach to enemies, while still enjoying side missions and the interaction with game characters that entails, it became clear to me that the FFM test was too vague and not specific enough to be applied to just any game.

Therefore I do not find the use of the FFM test (Johnson 2013) suggested by Canossa during his course 'Game worlds as fields of expressions' (8.3, "Creating play-personas", 86) particularly useful. The questions asked in the questionnaire are much too broad to be used to deduct motivations for in-game player-behaviour.

For the method to work when analysing an already created game, I suggest that a FFM questionnaire for that particular game should be created rather than trying to make it fit into a questionnaire regarding an entire person's being. Creating a questionnaire testing for the five factors is quite a hassle to go through merely to analyse a game and thus I would only recommend it for larger projects. Looking to Yee (2002) for inspiration on how to create such a questionnaire (7.2, "From Types to Player Motivation", 76), the importance of the questionnaire being specifically designed to study one game stands out.

Rather than only studying a select few of the possible play-personas, I think it would be better to study all possible-play-personas because when analysing the interviews none of the personas I had chosen to elaborate on matched the preferences of any of the interviewees. Of course this is not necessary at all as most players will find them-selves in-between the extremes of the personas elaborated upon, but it could make it easier to categorise a large group of interviews according to possible play-personas rather that guessing each time.

Another possibility is to skip the creation of a psychological profile using the FFM test altogether and simply create the psychological profiles from the possible play-persona table rather than going through filling out a bunch of questionnaires for all the different personas.

Canossa's general idea that players play by the affordances provided by the game without bringing any predispositions to the game may appear to be confirmed because none of the player's personal FFM test scores matched with that of any of the personas. However, seeing that the FFM test was more or less useless when analysing a possible play-persona I do not find this particularly convincing. When comparing the interviewees self-reported play-style from the games in question in this thesis to other games I also talked to them about, a pattern in the modes of involvement they seem to focus on emerges – especially when looking at the two most hardcore gamers (*Far Cry 3*, male 23 and Dishonered, male 21). The other two players seemed to have individual preferences across games, while the two hardcore gamers' both seemed to enjoy studying the game over several play-throughs – both with their individual focus on preferred modes of involvement.

All of the above being said, I still think the play-persona approach is a good overall design tool that may prove to be good to apply to a production, but for analysing a game one did not create, it does not work as intended as too many essential elements are based on guesswork. This works fine in production where the team needs some guidelines as to who to direct the game at.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Reflection

17 Narratives

17.1 Extended universes, gaps and choices

> *How can aesthetic object-approaches be combined with qualitative player analysis of digital games to create an analysis model which aids the understanding of player-behaviour in 'narrative' digital single-player games?*

My usage of the research question proved to be slightly different in this context, as the qualitative player analysis is based on my own examples and knowledge from the games reflected upon. However, I have kept these as objective as possible. Combined with various aesthetic object-approaches, the focus have been to find and/or improve methods already existing to make a foundation for narratives in games better, so that these can be used to fit a potentially broader audience of players.

17.1.1 Guiding the player

When telling a story in an interactive medium, it is important to be able to show the player what the goal is, as well as guiding him towards it. For this, quests are a very useful tool, especially when looking at narrative games – so much that they are even defined by them, as "quest games" (4.1, "Defining quest games", 48). Still, it should not be the only method of delivering the story – quests need backing up in order to successfully deliver it in a good manner.

It is obvious that quests and their usage have evolved during the past years (4.3, "From gameplay element to storytelling tool", 51), and has taken an important role in guiding the player. Rather than being a niche and a hidden way to track the goals in games, it is becoming a very well used element that still continues to shine. In that connection, I have given suggestions on how Aarseth's TOP-model (4.4.2, "The TOP-model", 54) could be improved to form a more up-to-date way of describing quest structures. The most noticeable addition was the dimension with push/pull-quests (4.4.3, "Push and pull", 55), which added something that the model did not already cover – and I find that aspect of

quests to be very important. For guiding the player, using sequential push-quests – or mandatory quest-lines – is the basic strategy quest games are built upon.

To further supplement the player, and also in giving the player the quests, the roles of guides and companion NPCs (5.3.1, “Guides and companions – the active NPCs”, 65) have become a very resourceful tool, both in terms of guiding the player through the actual quests, but also for delivering the story to the player.

17.1.2 Optional content

Not all players are interested in the game narratives, and focus more on the ludic aspects of the gameplay – after all, no story can be told, if there is no actual game for which to build it upon. Because of that, it made a lot of sense to look at different ways to see how optional content fitted into narratives, and how they could be used to elaborate on the story for those players that wanted to explore it, outside of the game’s primary story (3.2, “Optional elements”, 29). NPCs in particular can use this optional content to provide plenty of means to further supply depth to the story (5.3, “The roles of NPCs”, 64), but it was also seen as a major part of quests, which could provide for sub-quests to let the player off from the main quests that were always there (4.4.1, “Sub-quests and quest-lines”, 52).

The foundation of this optional content was based upon the idea of having a “game universe”, which contained every single detail that would be available for the player to experience and add to the fabula (3.2, “Optional elements”, 29). With high certainty this would be much larger than the fabula of an ordinary playthrough would contain. This is even truer when we acknowledge that each of these playthroughs is most likely different every time. In this connection, other media can be used to tie a much broader universe together, by using transmedia (2.2.3, “Transmedia”, 22) to elaborate on all aspects of the game world.

The fundament of gaps also plays an important role when talking about a game's story, in that there are many different details that remain somehow vague in terms of being described in context of a larger story (3.3, "Gaps", 31). It builds on narrative methods seen – and used – in a variety of other media, and proves to be one of the easier theories to add to games, and even use successfully. One of the best examples was the uncertainty of some details the player's avatar, which the player would then fill out however he wanted to (5.2.2, "Customised characters", 63), but it is also very important to look at the basic game mechanics that directly uses gaps – both for the better and the worse (3.3.2, "Gaps used in games", 34).

17.1.3 Choosing the story

Because games are interactive, the idea of looking at choices was a given, as they can be used in a variety of ways in games. Because of this varied nature, I looked for a way to figure out how to categorise these into a model that could be applied and used as a fitting description and framework for all kinds of choices in games, based on the known and unknown in relation to action and consequences (3.4.4, "Utilising hard choices", 41).

It is obvious that more linear games that have fewer choices with a story-based impact make game story-writing easier, as it is closer to the existing other media in which writers have worked for ages, and poses lesser difficulties (3.1.1, "Chronology in games", 26). To avoid getting too much into these challenges, choices are sometimes being set up as being illusions of being important, while they actually prove to change very insignificant things, if anything at all. While this may seem effective at first, it can prove to be problematic if the player chooses to take another playthrough of the game.

By letting the player choose who he is, details about his background, and likewise details, his immersion into the game is also potentially heightened, by forging who he is and setting a more personal mark in the story. It can be done, but it is difficult (5.2.2, "Customised characters", 63).

One particular thing I also looked at was modular storytelling (3.1.2, “Modular storytelling”, 27). I feel this is something that should be explored more, even though it might be very difficult and challenging to make meaningful and effective. Having an open game world, and the player choosing his path, opens up many interesting options, both in terms of gameplay and narratives.

18 Players

18.1 Affordances, personality and landscapes

> *How can aesthetic object-approaches be combined with qualitative player analysis of digital games to create an analysis model which aids the understanding of player-behaviour in ‘narrative’ digital single-player games?*

When we asked the research question and started looking into different theories, I thought the solution for looking at games as both aesthetic objects as well as processes would be found in the play-persona method.

18.1.1 Applying the five factor model

Canossa concluded that it was impossible to use the FFM’s dimensions to create play-personas for games as the affordances provided by a game are so very few compared to real life which the FFM is built from and for. Yet he went ahead and used it anyway, as he saw mechanics as players’ way to express themselves just like language enables us to express ourselves in everyday life thus justifying its use (Canossa 2009a, 42; 8.2.3, "Five Factor Model & Personas", 82). After having applied the method to several game-analyses I find it quite far-fetched. Even if mechanics are a player’s main way to express herself within a game world, the FFM test suggested by Canossa during classes (8.3, 86) is designed to give a description of a person living in the real world compared to the average scores of people belonging to the same segment.

Personally, I experience games' settings and the overall status quo of the game worlds to be somewhat more extreme than everyday life. E.g. the question from the FFM test "I get back at others" (21.6: Appendix F: Five Factor Model questions, 168) depends heavily on the context – even if we only focus on real life situations. In games, getting back at others (in the games I am studying; NPCs) most often involves much higher risks with death not unlikely to follow failing at a vendetta. However, one can always restart the game thus making a very serious situation not risky at all. Naturally, players are going to take the risk if it is really no risk at all because who does not want to try new things one could never pull of or experience in real life.

With this in mind, of course players may adapt another strategy in a game world than in real life, and of course their real-life-personality may not necessarily be mirrored in the play-persona they are most likely to adapt to – chances are it is not represented in the game at all. Because context matters, because games have limited worlds with limited affordances compared to real life, the FFM test needs to be designed for the game in question – if it is to be used at all. By creating a FFM test based on the mechanics found in a game one also avoids having the beliefs of the persona's personality involved at all, thus creating a test revolving around in-game affordances rather than a study in psychology.

The question still remains whether a psychological profile is even necessary. Up until the creation of the psychological profiles of the play-personas, the play-persona model mapped the potential combination of affordances and player-behaviours pretty well. Instead of focussing on personality or psychology – a wish I imagine Canossa would agree with due to him believing that player-behaviour is created by a game's affordances – I believe it is enough to design for and analyse the various uses of the affordances and the combinations.

18.1.2 Personas & game landscapes

Looking at the overall result of the analyses of *Far Cry 3* and *Dishonored* (Ubisoft Montreal 2012; Bethesda Game Studios 2012; 14, "Cry Far 3", 114; 15, "Dishonored", 124) the grouping of the main

mechanics in main parameters seem to give somewhat the same overall possibilities for interacting with and moving about in the game worlds. This could of course be caused by any predispositions in me to see games this way no matter what, and if further studies on this were to be done, I would have other researchers group the mechanics in main parameters as well.

Other than sharing the possibility for grouping the mechanics the same way, these two games are both allowing for more than one way to traverse the game space in pursuit of various goals. *Dishonored* has a hub-shaped/ multicursal corridors game landscape and *Far Cry 3* has an open world which in it-self leaves the player with quite different possibilities. At the same time it does require the designers to allow for various approaches to completing different tasks – as taking a different path, but only being allowed the exact same actions play-style-wise sounds rather boring.

In a game world built as unicursal corridors with strict routes for the player to follow, I find it hard to imagine the use of several play-styles applied for the same challenge thus giving the player a choice in her use of mechanics to express herself in the game world. Of course the mechanics required to complete various challenges can vary from one challenge to another, but not a lot of choice is left to the player if she is to follow a strict, predefined path presenting her with challenges designed for a certain play-style here and another there.

The affordances found in all types of game landscapes may possibly be the same, but it seems that where, when and how a player is allowed to apply them vary greatly depending on the predesigned challenges in relation to the game space where they are situated.

For the play-personas to have any real meaning in both design and analysis, the player needs to be presented with a choice as to what tactics she can apply in the pursuit of different goals. Canossa claims that the play-personas can be used for the design and analysis of any type of game be it linear or more open world:

> *Even the most linear game, with the most limited set of affordances, has more than one ways of transforming the possibility into a reality. It could be the choice of turning left instead of right in Pac-Man or walking while*

> *crouching instead of running and jumping in Quake Arena (Canossa 2009a, 35)*
>
> *It is my purpose to show how designing around play-personas allows players to express themselves, their individuality and their personality even within the boundaries of fairly linear games, hence negating the necessity of asset redundancy, multiple paths, branching or resource-intensive adaptive technology (Canossa 2009a, 107).*

However, I find the method to be better suited for games that are at least multicursal corridor based or even more open. I believe this because the microtactics that a player *may* get to choose in a predetermined e.g. shootout in a unicursal game do not really matter in the greater picture because the microtactics needs to be in line with the overall affordance that has been chosen as the mean to complete the challenge at hand.

18.1.3 Conclusion

As pointed out previously (144), the games analysed in this thesis turned out to have more or less the same main parameters when the mechanics had been grouped. As we have seen, the possibility for several main parameters to be applied for the same challenge most possibly stem from the game landscape. However, this does not give us any indication as to why the affordances and thus possible play-personas found in the games resembled each other so much. On top of that, the players' preferred play-styles seemed to go beyond the single game in focus during the interviews to also encompass other games they had played. The question if players' behaviours stem from the game mechanics or the players' personality thus remains.

To this question one can add if the players' preferences turn out to stem from one or the other, and games of more or less the same kind allow for the same set of player-behaviours, are the various affordances then to be found in the games because players play by those or do players play by them because they are left with no other choices?

19 Conclusion

19.1 Emil

It is obvious that not all narrative methods from other media can be expected to work as-is in digital games. They might have to be modified in order to work. A game cannot be expected to be built relying only on one narrative element; there has to be more that support each other. There can still be a narrative focus, but it must be supported by the other elements.

As Aarseth states (5.1, "The importance of characters", 60), characters are indeed some of the most important aspects of game narratives, and stories should as such be modelled for their characters – especially the player avatar. Because of the interactive element, there is a much larger requirement to write these than in other media.

In the end, one thing that would be interesting to look at is the combination of modular storytelling (3.1.2, "Modular storytelling", 27) and procedurally generated content, which would offer a much more open approach for looking at game storytelling – and also allows a higher level of interactivity. While it sounds very difficult and demanding, there are many ideas that can be used to deliver an amazingly open and dynamic type of storytelling. In essence, it should not affect gameplay much, and with a tendency of the more ludic procedurally generated content games becoming increasingly popular this might have some interesting opportunities in the future.

19.2 Annika

To answer the research question using the play-persona model that I thought would do the trick, one would need to develop it further first. It would need to either have a FFM test that was designed for the specific game in question or one would need to let the psychological profile go entirely.

More importantly, one would need to find out, if the various play-personas were present in all challenges of the game (multicursal) or if specific challenges could only be overcome applying a specific persona's tactics (unicursal). If the play-persona model were customised to analyse the game

in question specifically, through the use of a custom-made FFM test, I see no problem in using interviews rather than metrics to deduce if the play-personas that the game was designed to cater to, are actually the ones players are experiencing when playing.

However, the work I have done for this thesis, has made me curious to further study how the game landscapes influences the affordances of a game and their potential use. Therefore, rather than doing future studies for the play-persona model, I would look into game landscapes and patterns in their affordances across several games and in combination with player interviews study if their preferences are found across all games, thus indicating that preferences stem from personality, or if they follow specific game landscapes instead and with it indicating that player-behaviour indeed lies latently within games.

19.3 The Break Up

Initially we wanted to study how players, narratives and game landscapes interrelated, but it proved to be out of scope for the master thesis, resulting in game landscapes getting more or less cut out of the project.

Afterwards we thought that the link between players and narratives could be found by deducting implied players and comparing them to the implied readers found by analysing the games' affordances and narrative elements respectively. After conducting the interviews, we realised that it is difficult to combine the theoretic approach that studying narratives (in any medium) leads to with the practical and pragmatic way we chose to study games as a product of players' interactions with them. In other words, comparing aesthetic objects to the processes that they had actually lead to was problematic because narratives are hard to define as individual experiences without including a deeper psychological study. Because narratives can be approached in so many different ways as e.g. either a product of the author's intentions or the reader's interpretation, the study of narratives quickly becomes either one thing or the other.

This would require a study with a focus on a much higher psychological level than what was - and should be - at our disposal, as we would basically have to answer the question “how does the individual perceive things?”.

When studying games, and more specifically player-behaviour and play-style, we can ask about different actions taken, analyse players while they play, etc. We have events and actions from which to study these variables and from which we can deduce different patterns, reasons etc. We cannot see the patterns that create the experiences readers have when reading e.g. a book in the same way we can observe player-behaviour. We are most likely not aware or made conscious about the thought-patterns that lead to us perceiving, and thus experiencing, a story delivered through a classic narrative medium. There are no controlled actions taken when perceiving a narrative - it just happens.

Rather than trying to combine these two areas through the work done for the thesis we put more effort into studying the two subjects individually. The plan always was to find out how the chosen elements are connected in digital games, however, we had completely underestimated how many interesting subjects that narratives and players hold individually as well. Before being able to say anything about how they can possibly connect in games we needed to figure out how they work on their own. This is what we have come to do in this thesis.

19.4 Future research

In the end, the only thing that really can be done to accommodate stories in games for “everyone”, is by trying to make narratives in games work for as many different players as possible. On the other hand, making this scope too wide, would potentially ruin it for others exactly in the same way as focusing on too many different play-personas would.

For future studies it could prove very interesting and beneficial to analyse how the game landscapes influences the affordances of a game and their potential use. In the same way one could look to how

the game landscapes influences the use of different methods conveying potential narrative experiences.

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Self-Discipline
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Dutifulness
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Persons
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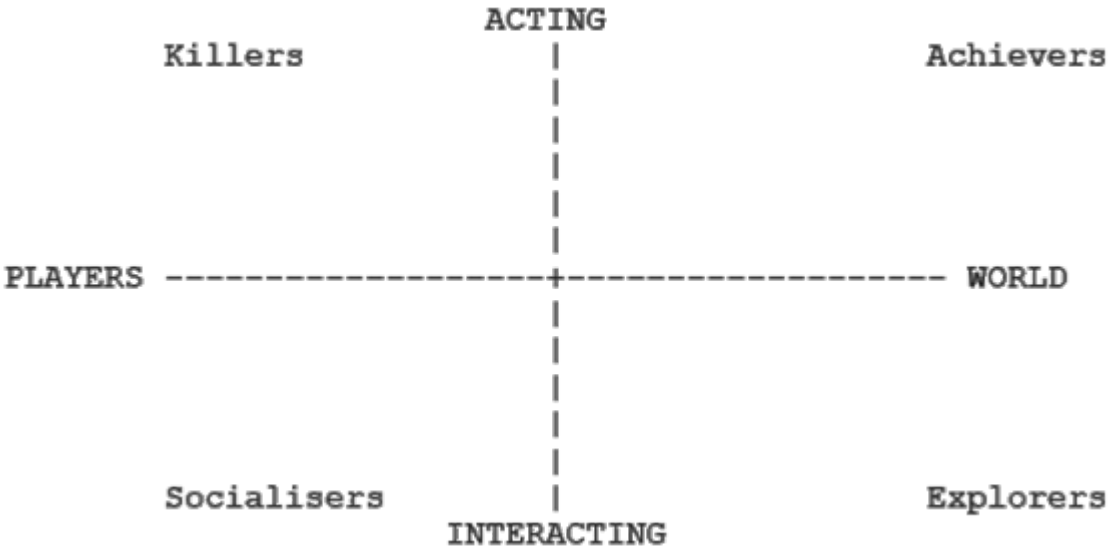
Appendix

21 Appendix

21.1 Appendix A: Iser on schematised pictures (Olsen 1996, Iser on "Tekstens appelstruktur")

> *"Men hvor stort skal da antallet af sådanne billeder være, for at det litterære objekt kan fremstå helt tydeligt? Øjensynligt er mange sådanne billeder påkrævede, for at man med tilstrækkelig tydelighed kan forestille sig det litterære objekt. Her støder vi på det problem, som i denne sammenhæng interesserer os. Hvert enkelt billede aktualiserer i reglen kun ét aspekt. Det bestemmer derfor det litterære objekt i nøjagtigt samme omfang, som det efterlader et nyt behov for en bestemmelse. Det vil imidlertid sige, at et såkaldt litterært objekt aldrig udtømmende kan bestemmes."*

21.2 Appendix B: Bartle's Interest Graph (Bartle 1996)



21.3 Appendix C: Yee's Five Factors (Yee 2002, 8–9)

Relationship: This factor measures the desire to develop meaningful relationships with other players in the game – usually in the form of a supportive friendship. Players who score high on this factor usually make good friends online, and tend to have meaningful conversations with their online friends, which usually involves talking about real-life personal issues. In times of need, these players can

usually count on their online friends for emotional support. These players also tend to feel that they have learned things about themselves from playing the game, as well as gaining a better understanding of real-life group dynamics.

Immersion: This factor measures the desire to become immersed in a make-believe construct. Players who score high on this factor enjoy being immersed in a fantasy world they can wander and explore. They tend to role-play their characters, and use their characters to try out new personalities and roles. They enjoy being in the company of other role-players. They also appreciate the sense of being part of an ongoing story, and oftentimes will think up a personal history and story for their characters.

Grief: This factor measures the desire to objectify and use other players for one's own gains. Their means may be both outward or subtle. On the outward side, they may enjoy dominating other players by killing them on the battlefield, or by taunting and annoying them. On the more subtle side, they may enjoy manipulating other players for their own gains, such as deceiving other players through clever scams, or begging for money and items. In either case, the satisfaction comes from some form of manipulation of other players for personal gain.

Achievement: This factor measures the desire to become powerful within the construct of a game. Players who score high on this factor try to reach the goals as defined by the game. They try very hard to accumulate rewards. For example, they try to optimize their XP gain to reach the next level as quickly as possible. Or they may try to accumulate as much high-level gear as possible. Or they enjoy doing massive amounts of damage to mobs. The underlying theme is a desire to get bigger numbers. But the satisfaction comes from feeling powerful.

Leadership: This factor measures the gregariousness and assertiveness of the player. Players who score high on this factor prefer to group rather than solo. They are often assertive individuals and usually drift to leadership positions when in a group. Because a group led by an indecisive leader often gets fragmented, the assertiveness of these players probably allows them to be effective group leaders in the game.

21.4 Appendix D: Five Factor Model: Factors & Facets

IPIP-NEO Narrative Report (*IPIP: International Personality Item Pool* from

http://www.personal.psu.edu/j5j/IPIP/ipipneo120.htm)

A note on terminology

Personality traits describe, relative to other people, the frequency or intensity of a person's feelings, thoughts, or behaviours. Possession of a trait is therefore a matter of degree. We might describe two individuals as extraverts, but still see one as more extraverted than the other. This report uses expressions such as "extravert" or "high in extraversion" to describe someone who is likely to be seen by others as relatively extraverted. The computer program that generates this report classifies you as low, average, or high in a trait according to whether your score is approximately in the lowest 30%, middle 40%, or highest 30% of scores obtained by people of your sex and roughly your age. Your numerical scores are reported and graphed as percentile estimates. For example, a score of "60" means that your level on that trait is estimated to be higher than 60% of persons of your sex and age. Please keep in mind that "low," "average," and "high" scores on a personality test are neither absolutely good nor bad. A particular level on any trait will probably be neutral or irrelevant for a great many activities, be helpful for accomplishing some things, and detrimental for accomplishing other things. As with any personality inventory, scores and descriptions can only approximate an individual's actual personality. High and low score descriptions are usually accurate, but average scores close to

the low or high boundaries might misclassify you as only average. On each set of six subdomain scales it is somewhat uncommon but certainly possible to score high in some of the subdomains and low in the others. In such cases more attention should be paid to the subdomain scores than to the broad domain score. Questions about the accuracy of your results are best resolved by showing your report to people who know you well.

John A. Johnson wrote descriptions of the five domains and thirty subdomains. These descriptions are based on an extensive reading of the scientific literature on personality measurement. Although Dr. Johnson would like to be acknowledged as the author of these materials if they are reproduced, he has placed them in the public domain.

21.4.1 Extraversion

Extraversion is marked by pronounced engagement with the external world. Extraverts enjoy being with people, are full of energy, and often experience positive emotions. They tend to be enthusiastic, action-oriented, individuals who are likely to say "Yes!" or "Let's go!" to opportunities for excitement. In groups they like to talk, assert themselves, and draw attention to themselves.

Introverts lack the exuberance, energy, and activity levels of extraverts. They tend to be quiet, low-key, deliberate, and disengaged from the social world. Their lack of social involvement should not be interpreted as shyness or depression; the introvert simply needs less stimulation than an extravert and prefers to be alone. The independence and reserve of the introvert is sometimes mistaken as unfriendliness or arrogance. In reality, an introvert who scores high on the agreeableness dimension will not seek others out but will be quite pleasant when approached.

Extraversion Facets

Friendliness: Friendly people genuinely like other people and openly demonstrate positive feelings toward others. They make friends quickly and it is easy for them to form close, intimate relationships.

Low scorers on Friendliness are not necessarily cold and hostile, but they do not reach out to others and are perceived as distant and reserved.

***Gregariousness*:** Gregarious people find the company of others pleasantly stimulating and rewarding. They enjoy the excitement of crowds. Low scorers tend to feel overwhelmed by, and therefore actively avoid, large crowds. They do not necessarily dislike being with people sometimes, but their need for privacy and time to themselves is much greater than for individuals who score high on this scale.

Assertiveness: High scorers Assertiveness like to speak out, take charge, and direct the activities of others. They tend to be leaders in groups. Low scorers tend not to talk much and let others control the activities of groups.

Activity Level: Active individuals lead fast-paced, busy lives. They move about quickly, energetically, and vigorously, and they are involved in many activities. People who score low on this scale follow a slower and more leisurely, relaxed pace.

Excitement-Seeking: High scorers on this scale are easily bored without high levels of stimulation. They love bright lights and hustle and bustle. They are likely to take risks and seek thrills. Low scorers are overwhelmed by noise and commotion and are adverse to thrill-seeking.

Cheerfulness: This scale measures positive mood and feelings, not negative emotions (which are a part of the Neuroticism domain). Persons who score high on this scale typically experience a range of positive feelings, including happiness, enthusiasm, optimism, and joy. Low scorers are not as prone to such energetic, high spirits.

21.4.2 Agreeableness

Agreeableness reflects individual differences in concern with cooperation and social harmony. Agreeable individuals value getting along with others. They are therefore considerate, friendly, generous, helpful, and willing to compromise their interests with others'. Agreeable people also have

an optimistic view of human nature. They believe people are basically honest, decent, and trustworthy.

Disagreeable individuals place self-interest above getting along with others. They are generally unconcerned with others' well-being, and therefore are unlikely to extend themselves for other people. Sometimes their scepticism about others' motives causes them to be suspicious, unfriendly, and uncooperative.

Agreeableness is obviously advantageous for attaining and maintaining popularity. Agreeable people are better liked than disagreeable people. On the other hand, agreeableness is not useful in situations that require tough or absolute objective decisions. Disagreeable people can make excellent scientists, critics, or soldiers.

Agreeableness Facets

Trust: A person with high trust assumes that most people are fair, honest, and have good intentions. Persons low in trust see others as selfish, devious, and potentially dangerous.

Morality: High scorers on this scale see no need for pretence or manipulation when dealing with others and are therefore candid, frank, and sincere. Low scorers believe that a certain amount of deception in social relationships is necessary. People find it relatively easy to relate to the straightforward high-scorers on this scale. They generally find it more difficult to relate to the unstraightforward low-scorers on this scale. It should be made clear that low scorers are not unprincipled or immoral; they are simply more guarded and less willing to openly reveal the whole truth.

Altruism: Altruistic people find helping other people genuinely rewarding. Consequently, they are generally willing to assist those who are in need. Altruistic people find that doing things for others is a form of self-fulfilment rather than self-sacrifice. Low scorers on this scale do not particularly like

helping those in need. Requests for help feel like an imposition rather than an opportunity for self-fulfilment.

Cooperation: Individuals who score high on this scale dislike confrontations. They are perfectly willing to compromise or to deny their own needs in order to get along with others. Those who score low on this scale are more likely to intimidate others to get their way.

Modesty: High scorers on this scale do not like to claim that they are better than other people. In some cases this attitude may derive from low self-confidence or self-esteem. Nonetheless, some people with high self-esteem find immodesty unseemly. Those who are willing to describe themselves as superior tend to be seen as disagreeably arrogant by other people.

Sympathy: People who score high on this scale are tenderhearted and compassionate. They feel the pain of others vicariously and are easily moved to pity. Low scorers are not affected strongly by human suffering. They pride themselves on making objective judgments based on reason. They are more concerned with truth and impartial justice than with mercy.

21.4.3 Conscientiousness

Conscientiousness concerns the way in which we control, regulate, and direct our impulses. Impulses are not inherently bad; occasionally time constraints require a snap decision, and acting on our first impulse can be an effective response. Also, in times of play rather than work, acting spontaneously and impulsively can be fun. Impulsive individuals can be seen by others as colourful, fun-to-be-with, and zany.

Nonetheless, acting on impulse can lead to trouble in a number of ways. Some impulses are antisocial. Uncontrolled antisocial acts not only harm other members of society, but also can result in retribution toward the perpetrator of such impulsive acts. Another problem with impulsive acts is that they often produce immediate rewards but undesirable, long-term consequences. Examples include excessive

socializing that leads to being fired from one's job, hurling an insult that causes the breakup of an important relationship, or using pleasure-inducing drugs that eventually destroy one's health.

Impulsive behaviour, even when not seriously destructive, diminishes a person's effectiveness in significant ways. Acting impulsively disallows contemplating alternative courses of action, some of which would have been wiser than the impulsive choice. Impulsivity also side-tracks people during projects that require organized sequences of steps or stages. Accomplishments of an impulsive person are therefore small, scattered, and inconsistent.

A hallmark of intelligence, what potentially separates human beings from earlier life forms, is the ability to think about future consequences before acting on an impulse. Intelligent activity involves contemplation of long-range goals, organizing and planning routes to these goals, and persisting toward one's goals in the face of short-lived impulses to the contrary. The idea that intelligence involves impulse control is nicely captured by the term prudence, an alternative label for the Conscientiousness domain. Prudent means both wise and cautious. Persons who score high on the Conscientiousness scale are, in fact, perceived by others as intelligent.

The benefits of high conscientiousness are obvious. Conscientious individuals avoid trouble and achieve high levels of success through purposeful planning and persistence. They are also positively regarded by others as intelligent and reliable. On the negative side, they can be compulsive perfectionists and workaholics. Furthermore, extremely conscientious individuals might be regarded as stuffy and boring. Unconscientious people may be criticized for their unreliability, lack of ambition, and failure to stay within the lines, but they will experience many short-lived pleasures and they will never be called stuffy.

Conscientiousness Facets

Self-Efficacy: Self-Efficacy describes confidence in one's ability to accomplish things. High scorers believe they have the intelligence (common sense), drive, and self-control necessary for achieving

success. Low scorers do not feel effective, and may have a sense that they are not in control of their lives.

Orderliness: Persons with high scores on orderliness are well-organized. They like to live according to routines and schedules. They keep lists and make plans. Low scorers tend to be disorganized and scattered.

Dutifulness: This scale reflects the strength of a person's sense of duty and obligation. Those who score high on this scale have a strong sense of moral obligation. Low scorers find contracts, rules, and regulations overly confining. They are likely to be seen as unreliable or even irresponsible.

Achievement-Striving: Individuals who score high on this scale strive hard to achieve excellence. Their drive to be recognized as successful keeps them on track toward their lofty goals. They often have a strong sense of direction in life, but extremely high scores may be too single-minded and obsessed with their work. Low scorers are content to get by with a minimal amount of work, and might be seen by others as lazy.

Self-Discipline: Self-discipline-what many people call will-power-refers to the ability to persist at difficult or unpleasant tasks until they are completed. People who possess high self-discipline are able to overcome reluctance to begin tasks and stay on track despite distractions. Those with low self-discipline procrastinate and show poor follow-through, often failing to complete tasks-even tasks they want very much to complete.

Cautiousness: Cautiousness describes the disposition to think through possibilities before acting. High scorers on the Cautiousness scale take their time when making decisions. Low scorers often say or do first thing that comes to mind without deliberating alternatives and the probable consequences of those alternatives.

21.4.4 Neuroticism

Freud originally used the term neurosis to describe a condition marked by mental distress, emotional suffering, and an inability to cope effectively with the normal demands of life. He suggested that everyone shows some signs of neurosis, but that we differ in our degree of suffering and our specific symptoms of distress. Today neuroticism refers to the tendency to experience negative feelings. Those who score high on Neuroticism may experience primarily one specific negative feeling such as anxiety, anger, or depression, but are likely to experience several of these emotions. People high in neuroticism are emotionally reactive. They respond emotionally to events that would not affect most people, and their reactions tend to be more intense than normal. They are more likely to interpret ordinary situations as threatening, and minor frustrations as hopelessly difficult. Their negative emotional reactions tend to persist for unusually long periods of time, which means they are often in a bad mood. These problems in emotional regulation can diminish a neurotic's ability to think clearly, make decisions, and cope effectively with stress.

At the other end of the scale, individuals who score low in neuroticism are less easily upset and are less emotionally reactive. They tend to be calm, emotionally stable, and free from persistent negative feelings. Freedom from negative feelings does not mean that low scorers experience a lot of positive feelings; frequency of positive emotions is a component of the Extraversion domain.

Neuroticism Facets

Anxiety: The "fight-or-flight" system of the brain of anxious individuals is too easily and too often engaged. Therefore, people who are high in anxiety often feel like something dangerous is about to happen. They may be afraid of specific situations or be just generally fearful. They feel tense, jittery, and nervous. Persons low in Anxiety are generally calm and fearless.

Anger: Persons who score high in Anger feel enraged when things do not go their way. They are sensitive about being treated fairly and feel resentful and bitter when they feel they are being

cheated. This scale measures the tendency to feel angry; whether or not the person expresses annoyance and hostility depends on the individual's level on Agreeableness. Low scorers do not get angry often or easily.

Depression: This scale measures the tendency to feel sad, dejected, and discouraged. High scorers lack energy and have difficult initiating activities. Low scorers tend to be free from these depressive feelings.

Self-Consciousness: Self-conscious individuals are sensitive about what others think of them. Their concern about rejection and ridicule cause them to feel shy and uncomfortable abound others. They are easily embarrassed and often feel ashamed. Their fears that others will criticize or make fun of them are exaggerated and unrealistic, but their awkwardness and discomfort may make these fears a self-fulfilling prophecy. Low scorers, in contrast, do not suffer from the mistaken impression that everyone is watching and judging them. They do not feel nervous in social situations.

Immoderation: Immoderate individuals feel strong cravings and urges that they have have difficulty resisting. They tend to be oriented toward short-term pleasures and rewards rather than long- term consequences. Low scorers do not experience strong, irresistible cravings and consequently do not find themselves tempted to overindulge.

Vulnerability: High scorers on Vulnerability experience panic, confusion, and helplessness when under pressure or stress. Low scorers feel more poised, confident, and clear-thinking when stressed.

21.4.5 Openness to Experience

Openness to Experience describes a dimension of cognitive style that distinguishes imaginative, creative people from down-to-earth, conventional people. Open people are intellectually curious, appreciative of art, and sensitive to beauty. They tend to be, compared to closed people, more aware of their feelings. They tend to think and act in individualistic and nonconforming ways. Intellectuals typically score high on Openness to Experience; consequently, this factor has also been called Culture

or Intellect. Nonetheless, Intellect is probably best regarded as one aspect of openness to experience. Scores on Openness to Experience are only modestly related to years of education and scores on standard intelligent tests.

Another characteristic of the open cognitive style is a facility for thinking in symbols and abstractions far removed from concrete experience. Depending on the individual's specific intellectual abilities, this symbolic cognition may take the form of mathematical, logical, or geometric thinking, artistic and metaphorical use of language, music composition or performance, or one of the many visual or performing arts. People with low scores on openness to experience tend to have narrow, common interests. They prefer the plain, straightforward, and obvious over the complex, ambiguous, and subtle. They may regard the arts and sciences with suspicion, regarding these endeavours as abstruse or of no practical use. Closed people prefer familiarity over novelty; they are conservative and resistant to change.

Openness is often presented as healthier or more mature by psychologists, who are often themselves open to experience. However, open and closed styles of thinking are useful in different environments. The intellectual style of the open person may serve a professor well, but research has shown that closed thinking is related to superior job performance in police work, sales, and a number of service occupations.

Openness Facets

Imagination: To imaginative individuals, the real world is often too plain and ordinary. High scorers on this scale use fantasy as a way of creating a richer, more interesting world. Low scorers are on this scale are more oriented to facts than fantasy.

Artistic Interests: High scorers on this scale love beauty, both in art and in nature. They become easily involved and absorbed in artistic and natural events. They are not necessarily artistically trained nor

talented, although many will be. The defining features of this scale are interest in, and appreciation of natural and artificial beauty. Low scorers lack aesthetic sensitivity and interest in the arts.

Emotionality: Persons high on Emotionality have good access to and awareness of their own feelings. Low scorers are less aware of their feelings and tend not to express their emotions openly.

Adventurousness: High scorers on adventurousness are eager to try new activities, travel to foreign lands, and experience different things. They find familiarity and routine boring, and will take a new route home just because it is different. Low scorers tend to feel uncomfortable with change and prefer familiar routines.

Intellect: Intellect and artistic interests are the two most important, central aspects of openness to experience. High scorers on Intellect love to play with ideas. They are open-minded to new and unusual ideas, and like to debate intellectual issues. They enjoy riddles, puzzles, and brain teasers. Low scorers on Intellect prefer dealing with either people or things rather than ideas. They regard intellectual exercises as a waste of time. Intellect should not be equated with intelligence. Intellect is an intellectual style, not an intellectual ability, although high scorers on Intellect score slightly higher than low-Intellect individuals on standardized intelligence tests.

Liberalism: Psychological liberalism refers to a readiness to challenge authority, convention, and traditional values. In its most extreme form, psychological liberalism can even represent outright hostility toward rules, sympathy for law-breakers, and love of ambiguity, chaos, and disorder. Psychological conservatives prefer the security and stability brought by conformity to tradition. Psychological liberalism and conservatism are not identical to political affiliation, but certainly incline individuals toward certain political parties.

21.5 Appendix E: Questions used for interviews

1. Which 3D single-player games have you played recently?

   a. Are there any specific games you are thinking about playing in the (near) future (getting a feeling of taste)?

2. Which multiplayer games do you play?
   a. Which role do you prefer?
3. Why did you play the (selected single-player) game?
   a. Was the motivation another than it being in an existing game-series / universe, rather than a whole new brand, that the interviewee already played
4. What is the game about?
5. What did you find particularly appealing about the game?
6. Could you put yourselves in the role of the protagonist? Why / why not?
   a. (If there is any bi- or supporting characters) Same question.
7. Describe the game's landscape – did you feel you had a choice in which way you wanted to go?
   a. Here, a specific example based on the game in question is good. If not, have the interviewee name a good one.
8. Did you play through the game more than once? Why / why not? (could be to explore, try another "path", player style – potential good player trait connections here)
   a. Could also be mentioned in relations to replaying partial parts of a game with different styles before progressing further.

21.6 Appendix F: Five Factor Model questions

Worry about things.	Dislike myself.	Easily resist temptations.
Make friends easily.	Try to lead others.	Enjoy being reckless.
Have a vivid imagination.	Feel others' emotions.	Have difficulty understanding abstract ideas.
Trust others.	Am concerned about others.	Have a high opinion of myself.
Complete tasks successfully.	Tell the truth.	Waste my time.
Get angry easily.	Am afraid to draw attention to	Feel that I'm unable to deal with

	myself.	things.
Love large parties.	Am always on the go.	Love life.
Believe in the importance of art.	Prefer to stick with things that I know.	Tend to vote for conservative political candidates.
Use others for my own ends.	Yell at people.	Am not interested in other people's problems.
Like to tidy up.	Do more than what's expected of me.	Rush into things.
Often feel blue.	Rarely overindulge.	Get stressed out easily.
Take charge.	Seek adventure.	Keep others at a distance.
Experience my emotions intensely.	Avoid philosophical discussions.	Like to get lost in thought.
Love to help others.	Think highly of myself.	Distrust people.
Keep my promises.	Carry out my plans.	Know how to get things done.
Find it difficult to approach others.	Become overwhelmed by events.	Am not easily annoyed.
Am always busy.	Have a lot of fun.	Do not enjoy going to art museums.
Prefer variety to routine.	Believe that there is no absolute right or wrong.	Obstruct others' plans.
Love a good fight.	Feel sympathy for those who are worse off than myself.	Leave my belongings around.
Work hard.	Make rash decisions.	Feel comfortable with myself.
Go on binges.	Am afraid of many things.	Wait for others to lead the way.
Love excitement.	Avoid contacts with others.	Don't understand people who get emotional.
Love to read challenging material.	Love to daydream.	Take no time for others.
Believe that I am better than others.	Trust what people say.	Break my promises.
Am always prepared.	Handle tasks smoothly.	Am not bothered by difficult social situations.
Panic easily.	Lose my temper.	Like to take it easy.
Radiate joy.	Prefer to be alone.	Am attached to conventional ways.
Tend to vote for liberal political candidates.	Do not like poetry.	Get back at others.
Sympathize with the homeless.	Take advantage of others.	Put little time and effort into my work.
Jump into things without thinking.	Leave a mess in my room.	Am able to control my cravings.
Fear for the worst.	Am often down in the dumps.	Act wild and crazy.
Feel comfortable around people.	Take control of things.	Am not interested in theoretical discussions.
Enjoy wild flights of fantasy.	Rarely notice my emotional reactions.	Boast about my virtues.
Believe that others have good intentions.	Am indifferent to the feelings of others.	Have difficulty starting tasks.

Excel in what I do.	Break rules.	Remain calm under pressure.
Get irritated easily.	Do a lot in my spare time.	Look at the bright side of life.
Talk to a lot of different people at parties.	Only feel comfortable with friends.	Believe that we should be tough on crime.
See beauty in things that others might not notice.	Dislike changes.	Try not to think about the needy.
Cheat to get ahead.	Insult people.	Act without thinking.
Often forget to put things back in their proper place.	Do just enough work to get by.	Avoid crowds.

21.7 Appendix G: Far Cry 3 play-personas

Brawler

Extraversion 95	**Agreeableness 1**	**Conscientiousness 8**	**Neuroticism 20**	**Openness 0**
Friendliness 70	Trust 7	Self-Efficacy 59	Anxiety 0	Imagination 1
Gregariousness 92	Morality 0	Orderliness 16	Anger 80	Artistic Interests 7
Assertiveness 68	Altruism 1	Dutifulness 0	Depression 4	Emotionality 33
Activity Level 92	Cooperation 0	Achievement-Striving 44	Self-Consciousness 7	Adventurousness 51
Excitement-Seeking 95	Modesty 16	Self-Discipline 35	Immoderation 99	Intellect 1
Cheerfulness 89	Sympathy 1	Cautiousness 0	Vulnerability 8	Liberalism 19

Table 7: Far Cry 3 play-persona Brawler's FFM score

Thief

Extraversion	**Agreeableness**	**Conscientiousness**	**Neuroticism**	**Openness**

32	7	96	24	8
Friendliness 0	Trust 3	Self-Efficacy 98	Anxiety 43	Imagination 0
Gregariousness 2	Morality 1	Orderliness 98	Anger 20	Artistic Interests 36
Assertiveness 49	Altruism 7	Dutifulness 14	Depression 36	Emotionality 0
Activity Level 99	Cooperation 69	Achievement-Striving 97	Self-Consciousness 81	Adventurousness 5
Excitement-Seeking 23	Modesty 67	Self-Discipline 77	Immoderation 2	Intellect 35
Cheerfulness 74	Sympathy 1	Cautiousness 82	Vulnerability 15	Liberalism 82

Table 8: Far Cry 3 play-persona Thief's FFM score

Pacifist

Extraversion 53	Agreeableness 69	Conscientiousness 62	Neuroticism 52	Openness 86
Friendliness 78	Trust 75	Self-Efficacy 19	Anxiety 79	Imagination 53
Gregariousness 80	Morality 22	Orderliness 94	Anger 4	Artistic Interests 72
Assertiveness 3	Altruism 57	Dutifulness 35	Depression 15	Emotionality 55
Activity Level 92	Cooperation 95	Achievement-Striving 88	Self-Consciousness 20	Adventurousness 90
Excitement-Seeking 1	Modesty 58	Self-Discipline 16	Immoderation 99	Intellect 65
Cheerfulness 89	Sympathy 50	Cautiousness 66	Vulnerability 98	Liberalism 96

Table 9: Far Cry 3 play-persona Pacifist's FFM score

21.8 Appendix H: Far Cry 3 interviewees FFM scores

Male, 23, FFM test scores

Extraversion 45	Agreeableness 16	Conscientiousness 29	Neuroticism 33	Openness 67

Friendliness 47	Trust 61	Self-Efficacy 67	Anxiety 64	Imagination 50
Gregariousness 64	Morality 0	Orderliness 12	Anger 8	Artistic Interests 50
Assertiveness 54	Altruism 5	Dutifulness 8	Depression 30	Emotionality 43
Activity Level 1	Cooperation 54	Achievement-Striving 26	Self-Consciousness 48	Adventurousness 48
Excitement-Seeking 66	Modesty 18	Self-Discipline 26	Immoderation 28	Intellect 79
Cheerfulness 57	Sympathy 52	Cautiousness 80	Vulnerability 58	Liberalism 87

Table 10: Far Cry 3, Male 23, FFM test score

Male, 21, FFM test scores

Extraversion 19	**Agreeableness 41**	**Conscientiousness 36**	**Neuroticism 76**	**Openness 2**
Friendliness 37	Trust 42	Self-Efficacy 38	Anxiety 64	Imagination 19
Gregariousness 29	Morality 39	Orderliness 41	Anger 68	Artistic Interests 14
Assertiveness 4	Altruism 13	Dutifulness 41	Depression 79	Emotionality 2
Activity Level 60	Cooperation 63	Achievement-Striving 46	Self-Consciousness 67	Adventurousness 28
Excitement-Seeking 17	Modesty 89	Self-Discipline 36	Immoderation 58	Intellect 1
Cheerfulness 27	Sympathy 13	Cautiousness 38	Vulnerability 77	Liberalism 62

Table 11: Far Cry 3, Male 21, FFM test score

21.9 Appendix I: Dishonored play-personas

Friend

Extraversion 73	**Agreeableness 94**	**Conscientiousness 48**	**Neuroticism 13**	**Openness 52**

Friendliness 96	Trust 98	Self-Efficacy 19	Anxiety 10	Imagination 19
Gregariousness 98	Morality 51	Orderliness 59	Anger 1	Artistic Interests 54
Assertiveness 7	Altruism 87	Dutifulness 81	Depression 9	Emotionality 55
Activity Level 76	Cooperation 90	Achievement-Striving 62	Self-Consciousness 3	Adventurousness 40
Excitement-Seeking 3	Modesty 49	Self-Discipline 16	Immoderation 64	Intellect 45
Cheerfulness 89	Sympathy 98	Cautiousness 49	Vulnerability 95	Liberalism 90

Table 12: Dishonored play-persona Friend's FFM score

Thief

Extraversion 30	**Agreeableness 35**	**Conscientiousness 99**	**Neuroticism 30**	**Openness 22**
Friendliness 0	Trust 0	Self-Efficacy 98	Anxiety 52	Imagination 10
Gregariousness 5	Morality 0	Orderliness 98	Anger 4	Artistic Interests 36
Assertiveness 59	Altruism 57	Dutifulness 14	Depression 53	Emotionality 8
Activity Level 99	Cooperation 95	Achievement-Striving 97	Self-Consciousness 88	Adventurousness 40
Excitement-Seeking 14	Modesty 49	Self-Discipline 93	Immoderation 22	Intellect 25
Cheerfulness 46	Sympathy 71	Cautiousness 99	Vulnerability 8	Liberalism 82

Table 13: Dishonored play-persona Thief's FFM score

Detective

Extraversion 53	**Agreeableness 64**	**Conscientiousness 96**	**Neuroticism 28**	**Openness 58**
Friendliness	Trust	Self-Efficacy	Anxiety	Imagination

42	57	92	52	53
Gregariousness 48	Morality 0	Orderliness 94	Anger 8	Artistic Interests 54
Assertiveness 30	Altruism 78	Dutifulness 47	Depression 52	Emotionality 44
Activity Level 97	Cooperation 90	Achievement-Striving 93	Self-Consciousness 28	Adventurousness 82
Excitement-Seeking 32	Modesty 58	Self-Discipline 93	Immoderation 42	Intellect 35
Cheerfulness 55	Sympathy 88	Cautiousness 88	Vulnerability 33	Liberalism 62

Table 14: Dishonored play-persona Detective's FFM score

Columbus

Extraversion 89	**Agreeableness 1**	**Conscientiousness 0**	**Neuroticism 50**	**Openness 1**
Friendliness 70	Trust 0	Self-Efficacy 45	Anxiety 0	Imagination 1
Gregariousness 80	Morality 1	Orderliness 1	Anger 95	Artistic Interests 1
Assertiveness 91	Altruism 1	Dutifulness 1	Depression 21	Emotionality 0
Activity Level 55	Cooperation 0	Achievement-Striving 1	Self-Consciousness 20	Adventurousness 29
Excitement-Seeking 95	Modesty 5	Self-Discipline 77	Immoderation 99	Intellect 1
Cheerfulness 74	Sympathy 1	Cautiousness 0	Vulnerability 43	Liberalism 0

Table 15: Dishonored play-persona Columbus' FFM score

21.10 Appendix J: Dishonored interviewees FFM scores

Male, 52, FFM test score

Extraversion 71	**Agreeableness 63**	**Conscientiousness 49**	**Neuroticism 22**	**Openness 65**

Friendliness 66	Trust 75	Self-Efficacy 17	Anxiety 32	Imagination 53
Gregariousness 64	Morality 50	Orderliness 47	Anger 20	Artistic Interests 63
Assertiveness 60	Altruism 54	Dutifulness 69	Depression 25	Emotionality 41
Activity Level 77	Cooperation 42	Achievement-Striving 43	Self-Consciousness 15	Adventurousness 53
Excitement-Seeking 41	Modesty 71	Self-Discipline 71	Immoderation 57	Intellect 66
Cheerfulness 77	Sympathy 58	Cautiousness 44	Vulnerability 31	Liberalism 75

Table 16: Dishonored, Male 52, FFM test score

Male, 21, FFM test score

Extraversion 17	**Agreeableness 38**	**Conscientiousness 18**	**Neuroticism 82**	**Openness 6**
Friendliness 28	Trust 79	Self-Efficacy 24	Anxiety 88	Imagination 39
Gregariousness 29	Morality 61	Orderliness 12	Anger 82	Artistic Interests 14
Assertiveness 10	Altruism 5	Dutifulness 28	Depression 72	Emotionality 2
Activity Level 49	Cooperation 44	Achievement-Striving 46	Self-Consciousness 58	Adventurousness 38
Excitement-Seeking 26	Modesty 82	Self-Discipline 47	Immoderation 58	Intellect 1
Cheerfulness 18	Sympathy 0	Cautiousness 15	Vulnerability 77	Liberalism 62

Table 17: Dishonored, Male 21, FFM test score