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CREATING EMPATHY IN VIDEO GAMES

Emotion sharing in the context of ludic
interactivity

Louis BLANCHARD

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SUMMARY

The present work addresses the topic of creating empathy in digital games. It relies on a multidisciplinary approach, using works in psychoanalysis, neuroscience and art studies, to determine the obstacles to and means of creating empathy in a ludic digital environment

Throughout my argumentation, I isolate the processes behind experiencing empathy in the context of a fictional world. I demonstrate how, comparing digital games to non ergodic media, interactivity poses new challenges to game developers in creating sentient characters. The analysis of two *interactive movies* finally provide examples of methods to create empathy in the context of digital story-driven games.

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Introduction

In his book *What is art?* (1897), Russian novelist Leo Tolstoy links art to the purpose of communicating one's emotion: "Art begins when one person, with purpose of communicating to other people a feeling he once experienced, calls it up again within himself and expresses it by certain external indications"¹. Art is an act of communication, using the external signs as a medium between the artist and his public. But in order to complete the act of communication, the audience has to *receive* the feeling, to decipher the external signs and translate them into feelings. This is where empathy comes in.

The first occurrence of the notion was used by German philosopher Robert Vischer in his 1873 doctoral thesis². He used the term *Einfühlung* to relate to the relationship between a work of art and its public, allowing the latter to penetrate its sense. This concept of an aesthetic empathy was later introduced in philosophy of mind then in psychology, as the ability of an observer to project into an object.

Thus, empathy is a fleeting, multidisciplinary notion that is still evolving today; combining the fields of aesthetic philosophy, psychoanalysis, neuroscience and art studies. Furthermore, empathy appears at the centre of the aesthetic relationship between a work of art, or a fictional character, and the public.

While these two dimensions of the concept of empathy first convinced me to approach it in this dissertation, I chose to analyse empathy in relation to video games for several reasons. First, because it is my opinion that video games, although frequently reduced to their ludic aspect³, constitute an art form. As such, the question of the engagement of the player through empathy must be addressed.

¹ Tolstoy, Leon, *What is Art?* (1897), translated by Richard Pevear and Larissa Volokhonsky, London, Penguin Classics, 1995

² Vischer, Robert, *On the Optical Sense of Form: A Contribution to Aesthetics*, 1873

³ American journalist Roger Ebert, for instance, wrote "one obvious difference between art and games is that you can win a game" ('Video Games can Never be Art', on *rogerebert.com*, April 16, 2010).

Furthermore, this question appears all the more relevant that the issue of creating empathy in art is challenged by the interactivity video games offer. Consequently, the question must be asked as to how a video game, as an ergodic medium, can create empathy.

The method for this dissertation, as the concept of empathy, is multidisciplinary. Approaching the concept of empathy without any prior knowledge, I will attempt to define and described the processes behind empathy using works from the fields of psychology and neurobiology.

In a second part, I will study the notions of fiction and media in order to determine what challenges they raise to the process of creating empathy.

Finally, using research works from the field of game studies, I will try to isolate several methods to make a player experience empathy toward a fictional character. A short analysis of two digital games, *The Walking Dead* and *Beyond Two Souls*, will show how these methods can be applied.

Empathy in neuroscience & psychology

Empathy is a complicated and multifaceted concept that has been addressed mainly by psychology and neurobiology. As a result, I will focus in this first part on the concept of empathy according to those disciplines, in order to formulate a neutral definition. This definition will constitute a basis on which to explore later the relationship between empathy and the media, and more specifically video games.

Definitions of empathy

For the sake of argument clarity, I will first rely on the definitions of empathy provided by two dictionaries: the online Oxford dictionaries and Cambridge dictionary.

The Oxford defines empathy as “the ability to understand and share the feelings of another”. Although very brief, this definition focuses on an aspect of empathy I will explore later: the fact that it is both a cognitive (“to understand”) and emotional (“share the feelings”) process. As a result, artificially creating empathy in the framework of a media product, such as a video game, must rely on strategies that target both of these aspects, addressing supposedly at the same time both the rationality or logic of the target user, and his emotions.

The Cambridge Dictionary provides a definition that is more oriented towards the process at work behind empathy, pointing out that it is “the ability to share someone else’s feelings or experiences by imagining what it would be like to be in that person’s situation”. This definition raises several ideas or issues that I will need to address later: contrary to the previous definition, here empathy’s goal is oriented towards a community of emotions (“share someone else’s feelings”) while the cognitive aspect is relegated to the process that creates empathy. This process (“imagining [...]”) relates of the common phrase “putting oneself into someone else’s shoe”, in other words make an effort to adopt their perspective.

If these definitions are obviously simplistic or incomplete, they draw our attention to several of the aspects of empathy that make it a multifaceted concept. First, both dictionaries define empathy as an “ability”, meaning that it is not a common trait among people, or at least that

different levels of empathy exist. Secondly, the term “ability” also implies that such a skill could be learnt or developed.

Another point of focus is the relation between the processes behind empathy. While the Oxford dictionary reckons that the cognitive (understanding) and emotional (sharing a feeling) processes are simultaneous, the Cambridge dictionary introduces a causality between the two (imagining leads to sharing a feeling). The difference in terminology between *to understand* and *to imagine* will also have to be addressed later. But the most important point here lies in the term “share”, present in both definitions: what are the characteristics of such a process? Does one simply acknowledge the feelings of another, or does he experience them himself? In other words, what is the difference between empathy, sympathy and projection?

Empathy, sympathy and projection

As Dr Neel Burton points out in his article ‘Empathy vs Sympathy’ in *Psychology Today*, “empathy is often confused with pity, sympathy, and compassion, which are reactions to the plights of others”. According to him, pity is “a feeling of discomfort at the distress of one or more sentient beings”, and “often has paternalistic or condescending overtones”. As a result, pity amounts to “little more than a conscious acknowledgement of the plight of its object”.

Sympathy, on the contrary, “is a feeling of care and concern for someone [...] accompanied by a wish to see him better off or happier”. As a result, sympathy implies a “greater sense of shared similarities together with a more profound personal engagement”. While pity can be experienced toward the distress of anyone, sympathy implies a personal connection between the sympathizer and the other. However, develops Dr Burton, “sympathy does not involve a shared perspective or shared emotions”.

Finally, compassion is described as an “active desire to alleviate the suffering of its object”, in which the subject “not only share [one’s] emotions but also elevate them into a universal and transcending experience”. In other words, contrary to empathy, compassion overlooks the specific interrelation between the compassionate subject and the object of his compassion.

Considering these distinctions, Dr Burton provides this definition of empathy:

[Empathy is] a person's ability to recognize and share the emotions of another person, fictional character, or sentient being. It involves, first, seeing someone else's situation from their perspective, and, second, sharing his emotions, including, if any, distress. For me to share in someone else's perspective, [...] I must imagine myself as him, and, more than that, imagine myself as him in the particular situation in which he finds himself. To empathize with a particular person, I need to have at least some knowledge of who he is and what he is doing or trying to do.

As a result, a major aspect of empathy is that it builds upon a certain knowledge of the "target other"; a knowledge one can acquire only by spending a significant amount of time with or observing⁴ this target person⁵. In other words, empathy requires the subject to *understand* (in its etymological sense: "be close to") the target other. This proximity between the empathizing subject and the target other indicates that experiencing empathy is fundamentally an inter-individual process ("another person, fictional character, or sentient being"). Feeling empathy for a group thus appears impossible, taking the form of compassion, which I described earlier.

While pity, sympathy and compassion seem to lack the inter-individual connection or closeness empathy requires; other inter-individual processes are to be distinguished from empathy: identification and projection⁶.

In his book *Empathy: what it is and why it matters*, David Howe points out the difference – and also the danger from a psychology practitioner's point of view – of such processes:

[...] For [practitioners from a psychotherapeutic background], sympathy can get perilously close to identification, even projection [...]. According to this analysis, sympathy, identification, projection and countertransference can distort our perceptions and

⁴ I added the term "observing" in order to include fictional characters depicted in books, movies, games, etc. as potential targets of empathy.

⁵ "The cognitive components of empathy in which we think about the other's emotional point of view take many years to develop [...]" - David Howe

⁶ Projection and Identification are here referred to in their psychological sense. I will discuss the idea of identification within video games (identify with an avatar for example) later in this essay.

communications. In contrast, empathy is a sense of knowing the other's mind without their state of mind being the same as ours.

In other words, although empathy builds upon an emotional and social proximity to the target other, it does not go so far as to confuse one's self and the self of another: when experiencing empathy, the subject clearly has in mind the distinction between his own self and the other; he can share the emotions, but does not technically *feel* them as his own⁷. As a result, the subject's perception cannot be distorted by the feelings of the target other. In order to investigate further this phenomenon, I'll partially leave the field of psychology and psychoanalysis to study empathy from the point of view of neurobiology.

Empathy in neurobiology

As I indicated earlier, empathy is a process presenting both a cognitive reality ("understanding" the target other) and emotional reality (sharing the feeling of the target others). For David Howe, cognitive empathy is based on "seeing, imagining, and thinking from the other person's point of view" and recalls later that "some knowledge of the other's history, personality, circumstances and situation is necessary before we can set our minds to work imagining what it might be like to be that person". Complementary to this cognitive empathy is the affective (or emotional) empathy, which Howe defines as "[resonating] with the other's feeling".

This dichotomy between emotional and cognitive response finds an echo in the process taking place in the brain, which we can relate to empathy. David Howe describes this "empathic brain":

Simplifying matters, it appears that the brain can respond to other people's emotional states in two ways. The first is subcortical, primitive and fast track. We see, tune into and contagiously feel the other's feelings. This is emotional or affective empathy; no thought

⁷ For David Howe, "I [the subject] am clear that it is you [the target other] who is in pain and despair and not me, even though I am being emotionally affected by your distress"; and later "empathy involves imagining another's psychological world while maintaining a clear self-other differentiation."

required.⁸ [...] The second is cortical, slower, more deliberate. We might have to make a conscious effort to think ourselves into the other's shoes, but having done that, we can appreciate the world from their emotional point of view. This is cognitive empathy.

This brief description of the process taking place in the brain while experiencing empathy apparently contradicts the postulate of the Cambridge Dictionary's definition of empathy: while, according to the Cambridge, the sharing of emotion was the result of a cognitive process ("imagining what it would be like..."); it appears that the affective empathy is first triggered in the brain in a "primitive", instinctive way. The cognitive empathy, however, is "more deliberate" and the product of a "conscious effort". In other words, from the perspective of emotions, we can assume that cognitive empathy actually "refreshes" or adds up to the emotion-sharing process automatically initiated by the instinctive response.

A more detailed description of the neurobiological process sheds light on a very important aspect of empathy: that it is partly the result of a conscious effort, thus being by no means an automatic response to another person's suffering. As a result, one has to "decide" to be empathic in order to fully experience the sharing of emotion with the target other. This leads to two key variables: empathy relies on one's ability to empathise, and also on the specific situation of the encounter.

Indeed, beyond other characteristics of the subject (sex, personality, temperament, attachment style, mood), Howe identifies two categories of subjects: the empathisers and the systematisers⁹:

Although systematisers are good at making sense of objects, machines and processes, their understanding is impersonal and detached. [...] these skills do not work when it comes to making sense of people in the everyday, relational sense. It is empathisers who are good at understanding and interacting with other people. Making sense of people and tuning into their minds requires you to be personal and involved.

⁸ A part of the scientific community describes the role of mirror neurons in the process of empathy. See Rizzolatti & Craighero, *The Mirror-Neuron System* (2004), and Keysers, *The Empathic Brain* (2011).

⁹ "Systematizing is the drive to analyse, explore, figure out how things work and find the underlying rules and principles that govern how systems, such as machines, organisms, computer programs or physical phenomena, work. [...]" – David Howe

In order to determine if one belongs to either of the two groups, two main tests have been developed. The first one, developed by Baron-Cohen and Wheelwright and advocated by David Howe, measures an individual's *Empathy Quotient* (EQ). Another test, presented by Christian Happ and André Maltzer, is called the *Interpersonal Reactivity Index* (IRI). While it is not my place to discuss which test is more preferable; I will simply point out that, according to Happ and Maltzer, the IRI presents a "fantasy empathy subscale" supposed to "measure both cognitive and affective reactions to emotional content in various media channels". Surely one would thus favour the IRI in order to determine the empathic response to a video game.

Another variable that determines empathy is the *specific situation*; in other words, *when*, *where* and *how* the subject meets the target other. While media producers cannot influence one's disposition toward empathy; they can surely set the parameters of the context of this encounter; especially in works of fiction.

I believe I have identified, in this chapter on the definition of empathy according to psychology and neurobiology, a number of key elements characteristic of the process involved:

- Empathy is an ability that is learnt and can be developed. As a result, different levels of empathy (or proneness to experience empathy towards a target other) are to be expected among the population.
- Contrary to pity or sympathy, empathy requires an inter-individual connection; a relationship between the subject and target other that ultimately allows the former to develop a specific knowledge about the latter's history, states of mind, opinions, etc.
- Nevertheless, empathy also builds upon the distinction between the self and the other. As a result, identification or projection (in a psychological sense), even though presenting traits and processes common with empathy, must be distinguished.
- Neurobiology teaches us that empathy consists in a dual response in the brain, one emotional and primitive, the other cognitive and the result of a conscious effort (yet also leading to a deeper sharing of emotions).
- Empathy depends on several variables, both individual and situational.

Empathy and Fiction

Observations

During my research, I realised that while many studies and articles focus on the role of fiction in developing empathy, very few actually address the process behind creating empathy toward fictional characters. Nevertheless, this issue remains a point of interest, even outside academic circles¹⁰.

The first and most obvious specificity of fiction is that it is not *real*: contrary to a witnessed event *in real life*, an event in fiction is only (1) a story (whatever the medium used to tell that story) of (2) a fictional event. As a result, two “walls” stand between the consumer of fiction and the fictional character.

The first relies on the media, where the consumer must create a mental image of the event considering all the data he retrieves from the story (situation, location, number of characters, etc.); a process commonly referred to as *representation*. Obviously, the dynamic of representation changes from one medium to another, depending on the sensory inputs used to receive the story data (images, sounds, videos, etc.). I will address the aspect of representation more specifically in the chapter about the video game medium.

The other “wall” standing between the consumer of fiction and the fictional character is the very nature of fiction: its un-reality. In order to regard the fictional character as a sentient being – which is the basis of empathy – the consumer must first put aside, or voluntarily forget, that the character depicted is not real. In media theory, this phenomenon is generally called “suspension of disbelief”, from the words of poet and philosopher Samuel Taylor Coleridge¹¹, referring to the process of “temporarily allow[ing] oneself to believe something that is not

¹⁰ See this Reddit thread: “How can anyone feel empathy for fictional characters?” [https://www.reddit.com/r/AskReddit/comments/3eil3v/how_can_anyone_feel_empathy_for_fictional/]. While not academic, the thread provides an interesting peak at how and why some consumers of fiction experience empathy – and identify it as such.

¹¹ “It was agreed, that my endeavours should be directed to persons and characters supernatural, or at least romantic, yet so as to transfer from our inward nature a human interest and a semblance of truth sufficient to procure for these shadows of imagination that willing suspension of disbelief for the moment, which constitutes poetic faith», Coleridge, *Biographia Literaria*, 1817, Chapter XIV

true, especially in order to enjoy a work of fiction”¹². In other words, the fiction consumer accepts, for the duration of the story, to suspend his critical faculties for the sake of enjoyment.

Earlier in this chapter, I have come to define empathy as a dual (emotional and cognitive) ability by which an empathising subject, upon perceiving the emotions of a target other to whom he is “close”, instinctively and primitively shares the target’s emotion; and through a conscious effort based on the knowledge of the target and situation, furthers this phenomenon of emotion-sharing. Only when the two processes (affective and cognitive) take place will the subject fully experience empathy.

Considering this definition, another obvious obstacle appears when it comes to experiencing empathy towards a fictional character: the only data regarding the said character and the situation is conveyed through the work of fiction. In other words, contrary to real individuals, a fictional character’s mind is built only on the various details a fictional work delivers to its readers. As a result, in order to allow the readers to “put himself into the character’s shoes” and experience empathy, a fictional character must display a sufficient number of traits and features for the reader to be able to “read his mind”.

As empathy, the ability of an individual to read one’s mind (aka to imagine what one feels and thinks) is not equal for everyone. But a closer look at the psychological process by which an individual imagines the thoughts and feelings of another individual, described by the *Theory of Mind*, could ultimately shed some light on the features a fictional character must present in order to “feel real”.

Theories of mind

To conclude on the psychological study of empathy, I would like to briefly recapitulate the three main philosophical approaches to theory of mind that have dominated the debate since the 1980s. Indeed, mind reading as an essential part of the empathic cognitive process; thus

¹² Entry *Suspended belief* in the Online Oxford Dictionary

understanding its functioning can shed light on how to design a video game character that will generate empathy.

A first approach, described by Shanton & Goldman as *Rationality theory*, considers that “people use principles of rationality to attribute mental states to others [...] [assuming] that others are rational in matters of belief, preference, and decision-making”. In details, mind readers “attribute propositional attitudes [by conjoining] information about a target’s initial states with appropriate principles of rationality. On the basis of this information, they determine which further mental state it would be rational to adopt and attribute that state to the target”. An obvious limitation to this approach is the premise that every decision-making process is conducted according to the laws of an objective rationality; while countless everyday examples suggest otherwise.

Another approach to mind-reading, notably advocated by philosopher Paul Churchland and called *Theory theory*, postulates that we “share a tacit command of an integrated body of lore concerning the lawlike relations holding among external circumstances, internal states, and overt behaviour”¹³. “Given its nature and functions”, Churchland adds, “this body body of lore may quite aptly be called ‘folk psychology’” (a reference to the basic, undocumented theories supposedly shared among human beings about basic physical phenomena, called “folk physics”). The process behind theory theory is described by Shanton & Goldman as follows:

This theory posits causal links between environmental inputs, inner states, other inner states, and behavioural outputs. Given information about another person’s observed behaviour or facial expression, etc., attributors make theoretical inferences to his mental states.

The main difference between theory theory and rationality theory is a change of paradigm: while the later relies on the premise of rational behaviour, theory theory postulates a basic general knowledge of other’s mental states. The origin and acquisition of such knowledge (innate vs empirical) is debated among theory theorists.

¹³ Churchland, Paul, *A Neurocomputational Perspective*, MIT Press, 1989

Finally, *Simulation theory* constitutes the third approach to mind reading. Shanton & Goldman define it as follows:

Rejecting the TT emphasis on theoretical inference, Simulation Theory says that people employ imagination, mental pretense, or perspective taking to determine others' mental states. A mentaliser simulates another person by first creating pretend states (e.g., pretend desires and beliefs) in her own mind that correspond to those of the target. She then inputs these pretend states into a suitable cognitive mechanism, which operates on the inputs and generates a new output (e.g., a decision). This new state is taken 'off line' and attributed or assigned to the target.

Although I am not interested in taking sides in the debate about mind reading, I will simply note that the Simulation Theory appears to fit pretty well with our definition of empathy. Another of the Simulation Theory's aspects echoing our work on empathy is described later in Shanton & Goldman's paper:

Simulation has frequently been invoked in discussions of aesthetics. [...] Simulational accounts may help solve the 'paradox of fiction': why fiction has the power to move us emotionally despite our knowing that the situations are not real. Currie has developed a simulationist view according to which readers of fiction make believe that they are reading true accounts of events. Interaction of their simulated beliefs with their simulated desires accounts for their emotional reactions. While this approach invokes high-level simulation, Freedberg and Gallese offer a low-level—or mirroring—account of aesthetic responses to painting and sculpture. They cite ways in which viewers of certain artistic works engage in bodily empathy, e.g., feeling activation in the same muscles that are activated in the figures of Michelangelo's Prisoners, who are depicted as struggling to free themselves from their material matrix.

This distinction between a *high-level simulation*, in which a subject attributes a mental state to a target other, and a *low-level simulation* where the subject "engage[s] in bodily empathy", could be linked to the two levels of empathy (primitive affective response and conscious cognitive effort); yet nothing indicates, in empathy theories, a distinction between a physical

empathy and an emotional one. In other words, nothing indicates than one shall express his empathy in a physical manner rather than an emotional one.

One explanation, however, would be to consider the data available to the subject: when seeing a sculpture, an observer has access to very little details about the object of his empathy. After “suspending his disbelief”, aka considering a human-shaped piece of rock as a human being, the only information about the target other a subject could have access to are limited. Some of the most basic inputs (motion, language) are not represented, and the subject has to “make do” with the few information he has access to, in this case the facial expression or the tension of the muscles as clues of a movement. Thus muscle tension could be one of the inputs simulated by the subject.

Summary

- Several obstacles or “walls” prevent a subject from experiencing empathy towards a fictional character.
- The first is the knowledge of the subject that the story and the character are fictional, not *real*. In order to experience empathy, one has to “suspend his disbelief”, in other words to convince oneself, for the duration of the story, that the events and characters are real.
- Another aspect of fiction that affects the possibility of an empathic response is the means by which the events and characters are represented, the different sensory inputs available to the subject that define the nature of the *medium* of representation.
- The nature of the medium affects the empathic response in the sense that empathy relies on a number of observed features such as facial expression, body movement, etc. Such features allow the subject to “read” the target other’s mind; a key process of experiencing empathy.
- The different theories of mind-reading can be applied in the context of fiction: a subject will either rely on the assumed rationality of the fictional target other, on a general “folk psychology” or on the specific knowledge of the target other. In the context of empathy, an inter-individual relationship is encouraged.

Empathy in media

Empathy in literature and theatre

Experiencing empathy towards a fictional character has always been at the centre of the classic arts - whether to facilitate the audience's involvement in the fictional world of a story or a play¹⁴; or on the contrary to unsettle the reader precisely by preventing him from feeling empathetic toward a character¹⁵. Understanding how other media, such as literature and theatre, create empathy towards their characters can provide hints as to how create empathy in video games.

Duggan & Grainger summarise the relationship, in theatre and novel, between identification to fictional characters and the aesthetic distance inherent to such art forms:

In stories, as in plays, we identify willingly with people we imagine to be in danger, or suffering pain or distress, or undergoing violent emotion, because we know that the circumstances are fictional. In theatre the willingness comes from our awareness that this is a play. In storytelling it comes from our knowledge that this is a story. Plays are signalled as plays by their theatrical setting, consisting of an acting area, [etc.]. Stories are announced to be stories by the narrative framework of a verbal kind. Both plays and stories are characterised by belief in the imaginative world they create [...]. In a way the imagination must work harder on stories than plays because of the actual presence of living characters. However, the harder our imagination works, the more of ourselves we invest in the effort to pretend we are living in the same world as the personages in the story, and the more real and satisfactory our experience turns out to be.

This short analysis of the process at hand in storytelling and theatre points out two essential aspects of the experience of empathy in the context of an artistic work. First, the emotional involvement of the audience or the reader, their identification to the fictional characters, is only allowed by what Duggan and Grainger call earlier the "aesthetic distance", a term used

¹⁴ The experience of catharsis, described in Aristotle's *Poetics* as one of the characteristics (even goal) of drama, relies precisely on the audience's emotional involvement as taking place in empathy.

¹⁵ Camus' *The Stranger* famously revolves around a character who has trouble feeling emotions; while Bertolt Brecht's theatre aims at a "controlled involvement" of the audience (Duggan & Grainger, 1997)

by Thomas Scheff to refer to “a specific point of balance between involvement and separation at which catharsis occurs, which is expressed and embodied in the presentation of art”¹⁶. Although catharsis is not the subject of this paper, and the willingness whether or not to attempt to reach this “point of balance” is ultimately the result of the artist’s choice; setting up this aesthetic distance generally stems from the existence of clues proper to the art form (theatrical setting, verbal narrative framework, etc.).

Another point raised by Duggan & Grainger is the nature of representation that defines the art form, and that I call the sign. In literature, the sign is verbal, whether oral or written. In theatre, mostly, the sign is verbal (oral) and physical (the actors as bodies). The nature of the sign directly influences the process of involvement and identification in the way that the fewer outputs there are (image, sound, movement, facial expression, etc.), the greater the imaginative effort of the audience must be in order to create the “point of balance” and the emotional involvement that follows.

Blakey Vermeule, in her book *Why Do We Care About Literary Characters?*, also addresses the issue of the reader’s involvement; citing the work of Amy Coplan:

The reader is neither fixed nor immobile; he is neither forced to mirror exactly the character’s experiences nor forced to observe the character’s experiences from the outside. Through the process of empathic connection, the reader simulates a character’s experience, but because he simultaneously has his own thoughts, emotions, and desires, his overall experience involves more than just simulation.

The reader empathizes but also reacts to what is learned through empathizing and to information he has access to that characters may not. Often the reader experiences sympathy as well as his own thoughts and feelings about the overall themes and messages of a narrative. These experiences are not shared by the characters and are not part of the reader’s empathic engagement, but can occur while he empathizes with the characters.¹⁷

¹⁶ Citation by Duggan & Grainger paraphrasing T. Scheff.

¹⁷ Amy Coplan, ‘Empathic Engagement with Narrative Fictions’, in *Journal of Aesthetics and Art Criticism* 62, 2004

Here, Amy Coplan draws our attention to the inherent separation between a literary character and the reader. As Duggan and Grainger pointed out, the aesthetic distance created by the characteristics of representation proper to the art form allow the audience (or the reader) to identify with the fictional characters. But this simulation of a character's experience is only a part of the reading experience: sometimes the asymmetry of access to information between the reader and the fictional character, and overall the reader's thoughts and emotions, result in a reading experience that goes beyond the simulation at hand in the empathic response.

Such experience, according to Gregory Curie¹⁸, lies in the adoption of the point of view of an "observer of facts". This hypothetical perspective is the pivotal point allowing both an external and encompassing point of view, necessary to follow and understand the narrative; and the simulation of a character's mind occurring in an emphatic response that requires to momentarily "forget" the narrative process. In other words, this position allows us to understand that we are reading a narrative, but also to adopt the point of view of a fictional character unaware of the scheme at hand.

Both the works of Vermeule and Duggan & Grainger, although from different backgrounds, consider the reader's involvement in literature and theatre. This involvement is only permitted by the adoption by the reader of an ambiguous perspective: the one of an "observer of facts". This point of view is defined by the ability to see the text or the play both as a narrative ("an account of connected events¹⁹") with its own specific means of representation (the signs); and a fictional world populated with characters to empathize with. In a nutshell, this perspective allows both the aesthetic distance and the emotional proximity to the characters. But what happens when the reader *is* a character, when he controls the character in such a way that the latter becomes an "acting agent" of the former? This is one of the questions associated with the study of video games as a medium.

¹⁸ Gregory Curie, 'The Paradox of Caring: Fiction and the Philosophy of Mind', in *Emotion and the Arts*, edited by Mette Hjort and Sue Laver, 1997

¹⁹ Online Oxford Dictionaries, entry "Narrative"

Video games as a medium

In her *Introduction to Game analysis*, Clara Fernandez-Vara approaches the issue of video games as a medium:

One of the challenging issues when writing about games, particularly when bringing methods and approaches from literature, film, or communication studies, is whether games can actually be understood as a new way of communication. [...] the word *medium* seems to imply that there is a message in them. Games as an expressive medium, however, are hardly a one-way method of communication where the designers “tells” a message to the player. The player is a necessary part of the text; [...], as the game is not really a complete text without a player that interprets its rules and interact with it.

This analysis refers to the inherent quality of games, and especially video games, that stems from the *interactivity* of the medium. Contrary to a novel or a play, a game needs the active participation of the player to “unfold” itself. Even though a book or a movie requires some form of participation from the reader or viewer (attention, focus, imaginative effort); these efforts are considered by Espen J. Aarseth as “trivial”, “with no extranoematic responsibilities placed on the reader except (for example) eye movement and the periodic and arbitrary turning of pages”²⁰. Such media are called by Aarseth *nonergodic*. On the contrary, ergodic media – such as video games – “nontrivial effort is required to allow the reader to traverse the text”: a specific action from the player triggers a reaction from the game program, allowing the game to move forward.

As a result, Fernandez-Vara points out that games are a “strange medium, where the communication takes place as a constant cycle of players making sense of the game, figuring out what they want to do, and seeing what happens. It is a medium that, by necessity, establishes a dialogue between the game and the players, and amongst players”.

²⁰ Aarseth, Espen J., *Cybertext : Perspectives on Ergodic Literature*, Johns Hopkins University Press, 1997

In the framework of game analysis, this specificity of games as a medium calls for a specific method distinct from the one used for other media. Fernandez-Vara advocates for considering games as a type of texts encoded with values:

Some aspects of games can be analysed from the standpoint of other media, such as examining cinematics from a film studies point of view, or from visual design. The purpose of this book, however, is to call attention to how games are different from other media. Rather than limiting ourselves to thinking about games as a medium to convey messages, we can think of them as artefacts that encode certain values, which players decode and engage with as they play. [...] game can be read differently depending on the audience, and [...] the system of the game embodies values which can also be subject of interpretation.

Here, Fernandez-Vara presents a way of considering a video game largely inspired from the Literature studies; presenting games as “cultural production[s] that can be interpreted because they have meaning”. Thus she invites to study, “when [analysing] games, meaning within the game (meaningful play) and around it (cultural significance)”; as well as the paratexts²¹ surrounding the game.

While the study of the cultural significance and paratexts of an “artefact” is common to every media; it is the “meaning within the game”, the “meaningful play” that really challenges the methods of analysis borrowed from other media form. This challenge stems from the fact that games are not only objects, but processes.

In *In-Game*, Gordon Calleja, discusses the “division of objects and process [...] applied to digital games”:

In the case of digital games, the object is described by the code and the material medium that contains the code. [...] The dormant code [...] presents a potential that is actualized during gameplay.

²¹ “In video game terms, paratexts would include the box of the game, the instruction manual, the game’s commercial website, reviews, and interviews with the developers, as well as other media, from other games to commercials or films that may have been inspired by the game or spawned by it”.

Considering video games, Calleja distinguishes the object (the code) and the process that is its actualization. But while the code of a video game is of importance, video game studies rather focus on what *appears on screen*, on the actions of the player in the virtual world; in short, on the game as actualization of the code. Hence the necessity, according to game theorists such as T.L. Taylor and Thomas Malaby, to consider digital games as “processual”:

The term processual refers to the potential for variation in a game’s enactment at every engagement and favours a dynamic and recursive view of games. A processual perspective suggests that the identification of persistent features of games is continuous with other domains of experience. This means that games need not be conceptualized as somehow experientially separate [...]. Malaby formulates games as processes that create carefully design, unpredictable circumstances that have meaningful, culturally shared, yet open-ended interpretations. Therefore, both the game practice and the meaning it generates are subject to change.

As a result, Calleja distinguishes five “elements” that define digital games²²:

- *The Player*: the “human agent, or agents, that engage with the game system”. The player evolves in a specific “social and cultural context” and present a certain “disposition prior to and during the engagement with the game”.
- *The Representational Sign*: the signifying identity (text, imagery, or sound); the “interpretable, representational element that players read in order to be able to interact with the game”.
- *The Rules*, coded into the software in the case of digital games and thus that can only be altered by changing the program of the game. A set of socially negotiated rules can arise in multiplayer games.
- *The (Simulated) Environmental Properties*, a constructed virtual environment with hard-coded physical properties

²² Calleja follows here Ludwig Wittengstein in “viewing games as members of an extended family that share resemblances”; focusing on the “subset, or group of subset, of the game family that occur within virtual environment”. Later the author calls this subset “virtual game environments” or “game environments”.

- *The Material Medium*, or the “material instantiation” of the game, is the hardware on which a game is played (PlayStation, PC, Xbox, etc.). A same game can vary from one console to another, as well as the gaming experience due to different controllers.

By identifying the elements common to every “virtual game environment”, Calleja provides a grid of analysis that takes into account the multiple realities of a digital game – as a technological object, a process, or a cultural artefact. Nevertheless, such grid falls short when it comes to analysing empathy in a digital game. This is why, after analysing the concept of immersion in a virtual game environment, Calleja offers another analysis grid, which I will use in the last section of this dissertation.

Empathy and Involvement: the Player Involvement Model

Before addressing the issue of analysing empathy in video games, I would like to recapitulate the conclusions of the previous sections regarding the definition of empathy, the process behind it, and its relation to fiction.

In the first section, I have concluded that empathy can be defined as a sharing of emotions between a subject and a target other based on both a primitive “mirroring” process as well as a specific cognitive process. During the latter, the empathising subject attempts to read the target other’s mind either by assuming the target’s rational behaviour, resorting to folk psychology or simulating the target’s emotions and thoughts. In any case, the mind reading process largely relies on the collection of data regarding both the individual (personal history, relationship to the subject, opinions, recurring behaviour, etc.) and the situation. As a result, the more data the subject has access to, the more efficiently he can adopt the target’s perspective, and the greater his empathic response.

Regarding works of fiction, the empathic experience also relies on the involvement of the reader in the fictional world of the narrative. The optimal level of involvement, in literature, is embodied in the role of “observer of facts”, allowing the reader to maintain distance with the narrative as a whole but allowing him also to identify with the character(s) and invest himself emotionally in the narrative. Dugan & Grainger even pose the aesthetic distance as a prerequisite to the emotional investment of the reader – it is because the artefact is an artistic

representation of a fictional world that the reader is able to “suspend his disbelief” and emotionally invest the narrative.

Gordon Calleja proposes to analyse this notion of involvement in digital games, a “prerequisite to the experience of higher-order cognitive processes such as presence or immersion^{23 24}”, by referring to the *player involvement model*.

This model relies first on a distinction between the *micro-involvement* and the *macro-involvement*:

- **The macro-involvement**, or macro phase of the involvement model, “addresses longer-term motivations as well as off-line thinking”. This phase includes pre-game and post-game experiences, and “exists largely as a contextualization of the actual moment of gameplay”.
- **The micro-involvement**, or micro phase of the involvement model, corresponds to the “aspects of the game which involve [one] in the moment of play”. It is necessary, recalls Calleja, not to associate micro involvement only with the direct inputs of the player, but more broadly with the “player’s cognitive effort²⁵”.

In other words, this first part of the model opposes the “in-game” and “out-game” elements that take part in the player’s involvement. Although out-game features play a major part in the player’s involvement in a digital game, and thus in his ability to empathize with the characters, I will in the last chapter rather focus on several in-game features that participate in the emergence of empathy.

The second part of the model distinguishes six dimensions of involvement, corresponding to the “clusters of emphasis derived from analysis of research data”:

- **Kinaesthetic Involvement** relates to “all modes of avatar or game piece control in virtual environments, ranging from learning controls to the fluency of internalized

²³ And, consequently, empathy.

²⁴ “Virtual environments offer a particular form of mediated experience that was not previously possible. [...] Technologists, media psychologists, and human-computer interaction researchers, among others, refer to this experience as *presence*, while humanists and, later, social scientists adopted the metaphor of *immersion*.”

²⁵ “Planning a move in a strategy game clearly requires effort and is thus an important aspect of ergodicity [...]”.

movement". Calleja highlights later the fact that "the freedom of action allowed and the difficulty of the learning curve of the controls involved have a major influence on the player's involvement [...].

- **Spatial Involvement** concerns "player's engagement with the spatial qualities of a virtual environment in terms of spatial control, navigation, and exploration". The player's engagement depends here on the "internalization" of the virtual space.
- **Shared Involvement** relates to the "engagement derived from player's awareness of and interaction with other agents", either other players or AI, "in a game environment". It addresses the social interactions in a game.
- **Narrative Involvement** refers to "engagement with story elements that have been written into a game as well as those that emerge from player's interaction with the game". Calleja distinguishes the *scripted narrative*, the "preordained story elements", and the *alterbiography*, the "story generated by the player's moment-to-moment actions within the game environment".
- **Affective Involvement** deals with the "rhetorical strategies of affect that are either purposefully designed into the game or precipitated by an individual player's interpretation of in-game events and interactions with other players".
- Finally, **Ludic Involvement** discusses the "player's engagement with the choices made in the game and the repercussions of those choices". These choices, according to Calleja, can be directed toward a goal stipulated by the game, established by a player, or decided by a community of players".

As we have seen, involvement on the part of the player is one of a prerequisite of experiencing empathy. While Calleja's model aims at encompassing all aspects of involvement in a digital game environment, some of the dimensions are less relevant to the study of empathy²⁶.

Creating empathy

I have so far identified some of the factors that allows one to develop empathy toward a fictional character. These elements are the following:

²⁶ Although the spatial involvement is a key component of the player's involvement in digital game world, it is not central when it comes to experiencing empathy.

- Empathy is first characterised by a primitive emotional response to witnessing an emotion in a sentient being.
- Empathy is fully experienced after a cognitive process in which the subject “reads” the target other’s mind. Several theories attempt to explain the mind-reading process. As the Rationality theory appears rather simplistic, and the Theory theory relies essentially on the subject’s knowledge of folk psychology, neither of them are useful regarding the subject of artificially²⁷ creating empathy in a video game. As a result, I will depend on the Simulation theory for the rest of the dissertation.
- The successful simulation of the target other’s thoughts and emotions relies on three categories of data: personal knowledge of the target, observable behaviour of the target, and the situation.
- In the context of a digital fictional world, empathy relies on the involvement of the subject (the payer). This involvement goes beyond the basic investment of attention, which Calleja defines as “the concentration of mental resources toward some particular stimulus or stimuli”.

Even though involvement is a prerequisite of experiencing empathy, it is not the subject of this dissertation. As a result, some dimensions of the player involvement model will be stressed upon. These dimensions are those in relations with the elements necessary to empathy:

- *The character as a sentient being*: to experience empathy, the subject must first and foremost perceive the fictional character as a sentient being, in other words able to perceive or experience things²⁸.
- *Knowledge of the other*: in order to simulate the character’s thoughts and emotions, the subject must possess a broad personal knowledge of the character’s story and behaviour. These elements are developed in the story of the character, but also, from a micro point of view, in the AI’s behaviour.
- *Observable behaviour*: in order to infer the state of mind of the character, the subjects must have access to a number of visual clues, mainly body movement, dialogue and facial expressions.

²⁷ I use *artificially* here to refer to the tools offered by video games as a medium.

²⁸ Cambridge Dictionary Online, entry “sentient”

Empathy in two digital games: The Walking Dead and Beyond Two Souls

The Walking Dead and Beyond Two Souls

For my analysis, I chose to focus on two games, *The Walking Dead* and *Beyond Two Souls*, for several reasons. First, as story-driven games, they put an obvious emphasis on the narrative behind the game. Contrary to other genre where the emphasis on the gameplay outshine the story, story-driven games spend more time developing the character in-game, allowing greater attention to behavioural details (dialogues, facial expressions, etc.). As we have seen, it is partly on such details that empathy relies.

Another interesting point is that both games are also labelled as *interactive movies* or *movie-games*, a subgenre in the digital game family which scripting, visual design and/ or narrative structure borrows from the cinema. A good definition of the subgenre is given by David Cage:

The cinematographic approach in *Indigo Prophecy* was an essential aspect of the game concept from the very beginning. The idea was to manage to recreate a richness and diversity of emotions comparable to film by using similar mechanisms (narration and characterization), but ones that are also peculiar to the medium (interactivity, immersion).²⁹

Hence the primary goal of interactive movies seems to reconcile narration and interaction in order to “absorb” the player into the experience and maximise affective involvement. This goal is reached through the use of cinematic features, but also by an emphasis put on character and story development.

The Walking Dead is an episodic interactive drama & graphic adventure developed by Telltale Games. The game features 2 seasons, each composed of 5 episodes. The first episode of the first season was released in April 2012, and the second season debuted in December 2013.

²⁹ Cage, David, ‘Postmortem : *Indigo Prophecy*’, on gamasutra.com

The Walking Dead draws inspiration from the comic, taking place in the same fictional world, although most of the characters are original to the game. The game puts an emphasis on character and story development, with the player's dialogue choices and actions influencing the outcome of the story. In game, the character plays as Lee Everett, a convicted criminal protecting an orphaned girl named Clementine. The two of them encounter various situations and characters while attempting to survive in a post-apocalyptic world.

Beyond Two Souls is an interactive drama & action-adventure game created by Quantic Dream and published by Sony Entertainment in October 2013. The game features two playable characters: Jodie Holmes (Ellen Page) and the incorporeal entity attached to her, named Aiden. Growing from childhood to adulthood throughout the game, Jodie gradually learns to control Aiden and the psychic powers he develops. Jodie is surrounded by several secondary characters such as Nathan Dawkins (Willem Dafoe), a government researcher who will become a surrogate father figure to Jodie. While not technically episodic, the game features a nonlinear narrative of Jodie's life divided in 26 chapters (including prologue and epilogue).

How they create empathy

On the basis of the previous research, this chapter will analyse how the two games, *The Walking Dead* and *Beyond Two Souls*, create empathy toward their characters. However, coming from a background in Literature rather than Game Studies, I do not possess the tools nor the knowledge to conduct a proper and thorough game analysis. As a result, I will rather focus here on a number of aspects of the games (avatar vs playable character, character development, character design, graphics) and try to isolate some of the elements that encourages an empathic response from the player.

Who is the subject, who is the target? Empathy vs Identification

The first question to ask when analysing empathy in any video games is *who?*: who is experiencing empathy, and toward whom; who is the subject, and who is the target other. Indeed, empathy relies primarily on the perception and recognition of the target other as a distinct sentient being from the subject. In video games, the subject is automatically the

human agent playing the game, or occasionally the other agents watching him play. However, the issue arises regarding the target of the empathic response.

Indeed, in non-ergodic media such as movies or novels, the narrative structure is generally as such as it revolves around a central character. The reader or viewer follows his adventures from an external point of view, that of the “observer of facts”; a distance reinforced even so if the perspective is mediated by the narrator in literature or the montage in cinema. However, in *The Walking Dead* and *Beyond Two Souls*, the perspective the player adopt is made more complex by its representation inside the game, the avatar.

In *The Walking Dead*, the player’s avatar is also the main character, Lee. Although Lee presents all the characteristic of a fictional character (personal story, visual and vocal identity, specific behaviour, etc.); an important part of his actions and discourse is chosen by the player who controls him. In the very first scene of the game, Lee is cuffed in a police car leaving Atlanta. Through the conversation with the policeman driving the car, we learn a bit about Lee’s character – for instance that he is from Macon, was convicted for killing a senator, taught at UGA, etc. But the interactive dialogue immediately requires the player to chose between several behaviours: Lee can be either secretive, aggressive, honest, etc.

This allows the player to “build” himself Lee’s personality: the very limited information about the character’s personality *before* the player controls him are not sufficient to infer a coherent behaviour that the player could reproduce while playing. Here, the player does not “read” Lee’s mind, he writes it. In a sense, the designers did not want the player to empathize with the character, but to invest it with their own personality, ethics, etc³⁰. This “mind writing” process it all the more essential to the game that the choices made by the player, when interacting with the other characters, can change the outcome of the story. For instance, showing aggressive behaviour toward another character can make the the latter dislike Lee, and choose not to help him later in the game.

³⁰ Although due to the limited conversational ability form the IA, the dialogues only offer a limited number of options to the player. As a result, the personality of the character can be expressed in the options available. For instance, never in the scene is the player given the choice to make Lee say “I killed my wife and I liked it”, which would label him as “evil”.

As a result, the relationship between the player and the main character appears somewhere between empathy and identification: on the one hand, the player can simulate, from the information he possesses on the character, his thoughts and emotions; but on the other hand, his control over the character's discourse and actions encourages him to see the character as a sentient puppet or as a representation of himself inside the game.

Figure 1: Conversational choices in *The Walking Dead* and *Beyond Two Souls*³¹



Beyond Two Souls have chosen a different treatment of the main character(s). Indeed, as indicated in the title, the story revolves around two characters: Jodie and Aiden, the spirit-like

³¹ The screenshots are taken from Youtube walkthrough videos made by HHGaming (@HassanAlHajry)

form connected to her. Contrary to Lee in *The Walking Dead*, the character of Jodie presents a rich individual story, that is delivered to the player through the numerous cinematic scene in the game (the majority of them featuring Jodie). The structure of the narration, also, helps develop the character's story: the game is divided in 24 chapters, each corresponding to a certain moment in Jodie's life, between childhood and adulthood. The multiplicity of story elements over a long period of time allows the character to develop a personality and behaviour of its own. Another element participating in the richness of the character's story is the very limited control the player has over the character. Indeed, control options over Jodie are limited to motion in space, quick time events serving the purpose of moving forward in the narrative or providing further information about the character, or dialogue options that have little impact on the perception of the character³².

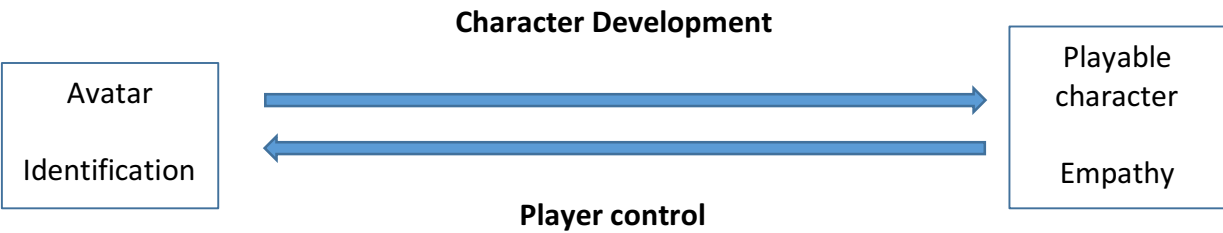
The lack of control over Jodie's character is compensated by the presence of another main character, Aiden. Indeed, this character presents no identifiable form, as it is impossible for the player to actually see him: when controlling Aiden, the player's camera switches to a first-person view; and while controlling Jodie, Aiden takes the form of an invisible spirit that the player cannot hear. Furthermore, the player is presented with no conclusive information about the character's story until the very end of the game; only inferring from the other characters' dialogues that he is a sentient being associated with basic emotions (angriness, jealousy, will to protect Jodie). Most of Aiden's actions throughout the game are controlled by the player. Much like Lee, he is a character that the player invests with his own thoughts and emotions.

To conclude with the analysis of the main characters in the two games, I would like to propose a distinction between two notions concepts: the avatar and the playable character. This distinction is based on the opposition between character development (individual story, behaviour, etc.) and player control: in order to maintain the coherence between a character's personality and his actions when controlled by the player, the game designers have to limit

³² Throughout the game, a few choices are offered to the player controlling Jodie that can change the outcome of the story; notably the final choice between *Life* and *Beyond*. Yet it is my opinion that these serve the purpose of the player's narrative involvement rather than his identification with the character. If nothing else, they urge the player to make the choices according to his perception of Jodie's character – hence promoting empathy.

the extent of the player’s control over the character. Conversely, a character whose every action is controlled by the character must present a minimalistic development, in order to allow the player to identify with it. I call avatar and entirely player-controlled entity in the video game; while a *playable character* is a character defined by a specific story and behaviour that the player can control to a limited extent in order to preserve its cohesion. While the player identifies with the avatar, he is able to experience empathy towards the playable character.

Figure 2: the relation between character development, player control, and the player’s cognitive involvement.



Continuing this distinction, the characters presenting individual traits and personality but not controlled by the player are secondary or non-playable characters from a video game perspective. Regardless of their role in the narrative or in the interaction system, I consider that the rules and tools to create empathy towards these characters must be the same as in film theory.

Creating a sentient entity

Creating a sentient being, aka a character that gives the impression of being able to feel, to react to stimuli by a specific, coherent response, has always been a preoccupation in any narrative. Although I hinted at several elements that make a character credible (individual backstory, coherent personality and behaviour, etc.); character development is a subject on its own, inspired by narratology, psychology, and the study field specific to the medium, among others. This is why this final chapter is not about providing the technics to create a credible sentient character, but merely about pointing towards several aspects of *The Walking Dead* and *Beyond Two Souls* that could participate in the character development.

Furthermore, perceiving a secondary character as a sentient being depends, in digital games, on the narrative and shared involvement of the player. As Celia Parce underlines, “unlike literature and film, which centre on story, in games, everything revolves around play and the player experience”³³. As a result, the involvement in the narrative, of in the fictional world, is not mandatory in most games; and while some player will take the time to interact with a great number of characters, and thus have access to their story and personality, some others might either only see them as tools in order to reach a goal, and simply ignore them. This narrative involvement is generally taken for granted in the case of story-driven games, even more so in interactive movies: such games mainly revolve around the story of the main character, and the main goal of the game is to advance through the story by interacting with the game elements. But more often than not all interactions serve this purpose, either in the case of puzzle games (only some key interactions, activated in a specific order, trigger the story to move forward) or to make the fictional world more credible by introducing randomness.

Such technics are commonly used in *The Walking Dead*. As a highly social video game (the survival of the group depends on the interactions between its members, including the player’s avatar or playable character), many of the key interactions that allow the story to move forward are social interactions with the other characters. As a result, the game encourages the player to interact with the different characters in order to achieve one of the game’s goals (finish the story). This way, the ludic involvement can make up for a lack of interest, from the player, in the fictional world and the characters that populate it.

But while creating a sentient character with which the player can interact participates in the player’s involvement in the game and makes room for empathy, it is also a lot of work. Programming a character’s story and interactions takes time and resources. As a result, *The Walking Dead* as well as *Beyond Two Souls* reduce the number of interactive character by offering, in any given time, a limited number of interaction options, each represented by a specific sign (in both games, an interactive element is signalled by a white dot).

³³ Pearce, Celia, ‘Towards a Game Theory of Game’ in *First Person : New Media as Story, Performance, and Game*, edited by N. Wardrip-Fruin & P. Harrigan, MIT Press, 2004

Another key aspect of a sentient character is its representation in game. Indeed, we have seen that the process of mind reading partly relies on the observation of visual cues, such as body movement and facial expressions. As a result, it would appear that the question of graphics plays an important role in creating empathy.

On this aspect, *The Walking Dead* and *Beyond Two Souls* present to very different stands regarding graphics and character design. If both are based in 3D-environment, the quality and complexity of the graphics is very different from one game to the other, and serve specific purpose.

In *The Walking Dead*, character design could be labelled as minimalistic. The characters are represented by low poly meshes, showing few details and basic texturing. The animation of the character's bodies is also limited, and sometimes lack fluidity. The main reason for this choice of graphics is that it replicates the visual appearance and style of the comic it is adapted from; but on a more practical point of view, limited graphics are also generally associated with more limited game engines. As a result, the characters appear less details, and the animations, more basic; sometimes making the facial expressions of the characters appear over simplistic or, in any case, not realistic. We can assume that *The Walking Dead's* character graphics and animation provide only the basic information for the player to be able to imagine the character's thoughts and emotions.

Figure 3: Character showing emotions in *The Walking Dead* and *Beyond Two Souls*



Beyond Two Souls, on the contrary, presents a very different, hyper-realistic art style. The characters in game are very complex meshes, and most of them are designed and animated based on motion capture acting. This strategy allows a greater control over the character's facial expression, leading to a greater and more complex range of bodily reactions. Character design and animation is paired with on-set voice acting, allowing a total control on all the character outputs (movement and speech). Considering the other games produced by Quantic Dreams (*Fahrenheit*, *Heavy Rain*, and more recently *Detroit: Becoming Human*), it is likely that the game director David Cage aimed for ultra realism in order to emulate film's cinematography.

Yet the question remains: is better graphics preferable in order to create empathy? Although a greater amount of details in the character's reactions surely allows it to show a wider range of reactions and emotions; according to Calleja, "humans instinctively perceive computers and computer-controlled agents as social beings". Referring to Gerhard, Moore and Hobbs³⁴, he explains that "players derive a sense of cohabitation in a virtual environment even when the computer-controlled agent in the virtual environment is rudimentary". "Our first reaction to media representations", he points out, "is to treat them as if they actually existed".

As a result, creating a sentient being does not appear to rely on the complexity of the graphic design; even though the more detailed the character's representation, the wider the range of reactions and emotions it can display. The key to making an in-game agent *appear* sentient seem to lie more in making it an identifiable character displaying individual features (design, voice, etc.), an individual story and coherent interactions with the player. The complexity and depth of a character mainly depends upon its personal story and the complexity of his AI.

³⁴ Gerhard, Michael, David Moor & Dave Hobbs, 'Embodiement an Copresence in Collaborative Interfaces', *International Journal of Human-Computer Studies* 61, 2004

Conclusion: Creating empathy in digital games

As an inter-individual emotional and cognitive process, empathy requires two types of data. The situational or observable data provide the subject information about the target other's emotions (body movement, facial expression, discourse) and the situation he appears to be in. These data are received through the subject's senses, and are processed during both the primitive and cognitive phases³⁵ of the empathic response. Another type of data is the knowledge of the target other, which is being processed during the cognitive phase of empathy. These data allow the subject to better adopt the target's perspective, thus sharing his emotions more accurately.

The challenge in creating empathy towards a fictional character, in any art form or medium, lies specifically in the nature of these data: every piece of information that the subject has on the target is created by the artist(s). The science behind selecting the right information, the right *data*, in order to make a credible sentient character is commonly referred as character development. Regardless of the art form, creating a character that seems *real* essentially relies on giving it depth.

The specificity of digital games lies in their interactivity. Indeed, in non-ergodic media, the quantity of data about a character, and the means by which the reader access this data, is entirely controlled by the author: it is impossible for the reader to access more data by, for instance, asking the character directly. In ergodic media, on the other hand, the author has less control on this access to data: the player can, indeed, interact with the characters in the game. The only option for the game developer is then to predict and plan all the possible interactions the player can have with the character, and the data the player will acquire from these interactions. This can be achieved either by mapping a considerable number of potential interactions, or limiting their number.

³⁵ All the more if one adheres the *Theory theory*, where the mind reading process derives from the application of a "folk psychology" theory.

This is why interactive movies, such as *The Walking Dead* or *Beyond Two Souls*, excel in creating empathy toward their characters: featuring a great number of cinematic, non-interactive scenes and relatively limited potential interactions during the interactive episodes. They combine the control over the data delivered to the player with the character development allowed by pre-scripted interactions.

It appears that interactivity, in digital games, is the enemy of empathy. To create empathy toward a primary character, the game creators have no choice but to limit the player's control over the character, at the risk of either compromising the character's coherence or losing empathy to identification. The same applies to secondary character: considering the present technology, they must choose between a limited number of coherent, in-depth interactions, or a greater number of more limited ones. No doubt that the future advances in the fields of storage or Artificial Intelligence will, ultimately, allow games to feature both quantity and quality of interaction with the fictional characters. In the meantime, game developers can turn to neuroscience, and more specifically Theory of Mind, in order to have a precise estimation of the nature and quantity of data required by a subject to perceive a digital character as "human"; thus allowing the artificial empathic response to perfectly mimic a natural one.

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