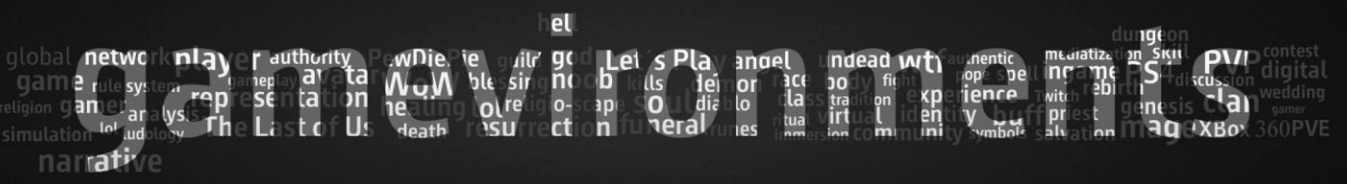
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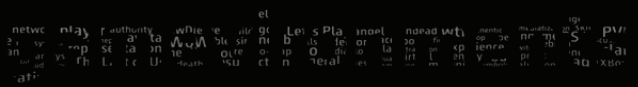

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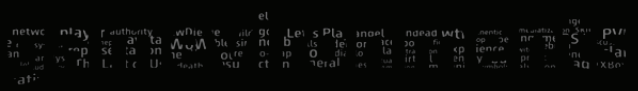

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To Dream a Game. Dreams as Interactive-Narrative Devices in Digital Games

Frank G. Bosman

Abstract
In this article, the author investigates the position, characteristics and functions of dreams and dreamlike phenomena in digital games. The author situates his own research within the broader field of academic disciplines that have studied dreams, their meaning and their interpretations in general (psychodynamic, activation-input-modulation, neurocognitive, and esoteric), and especially within the domain of literary studies, which study dreams in texts as literary devices. He provides four characteristics (experience, entrance, exit, and mode of inducement) and two functions (ludological training and narratological revelation) of dreamish phenomena in digital narratives/games. At the end, the author focusses on the necessary lucid characteristic of digital dreams, due to the – also necessary – interactive nature of the digital medium itself.

Keywords: Digital Games, Dreaming, Hallucinations, Visions, Hypnosis, Mind-Control, Virtual Reality, gamevironments

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Introduction

In the game *Batman. Arkham City* (2011), the game's protagonist and gamer's avatar Batman is inflicted by his archenemy The Joker with a deadly poison, progressively killing him. The Joker has poisoned Batman not only as a sadistic turn of events, but also to give Batman a real motivation for finding a cure, since The Joker has also been inflicted by the same substance. The poison rapidly effects Batman's sensory perception making him groan audibly and breathe heavily. When leaving a sewer

through a manhole, just before reaching the gates of Wonder City, where a vital ingredient of the antidote is to be found, Batman collapses onto the ground, leaving his health-bar dropping to lethal levels.

Then, two doors open, showing a very bright light shining from the inside out. Two figures are shown, barely visible. One of them is identified by the game's subtitles as Martha, calling Batman by his birthname Bruce. Inevitably, the two are Batman's parents, whose murder, decades ago, was the trigger for young Bruce to become a crime fighter in the first place. With a slightly distorted voice, she pleads her son:

> "Bruce, you can hear me, can't you? You need to step into the light. Your father and I are waiting. We've missed you so much. You have to do it. We need you to do it, Bruce. Bruce?" (*Batman. Arkham City* 2011)

Then, the two figures disappear into nothingness, showing the normal scenery behind the doors. Batman gets on his feet, apparently strengthened by the vision, and walks onwards. What has just happened? Did Batman experience the deadly consequences of The Joker's virus up to the point of hallucinating? Was it all just a dream? Or was it a glimpse of a near-death-experience? And if so, what does the inclusion of such a well-known phenomenon in the game's narrative mean? Dreams and dreamlike phenomena such as hallucinations, near-death experiences, psychosis, virtual reality-machines, hypnosis and artificially induced comas are widely used in narrative contexts as literary devices (Burkhead 2013, Porter 1993, Nuijten 2013), while the history of academic dream research is both extensive and widely diverging in methodology and results (Nir and Tonini 2010).

Also, in digital games, dreams and their related phenomena have been widely used, for example in the *Assassin's Creed* series, the aforementioned *Batman. Arkham City*,

Child of Light (2014), *Dishonored* (2012), *DmC. Devil May Cry* (2013), *Fallout 3* (2008), *Fallout 4* (2015), *F.E.A.R. 2* (2009), *Hellblade. Senua's Sacrifice* (2017), *Metro: Last Light* (2013), *Super Mario Bros. 2* (1988), *The Outer Worlds* (2019), and the *Wolfenstein* series (1992-2019). However, is the use of dreams and dreamlike phenomena in digital games different from their utilization as literary devices in their analogue counterparts? Since digital games are fundamentally different from analogue media like novels and films, especially concerning their necessary interactivity, it is plausible that differences and similarities can be found.

In this article, I want to focus my attention on this specific domain in which dreams and dreamlike phenomena play a distinctive role, that is, as interactive-narrative devices in digital games, to uncover their typical characteristics and ludological and narratological functions. I will situate my own research within the broader field of academic disciplines that have studied dreams, their meaning and their interpretations (section 1): psychodynamic, activation-input-modulation, neurocognitive, esoteric, and literary. Secondly, I will argue that within traditional (analogue) literary contexts, dreams are used for multiple literary purposes, ranging from exposition to communication with the deceased (section 2).

Next, I will give four characteristics – experience, entrance, exit, and mode of inducement – and two functions – training (ludological) and revelation (narratological) – of dreams and dreamlike phenomena in digital narratives/games (section 3), partly differentiating them from their analogue counterparts. Finally, I will discuss some suggestions for further research, especially in the context of the rapidly developing field of virtual reality, and its ramifications for the conceptual relationship between dreams and games as a whole (section 4).

On methodology, we have to establish working definitions of both constitutive parts of this article: digital games and dreams. In this article, I will consider games to be digital (interactive), playable (narrative) texts (Bosman 2019a, 37-56). As a text, a video game can be an object of interpretation. As a narrative, it can be conceived of as communicating meaning. As a game, it is playable. In addition, as a digital medium, it is interactive. Treating video games as playable texts and using a game-immanent approach (Heidbrink, Knoll and Wysocki 2015, Bosman 2019a, 37-56), I will use close reading of the primary sources of my research, the actual video games themselves, as well as secondary sources, i.e. material provided by critics and scholars discussing the same game. Close reading of the video games and game series is performed by playing (in my case, the PC-version of) the games.

When discussing the characteristics and functions of dreams in digital games, I will use a distinction, sometimes deemed obsolete, between *ludology* and *narratology*. The height of this debate was reached during the end of the 1990s, but it is still lurking in the background (Simons 2007), although both ludologists and narratologists have declared that their differences have been settled (Frasca 2003, Jenkins 2004, Murray 2013). The debate focused (focuses) on the fundamental question as to whether video games should be considered (primarily or exclusively) to be *ludus* (play or game), or (again primarily or exclusively) to be *narratio* (narrative or story). Since both constitutive elements of what a digital game is, are reflected in the two functions of dreams in digital narratives, I have chosen to readopt this old distinction nevertheless.

The definition of a dream is perhaps even more difficult, especially if we take into account that there is already a primary difference between the experienced, remembered, and reported dream (Domhoff 1996, 3). However, the categorical

confusion does not end here, since dreams can and have been interpreted as an awful lot of things. As Pagel (2014, 147) summarizes:

> "[D]reams are actually a labyrinth of meanings, an associative nexus of memories, a series of oneiric symbols, a Porphyrian tree of grammatical structure, meditative visions, imagery, REMS, emotions, and day-residues, as well as an awareness of consciousness, messages from God, meaningless babble, neuroconsciousness, the borders of mind, and absolute metaphor."

Laurence Porter (1993, 38), although critically, points out that some dream scholars have opted for the solution that all individuals writing on dreams should present their own definition. Porter defines "dreaming" as "sleep mentation that is remembered or reported on awakening." He continues by including "dreamlike phenomena" as "those occurring in sleep or when awake that share characteristics with dreams." In literary contexts especially, the distinction between being asleep and awake, and between dreaming in the strict sense of the word and the broader categories of dreamlike phenomena are blurry, to say the least. Porter deems such labels as "most untrustworthy", since authors do not usually differentiate clearly between "dreams, fantasies, hallucinations, and visions."

For this article, I am however, exclusively interested in the way these phenomena are aesthetically and rhetorically represented within postmodern (collective) narratives. To attain some conceptual clarity on dreams and dreamlike phenomena in digital games, I suggest a tentative definition: A *dream* is a physiological-mental phenomenon, in which the subject's consciousness is temporarily de-activated or severely reduced, either naturally induced through the process of sleeping, or artificially induced by an outside force, through which the aforementioned subject experiences an – usually involuntarily – succession (or successions) of images, ideas,

emotions, and/or sensations, typically restraining the subject's abilities to influence said sequences in any way whatsoever.

Every dream, may it be in our reality or within the fictional-constructed reality of a(n) (interactive) narrative, necessarily involves the dreamer's consciousness to be either de-activated, in the case of natural dreaming, or to be strongly diminished in activity, in the case of external factors triggering a dreamlike situation. While dreaming – or being under the influence of external forces, like drugs or mind-control – the subject experiences pseudo-physical phenomena like running, eating, kissing, flying, and so forth, together with reflective thoughts and/or emotional fluctuations. Usually, the dreamer is unconscious of his dreamer-state, and is typically unable to influence the sequence of impressions, including ending the experience at will.

Different Approaches to Dreams and their Interpretation

Dreams have been studied since the beginning of human scientific research (Gottesmann 2010, Stevens 1995, Carroy 2019). Traditionally associated with the divine realm (Bulkeley 2010, 33-36) and especially influential for Western culture are the dreams found in the Hebrew Bible and the New Testament (McAlpine 1987, Husser 1999, Koet 2009, Strickling 2009). It was with Sigmund Freud that the era of *modern* dream research started. In his famous work, *The interpretation of dreams*, Freud (1900 [2008]) interpreted dreams as representing the fulfilment of unconscious (usually egocentric or egoistic) desires and wishes, that were banished from real-life implementation due to legal, social and/or moral prohibitions.

The, often bizarre, aesthetics and rhetoric of actual dreams are caused by the individual's own unconscious psychological censorship of the said desires. According

to Freud, dreams do give meaningful information about the dreamer, thus permitting the possibility of all efforts to interpret the actual meaning of the dream's content. Other representatives of Freud's psychodynamic or psychoanalytic vision on dreams are his contemporary and former student Carl Jung (1909-1945 [2011]), although they fiercely disagreed on several points (Glover 1991), and modern neuropsychologists like Mark Solms (2014).

A second approach to dreams and dream research is the activation-input-modulation (formerly known as the activation-synthesis hypothesis) proposed by John Allan Hobson and Robert McCarley in 1977. According to this theory, "dream states are to be seen as protoconsciousness states that serve to prepare the brain for the maintenance of higher levels of consciousness both during development and maturity" (Singer 2014, xii). Simply put, Hobson and McCarley theorize that dream events occurring through sleep are actually a sort of training field for the brain in order to learn and adapt itself for real-life situations. Claus Vögele (2014, 220) reflects on Hobson's idea as follows:

> "If dreaming constitutes a virtual reality program for the brain then dreaming can be conceptualized as a process of fear extinction. Consequently, nightmares are an example of interrupted 'exposure,' which leads to the opposite of adaptation, i.e. sensitization."

Interesting for the context of digital games is Hobson's use of the notion of *virtual reality* (2009) in the context of his own dream research (2009): "REM sleep may constitute a protoconscious state, providing a virtual reality model of the world that is of functional use to the development and maintenance of waking consciousness."

Antti Revonsuo (1995, 2006) agrees not only with his colleague Hobson, but adds the concept of *world-simulation* to define dreaming itself: "dreaming is a simulated phenomenal world" (2014, 193). Windt (2010), in her turn, characterizes dreaming as an "immersive spatiotemporal hallucination".

A third approach is the neurocognitive one, spearheaded by Foulkes (1985) and Domhoff (2003). Dreaming, in this view, occurs when a typical brain, after being adequately activated, is disconnected from external stimuli because of sleep. The still active brain, having lost its usual self-awareness and self-reflection, draws on specific memories and general knowledge to produce simulations of the world. Even if dreams are thought of to have no function in themselves (in contrast to Hobson's view), they have coherence and meaning, which is frequently, according to Domhoff (2003, 168), mistaken for functionality: dreams are "a spandrel of the mind, a by-product of the evolution of sleep and consciousness."

Besides the more scientific approaches of Freud, Hobson, and Domhoff, there are two more different ones to be discussed. The first one is the esoteric domain, in which dreams are thought of not only as a way to personal psychological knowledge, as was the case with Freud and Solms, but also as a key for universal understanding and spiritual enlightenment, a path already initiated by Freud's pupil Jung. Books like *Dream Alchemy* by Ted Andrews (2015) and *The hidden meaning of dreams* by Craig Hamilton-Parker (2008) promise readers an initiation into an ancient craft of dream interpretation leading to the unlocking of hidden knowledge, earlier undiscovered competences, psychic abilities, and a universal holistic experience. When discussing post-mortem consciousness and the immortality of the soul, Helena Blavatsky (1972, 104), founder of the Theosophical Society, informs her readers:

> "After the dissolution of the body, there commences for it a period of full awakened consciousness, or a state of chaotic dreams, or an utterly dreamless sleep undistinguishable from annihilation, and these are the three kinds of sleep. I repeat it: death is sleep."

The fifth and last approach to dreams is literary, focusing on the narrative dimensions of dreams. This approach can take two different related forms: dreams as narratives or dreams as literary devices. The first one tries to analyze actual dreams as narratives, the second one focusses on dreams as used in narrative mediums like novels and films. Patricia Kilroe (2000) and Richard Walsh (2010) both claim that actual (reported) dreams constitute a narrative per se, if not on the level of the dream itself, then on the level of the remembering, the reporting and the (continuous) process of interpretation of the dream content. Others have tried to establish patterns and trends in the ways dreams have been used by artists. The next section of this article will be dedicated to this specific dream approach.

Dreams as Literary Devices

The second form of the literary approach to dreams and dream interpretation is, as said before, the literary use of dreams in literature, film and other art forms: constructed dreams as literary devices. Kelly Bulkeley (2010, 38) sketches four ways in which dreams play their role in literary creativity. An author can be inspired by one of his own dreams specifically, or can be stimulated to write more imaginatively in general by the sum of his dreams. An author can create a dream sequence for one of his characters, or recreate certain aspects of (universal) dream experiences to induce *dreamish* elements in form and content. As examples, Bulkeley lists Fyodor Dostoevsky, Samuel Taylor Coleridge, Edgar Allen Poe, Robert Louis Stevenson, H. P. Lovecraft, and Ursula K. LeGuin.

For her own division, Cynthia Burkhead (2013), explicitly borrowed from Jung's dream theories. Jung identified four narrative stages to dreams: exposition, development, culmination and conclusion (Stevens 1995). In comparison, Burkhead identifies four different literary functions of dreams in modern filmic narratives. Dreams can function as an exposition, quickly and imaginatively setting the stage for the narrative, and introducing the primary character(s) to the audience(s). Secondly, dreams can be used for narrative development without "fully exposing the plot or immediately explaining their meaning" (Burkhead 2013, 39). A third literary element is the use of dreams in and as the climax of the story. A dream can lead to a character "achieving a self-awareness" that "leads to some long-term shift in attitude" (Burkhead 2013, 51) or a story-altering action. Finally, dreams can function as the narrative's ending, usually in the form of a rather shocking and sometimes utmost disappointing message that everything the audience has witnessed was nothing more than a dream.

Laurence Porter (1993, 37) points out three major differences between actual and literary dreams. Due to their "laconic" nature, the content of the dream is much shorter than "the thoughts for which it is a substitute." The *elaboration* is double: the representation of feelings and thoughts in images and sounds (during sleep), and then the transition from these images, sounds and feelings into (either written or spoken) words (after awakening from the dream). The second of Porter's (1993, 38) observation is the insight that literary dreams are "surrounded in the adjacent text by explicit labels, framing, and interpretation." As stated earlier in this article, authors do not usually differentiate clearly between *dreams, fantasies, hallucinations*, and *visions*. This conceptual chaos makes it difficult to correlate actual dreams with literary ones. Finally, Porter points out the two different (implicit and/or intended) audiences: whereas the dream is only *meant* for the one who is simultaneously creating it, the

dreaming individual itself, the literary dream is usually aimed at a larger (fictional or real) group of readers, listeners and/or viewers.

Another contribution to this discussion, is the – again fourfold – division made by Iris Nuijten (2013). Dreams are generally used for their (perceived) predictive capacities, with or without the explicit help of a transcendent being. Next is the dreams' function of unifying different plot elements, precisely because of the actual dreams' free associative and transformative nature, as is – probably – experienced by the individual readers or viewers of the literary dream.

Third is the didactic function: the dream is used to portray the story's moral, a lesson to be learned not only by the fictional character(s), but very possibly also by the actual audiences. Lastly, dreams are employed for the appearance of the dead. Those who have (recently) deceased attempt – through the literary dream – to alter the circumstances of their (untimely) demise, allowing their relatives to say a proper farewell, and to convey (moral) lessons to the living.

Dreams as Literary Devices in Digital Games

After positioning our topic of dreams in games within the broader context of approaches to dream research in general and of dreams as literary devices in particular, we can focus our attention on dreams in digital games themselves. Some of the aforementioned literary functions of dreams in general are also applicable to digital narratives. For example, Nuijten's element of communicating with the dead is clearly visible in Batman's near-death experience in *Batman. Arkham City* (Moody 1975, Kellehear 1996, Blackmore 1993, Van Lommel 2010), but also in the memory device of *Fallout 4* and while using the *sacramental incense* in Hermit's meditation

chamber in *The Outer Worlds*. Also, Nuijten's didactic elements are very apparent in many dreamlike sequences in games, like *Fallout 3*, *DmC. Devil May Cry*, or *Dishonored*, may it be as ludological training or as narratological exposition. Moreover, the function of dreams ending a narrative, as Burkhead suggested, is the very premise of the classic NES-game *Super Mario Bros. 2*. When started, the game projects the following text, titled *story*:

> "When Mario opened a door after climbing a long stair in his dream, another world spread before him and he heard a voice call for help to be freed from a spell. After awakening, Mario went to a cave nearby and to his surprise he saw exactly what he saw in his dream." (*Super Mario Bros. 2* 1988)

After this section, the player is encouraged to press *start* to begin the game. When the player has played through the game and has defeated the last boss, the four game protagonists – Mario, Luigi, Princess Toadstool, and Toad – are given a victory celebration. Moments later, we see the celebration depicted inside a classically drawn *thought cloud*, while Mario is peacefully snoring in what appears to be his own bed. Then all the antagonists of the game appear in sequence as a kind of *credits*, ending with *the end*. Mario never wakes up, and continues to sleep.

Characteristic 1: The Lucid Experience

When looking at dreams and dreamlike phenomena in digital games, four characteristics can be established: 1) the lucid experience itself, 2) the (in)voluntary entering of the dream, 3) the conditional exiting of the dream, and 4) the different kinds of methods used for inducing the dreams and other dreamish experiences.

The first characteristic concerns the experience itself, both on the level of the player and its avatar. Let us take the two most recent instalments of the *Wolfenstein* franchise: *The New Order* and *The Old Blood*. *The New Order* makes use of cleverly

placed Easter eggs through which the player can access one or more levels of the iconic *Wolfenstein 3D* from 1992. In *Wolfenstein. The New Order*, the game's protagonist William B. J. Blazkowicz joins the German resistance in an alternative 1960, where the Nazis have won the Second World War (Bosman and Mock 2016).

When Blazkowicz lies down on the mattress in the resistance's headquarters, by pushing the designated button identified as "Nightmare!" (*Wolfenstein. The New Order*, 2014), he enters the first level of the original *Wolfenstein*, however still equipped with his modern weapons. When the button is activated, the screen goes black, fades for a couple of seconds into a black-and-white version of *Wolfenstein*, before returning to full colour. During the transition, Blazkowicz has one of his *monologues intérieurs*: "Dreaming. Strange dreams. The killing never stops. Till I die." (*Wolfenstein. The New Order* 2014). The mission attributed to this dreaming session, named "Escape from Castle Wolfenstein" (*Wolfenstein. The New Order*, 2014) after the title of the level in the original. *Wolfenstein*, has some in-game notes stating: "Where am I? It's all a blurry haze. Think I need to get out of this place" (2014). When B. J. has entered the elevator of *Wolfenstein* (indicating the end of the level), he is instantaneously transported back to the headquarters, waking up.

In *Wolfenstein 2. The Old Blood*, ten replicas of the first ten levels of *Wolfenstein* can be found throughout the game. Serving as a direct prequel of *The New Order*, *The Old Blood* features ten mattresses, by which the dream levels can be accessed. When a mattress is *activated*, the player sees Blazkowicz' face changing from the detailed version of the modern games to the pixelated version of 1992. When entering the aforementioned elevator, the face of B. J. changes back and the player can continue with *The Old Blood*.

In *Wolfenstein 2. The New Colossus* and *Wolfenstein. Youngbloods*, B. J. can find arcade machines featuring *Wolfstone 3D*, a Nazi-optimised version of *Wolfenstein 3D*, in which the player has to battle not German, but Russian, British, and American soldiers, alternated with new boss fights against friendly NPCs from the previous two games, like Anya Oliwa and Set Roth. These are, however, games-in-games, not dreams.

These dream sequences are exemplary for the lucid character of such events. One of the most common characteristics of actual dreams is the retainment of the subject's abilities to influence the sequences in any way whatsoever, usually in combination with the absence of self-awareness of the dreamer him- or herself. Usually, we cannot influence what we dream, nor are we aware that we are dreaming. Of course, actual dreams can also be experienced as being in the subject's control, so-called lucid dreaming, which has been reported since the dawn of history (Green and McCreery 1994, Bulkeley 2014). As for a tentative definition of *lucid dreams*, I suggest: A lucid dream is a specific kind of dream in which the subject is either conscious about his own mental state (i.e. that he is dreaming), is capable of controlling all or some events in the dream itself, and/or is capable of waking up at will. It is in this context that the research of Jane Gackenbach has to be mentioned, as it interfaces with more than one of the aforementioned approaches, and as it is specifically focused on dreams and digital games. Gackenbach and her colleagues have shown frequently and methodically, that hard-core gamers dream differently from those who are not, or only casually, involved in that medium (Gackenbach and Kuruvilla 2013, Gackenbach et. al. 2010, Gackenbach 2009, Gackenbach, Kuruvilla and Dopko 2009, Gackenbach and Snyder 2012). Gackenbach and Snyder (2012) define *hard core gamers* as those gamers who have played more than fifty games in their lifetime,

having started gaming at an early age, playing in sessions of more than two hours, several times a week on average.

Gackenbach and her colleagues found that such gamers had more lucid and control dreams than those who rarely play, that gamers have more bizarre dreams than the control groups, and that gamers do tend to dream more violently or *nightmarishly* than non-gamers, but feel less threatened and/or helpless when confronted with their own negative dreaming. Gackenbach and Snyder (2012, 72) provide quite a lively example of this kind of gamer dream with the introduction of subject #27, an unnamed hard-core gamer, who reported the following:

> "I was in a desert. I looked bad, dusty. I saw my tiny silhouette against a large sun, meaning I was watching myself, in 3rd person. While I looked bad, I didn't feel bad. I was indifferent to the 'my' feelings. I came upon a carnival, but it gets sketchy at that point. Eventually I'm driving a car, again not at a real POV (point of view), but following behind the car. It didn't matter to me that I was crashing into other cars or walls. My car caught fire; I saw it melt from within. I died, not trying to escape. As the car was burning, I opened the door and leaned out to leave but made the decision to stay inside instead because I was curious to see what I would look like burning alive. While I felt the heat, smelt the smoke, I didn't feel any pain. I felt detached from the feelings, but recognized that they were my own."

Gackenbach, Kuruvilla, Dopko and Le (2010) suggest a deeper connection between the digital games and dreams: both are constructed alternative realities, but where dreams are biologically constructed alternative realities, digital games are technologically constructed. If that is true, the ramifications for the idea of games *as* (a form of) dreaming are considerable. I will return to this subject at the end of this article.

As the research suggests, gamers are more likely to report lucid dreaming. Parallel to this, the dreams used as literary devices in digital games are, almost universally, of the lucid kind. This lucid element is typically applicable to all in-game dreams and dreamlike phenomena, as long as they are not narratively framed as a situation in which the subject is explicitly incapacitated, for example, by being strapped down or paralysed, and/or in as far as the dream sequence is not presented in the form of an in-game cutscene, when the gamer is generally prevented from intervening in the events shown. The *Wolfenstein* example is a good example of this lucidity, but also *Super Mario Bros. 2* qualifies as such: in both cases the gamer is in full control of the dreamish sequence, although only in the first case is the gamer actually aware of the fact that he is *playing* a dream.

This lucid element of dreams in digital games is strongly connected to their necessary interactive capacity (with the exception of dreams occurring in non-interactive sequences, like cutscenes and the likes). As I have already argued in the introduction of this article, games are *interactive* texts. As Chris Crawford (2003, 191) stated, a video game "mandates choice for the user. Every interactive application must give its user a reasonable amount of choice. No choice, no interactivity. This is not a rule of thumb, it is an absolute, uncompromising principle." Of course, the interactivity can take many forms, as Marie-Laure Ryan (2006, 108-122) describes, ranging from internal (through the in-game avatar) and external (in the case of god games like *Godus* [2014]) to exploration (changing the player's perception of the game world) and ontological interactivity (drastically influencing the game world and the game narrative).

This interactive capacity of digital games turns (almost) all dreamish sequences in said games into lucid experience, since the lack of control by the player through the

avatar would violate the interactive nature of the medium itself. This lucidity is apparent on both the level of the avatar as on that of the player. The player of *Super Mario Bros. 2* or *Wolfenstein*'s dream sequences experiences more or less complete control over the avatar's actions, while – within the game narrative itself – the avatar-cum-game's protagonist also experiences this kind of control during the dreamish experience.

Moreover, since the identification between player and avatar is based on control rather than on aesthetic characteristics or the player's point-of-view (McDonald 2013, 116), for example, first- or third-person perspective, the difference between the *simulated* interactivity on the level of the narrative characters, and the *actual* extent of control on the level of the player, are emotionally and psychologically blurred during gameplay. The first and foremost characteristic, distinguishing dreams in digital narratives from their analogue counterparts, is the lucidity of the experience itself, due to the necessary interactivity of the medium.

Characteristic 2: The (In)Voluntary Entrance

Both in actual and in literary dreams, entering such a state is usually involuntary. No one *decides* to go off dreaming. Even though one could go to sleep with the intention of entering into a dream, the actualization of such a desire is unsure at best, let alone the fact whether all our dreams are able to be recalled after awakening. In digital games, entering into the dreamish sequence can be involuntary as well, but can also be the result of a deliberate action on the part of the avatar/player. Let us start with the voluntary version of dream access.

In *Fallout 3*, the player, taking on the role of the game's protagonist, The Lone Wanderer, encounters the Tranquillity Lane Simulation device, located at the

underground Vault 112 amidst a post-apocalyptic wasteland. The Lone Wanderer enters one of the devices, an egg-shaped half-metal, half-glass contraption, designed and operated by Dr. Stanislaus Braun, only to find himself inside a virtual reality simulation, a brownish representation of the German city of Kronach. Inside the simulation – that is impossible to leave before ending the mission of the same name – The Lone Wanderer slowly discovers that the devices were once conceived as a technology to maintain mental wellness during prolonged stasis.

However, the twelve individuals trapped in the virtual reality serve no other goal than to humor the sadistic and bored Braun, who – reboot after reboot – finds ways to let the inhabitants kill each other, only to wipe their memory and start over. The Lone Wanderer can torture the inhabitants to humor Braun into letting the game player out (by making a child cry, cause a divorce, and kill several people creatively), or activate the in-simulation fail-safe, effectively killing all inhabitants permanently (by causing cardiac arrest in the subjects), but leaving Braun trapped and alone in his simulation.

While The Lone Wanderer seems perfectly aware of the true nature of the situation (and the player too), the other inhabitants are oblivious of living in a virtual reality, with the exception of T. Dithers a.k.a. the Old Lady. She seems at least partially aware of her situation, and while she is trying to warn the others, she is deemed crazy by the rest. At one time, she says to The Lone Wanderer:

> "We're not really here. We're not really talking. It's all made-up, make-believe. We're sleeping, dreaming. The dream became a nightmare. It has to end, it just has to. But we're not in charge. He is, and he doesn't want us to wake up." (*Fallout 3* 2008)

A second example of artificial-mechanical inducement is found in another instalment of the *Fallout* series. In *Fallout 4*, the *Sole Survivor*, as the player's avatar is referred to, is looking for his stolen baby child, again amidst a post-apocalyptic wasteland. Eventually, the Sole Survivor finds out that a man called Conrad Kellogg is responsible for the kidnapping. After confronting Kellogg – inevitably leading to Kellogg's death – the Survivor loots a brain fragment with an advanced cybernetic device attached to it from his head, called the Cybernetic Brain Augmenter. With the augmenter in his possession, the Survivor ventures off to Dr. Amari, living and working in a place called the Memory Den.

In the Memory Den, the brain-plus-device is implanted inside the head of a friendly robot called Nick Valentine, while the Survivor can enter the device itself allowing him to experience parts of Kellogg's memories first-hand. The memory machine itself looks not unlike the virtual reality machine from *Fallout 3*, only it is more luxurious and a little bit more comfortable for the subject to rest in. As was the case in the previous instalment of the series, it remains unclear *how* the subject's brain and/or mind is connected to the machine. The Survivor climbs into the machine, the glass lid is closed, and a primitive television screen is set in front of the user. Then, the screen fades, suggesting an overlapping between the virtual world and what the gamer is seeing on his screen.

Since the brain synapses have been fragmented and compromised by the violent death of their owner, the Survivor has to navigate from one memory sequence to another by walking over the connections between the brain cells themselves. And even then, the memories are fragmented, showing only the bare minimum needed to understand what has been going on. After all the memory sets have been viewed, the Survivor gets the opportunity to use an in-memory television screen – the same as in

the beginning of the experience – to allow himself to return to the Memory Den in the real world.

On the other hand, entering a dreamish state can also be an involuntary act, just like actual dreams in real life. In *Dishonored*, Corvo Attano, the personal bodyguard of Jessamine Kaldwin I, the Empress of the Empire of the Isles, is wrongly accused of high treason, when she is murdered in front of Corvo. He is subsequently imprisoned, while the real murderers take over the empire. After being rescued by a resistance group, Corvo is brought to a safe haven, where he can finally rest. The act of going to bed and going to sleep, however, requires an input by the player. During the night, Corvo wakes up for no apparent reason at all, only to find the environment outside his bedroom is twisted and distorted. There he is met by the Outsider, a strange and morally ambiguous supernatural being, who takes interest in the recent course of events. Corvo is presented with some – initially quite confusing – background information, but more importantly, is introduced to several game mechanics he and the player need to venture further on in the game

A second example of involuntary access is found in *Child of Light*, a peculiar indie-styled side scrolling game, the narrative of which is delivered solely in rhyme (Bosman 2018b). The game connects the historical earthquake of Ljubljana on 14 April 1895 (Coen 2014, 141-144) with the magical story of a Duke's daughter, Aurora, who mysteriously falls ill and dies on "the Great Friday" (*Child of Light* 2014), two days prior to the disaster. The story is quite complex, but for now it is enough to state that Aurora's death was caused by Queen Umbra, both the evil ruler of the subterranean land of Lemuria and the Duke's new wife. Eventually, Aurora finds out about her stepmother's evil intentions when she tries to murder her stepdaughter using magic.

However, the magic spell is partly diverted by a toy crown Aurora is wearing, a gift from her late mother. Severely wounded, Aurora is placed in custody to await her death.

In the meantime, the screen turns white, while big, black ink drops fill the void as if they were being drawn on the spot. The camera pans down to a scenery below, where little Aurora and her mother, the Queen of Light, are walking alongside a giant apple tree. During the scene ink drops roll upwards, leaving grey trails on the white skies. When Aurora is invited by her mother to catch a firefly, Aurora wanders off leaving her mother just off-screen. Upon returning, Aurora finds her mother collapsed, and apparently dying from an unknown cause. She complains about her heart, while Aurora comments that her mother's face has turned blue. With her dying breath, the Queen puts a magic spell on her daughter, apparently the same one protecting her from Umbra's magic:

> "Guardians of Lemuria hear my plea. Protect my daughter from the hand that poisoned me (…) This spell I cast upon my death and seal it with my final breath." (*Child of Light* 2014)

Then the screen fades again, showing Aurora waking up – seemingly unharmed – in an iron cage, from which she will eventually escape. It is not directly clear how and why Aurora's dream-cum-memory was triggered, but the context suggests that it has to do with her mother's protective spell being activated upon the attack on her daughter. The player retains his agency completely during the sequence, with the exception of the Queen's final words that are projected on a black screen. The second characteristic distinguishing dreams in digital narratives from their analogue counterparts, is the possibility to enter into the dreamlike state by a conscious decision instead of yielding to one's autonomous biological functions.

Characteristic 3: The Conditional Exit

While the dream access can be voluntary or not, the process of exiting the dream sequence is totally within the control of the avatar/player. The dreamish episode typically ends when certain ludological and/or narratological goals have been reached by the avatar/player, even though these conditions are not always foreseeable upon entering. Typically, one could say that the actions to be taken in the sequence are ludologically limited in terms of world and input, and narratologically very condensed and well-prepared to convey a specific piece of information about the game world. (This is connected to the ludological and narratological functions of digital dream sequences; see the next section of this article for more details.) In a digital game, the player is – probably unbeknownst – taken over a very specifically designed path through the dream level. The better the design the developers have come up with, the less a player is aware of these limitations.

As an example of the narratological and/or ludological criteria used to allow a player to end a certain dream level, I will discuss two instances from the *Assassin's Creed* series. The first is from *Assassin's Creed Unity* (2014), the story of which takes place against the background of the French Revolution (1789-1799). During the course of the game, Arno Dorian, the gamer's avatar within the game world, wants to be initiated into the Paris branch of the Assassin Brotherhood (Bosman 2019b), loosely based on the historical Nizari Isma'ilis (Bosman 2016a), to fight against their archenemy, the Templar Order. Arno is initiated by four Assassin Masters and one Grandmaster, the historical Honoré Gabriel Riqueti (1749-1791), who was a well-known leader of the French Revolution in its earliest stages (Luttrell 1990).

The Assassin Council stands on a balcony, towering over Arno who stands in the large space between two staircases leading up. Arno is still wearing his simple prison

clothes (he has just escaped the Bastille, during its storming on 14 July 1789), while the Council Members are dressed in beautiful uniforms and wearing large, grey, hooded cloaks. Mentor Gabriel starts the inquiry, and Arno answers sarcastically, still unconvinced that the whole ceremony is to be taken seriously. A short question-and-answer sequence follows:

> Gabriel: "Very well. Out of the dark, you have come to the light. From the light, you will return to the dark. Are you prepared to travel the eagle's path?"
> Arno: "If that is a fancy way of asking 'do I want your help', yes."
> Gabriel: "Then drink." (*Assassin's Creed Unity* 2014)

Arno drinks from a golden chalice with the word *fraternitas* written on it, Latin for brotherhood. The chalice seems to contain a powerful psychedelic potion, instantly throwing Arno into a kind of dream sequence. Besides being a rather hidden reference to the legend of the intoxicating drugs supposedly used by the Nizari Isma'ilis to push their recruits into suicide missions (Bosman 2016a), the content of the cup makes Arno visit key elements from his very turbulent past, with which he has to come clean.

The memories are depicted as floating paintings slowly rotating around Arno, while only a few tiles permit him to stand above a white void. The paintings have Latin names: *natus* (birth), *puerilis* (childhood), *iuventus* (puberity), *adultus* (adulthood), and *mortis* (death). The last painting depicts Arno's leap of death from the top of the Bastille, which he survived against all odds, although this leap belongs to the standard repertoire of the Assassins. Again, Arno jumps down, falling through multiple paintings, while hundreds of others are still rotating around him.

Finally, he lands suavely on a tiled surface, only to be forced to run as fast as he can through a large, empty room that is rapidly decaying around him, while voices and

hollow figures from his past are heard and seen. After some well-placed *quicktime* events, and arriving at the end of the room, he is confronted with the murder of his foster-father, François de la Serre (the Grand Master of the Parisian Templars, a fact unknown to Arno), a crime for which Arno was falsely blamed and imprisoned. François' body disintegrates before Arno's eyes, leaving him the sealed letter he was supposed to deliver to his father containing information that would have saved his life.

After some other *quicktime* events guiding Arno through a half-destroyed version of the place his foster-father died, Arno enters an almost blacked-out room with hundreds of hooded figures. Arno is challenged to kill the one assassin in the room without being seen. When he succeeds, Arno returns to the room of the Parisian Assassin Brotherhood to complete his initiation. Arno remains in control of his movements all the time, although it is very uncertain whether he grasps the factual situation of his predicament.

The second example is found in *Assassin's Creed Syndicate (2015)*, taking place in Victorian London. Assassin twins Evie and Jacob Frye join the very real *Ghost Club*, a paranormal investigation group founded in 1862 that counted Charles Dickens and Sir Arthur Conan Doyle among its members, and has existed unto the present day. Implicitly based on the historical *Vanishing Hitchhiker* urban legend (Brunvand 1981), Evie and Jacob are tasked by Dickens himself to investigate sightings of a carriage, "said to be covered with gold leaf, dazzling passers-by when the sun shines. Naturally, it's rumored to be haunted" *Assassin's Creed. Syndicate* (2015).

When Evie or Jacob investigates the broken carriage, Dickens suggested was the legendary one, a mattress is located nearby. When given the prompt *investigate*, the

protagonist remarks that it looks “remarkably comfortable” (Jacob) or “I’d rather enjoy a sit down” (Evie) (*Assassin’s Creed. Syndicate* 2015). In both cases, the protagonist is sitting down on the mattress, when the screen fades to black. When the game resumes, a slight haze is projected over the game indicating mental fuzziness. Upon awakening, one of them receives a love letter from an unknown Elizabeth.

When read, Evie/Jacob is confronted with a carriage apparently transporting a kidnapped woman, who is screaming for help. Eventually, upon being captured, the woman – still hidden in the carriage – thanks her hero/heroine and invites him/her to come inside. When entered, the carriage appears to be empty, except for a letter from the same Elizabeth claiming she has had to run away from a forced marriage, although she is certain her fiancé will hunt her down and kill her. Then, the screen instantly turns to black, presenting an awakening Jacob/Evie again with a kind of hazy veil over the camera.

Dickens arrives at the scene, saying: “You look as though you're just about to collapse! What on Earth has happened?” To which the protagonist responds: “You wouldn’t believe me if I told you” (Jacob) or “Just a dream. Or so I think” (Evie) (*Assassin’s Creed Syndicate* 2015). It is tempting to classify this experience as merely a normal dream, especially in the context of a sleeping mattress and the protagonists expressing their fatigue. At the same time, sleeping on the job is, especially for Evie, very counter-intuitive. A supernatural cause could also be involved, especially since the Ghost Club was interested in paranormal phenomena, but no real evidence is provided by the game.

In both cases, Arno and Evie/Jacob could easily exit their dreamish sequence after completing the ludological and narratological goals the game set for their players, may it be a soul-searching initiation through a collapsing building, or finding the solution to an old urban legend.

Characteristic 4: Modes of Inducement

The fourth and final characteristic of dreams in digital games are their different modes of inducement. The first major, and rather obvious, distinction can and should be made between natural and artificial.

Dreams typically occur, either in the reality of fictional narratives or in our everyday reality, as a by-product of the process of sleeping. These are (in-game) dreams in the strictest sense of the word. *Naturally induced dreams* in games may be narratologically applied to the game as a whole (as for example *Super Mario Bros. 2*), or to certain fragments of the game. Since we have already established that, in the case of literary dreams, the conceptual boundaries between dreams in the strict sense and related dreamlike phenomena are blurry, the inducement of these phenomena in digital games can take other forms of inducement than only natural ones. In the cases of *Super Mario Bros. 2*, *Dishonored*, *Wolfenstein. The New Order* and *Wolfenstein. The Old Blood*, the inducement of the dream sequences is quite natural: in these game narratives, Mario, Corvo, and Blazkowicz go to sleep before experiencing their respective dreams.

On the other hand, we have *artificially induced dreams*, most often the aforementioned dreamlike phenomena. They too, like natural dreams, produce a de-activation or a diminishing of the subject's consciousness, through which the subject experiences specific successions of images, emotions, sounds, and so forth, and

manipulate the protagonist/gamer in a way he or she can interact with the game world, usually reducing the quantity and/or quality of movements and other actions performed.

The category of artificially induced dreams, or rather, dreamlike phenomena contains a number of (mutually non-exclusive) subcategories focusing on the manner or technique used to induce the dream-state. It can be induced mechanically by hooking the subject onto a kind of highly-advanced virtual reality machine; pharmaceutically by exposing the subject to (medicinal and/or recreational) drugs in the form of tablets, liquids, injections or inhaled gases; psychologically by different kinds of mind-manipulating and consciousness-diminishing techniques, like hypnosis or other forms of mind-control; magically by exposing the subject to magic spells, potions and/or rituals believed to have direct influence on the subject's mental state of consciousness; and metaphysically by divine intervention from transcendent sources.

The first subcategory of artificial inducement is that by *machines* designed to create dreamlike states in the game's protagonist, in practical terms, some sort of hyper-modern virtual reality machine. The subject either goes willingly or is forced, into the machine, but can typically only leave it when pulled out by someone outside the machine or by achieving one or more in-game goals, which can be an object, a location, or an insight, and/or the proven capability of mastering one or more in-game abilities. In *Fallout 3*, the Tranquillity Lane Simulation device plunged The Lone Wanderer into a virtual reality together with twelve other trapped individuals. And in *Fallout 4*, it is through the combination of another virtual reality machine with the android Nick Valentine that The Sole Survivor is able to enter the memories of the deceased felon Conrad Kellogg.

Another possible means of artificially inducing dreams is by using *pharmaceuticals*, either in the form of medicines or in the form of drugs (eaten, swallowed, injected, sniffed or inhaled). The difference between the ingestion of a magic potion (see below) and the use of (orally ingested) drugs/medicines, is the (suggested) paradigm featured in the game's narrative. In fantasy games like *Skyrim* the dream-producing liquid is conceived of as having a magical origin and function, while in science fiction games like *The Outer Worlds*, the ingested substance is much more easily seen within the context of empirical science, although the two may not always be so simple to distinguish from one another, especially in games where fantasy (magic) and science fiction (technology) are intertwined (Slusser and Rabkin 1987), like for example *Dishonored*.

A third subcategory of the artificial inducement of dreamlike phenomena is *psychological* in nature. This kind of inducement is produced with the help of psychological techniques and methods, like hypnosis, mind-control or other processes of direct mind-connection. The specific psychological methods do not necessarily have to belong to the realm of possibility in today's world, but have to remain within a theoretical range of foreseeable future scientific developments, including non-human or super-human parapsychological techniques, if they are not to be banished to the realm of magic (see below).

An example of such a form of inducement is found in *F.E.A.R. 2. Project Origin*. The game continues the story of the first instalment, circling around the paranormal activities of Alma Wade, who is manipulated by her own father to give birth to and control an army of psychically controlled super-soldiers. At the beginning of the second instalment, the game's protagonist and player's avatar Michael Becket, Delta Force operative, is visited by Wade (appearing in the form of a young girl, dragging

her teddy bear alongside her), leading him through desolate streets, where the ground is torn open by yellow, fiery phenomena.

Although Becket's sensory perceptions appear to be functioning at a less than optimal level (aesthetically shaped as the scenery blurring in and out of focus), he manages to follow Wade into one of these fiery holes, where he finds himself sitting in an abandoned military-style airplane. When he finds an old-fashioned record player spinning next to him, he is suddenly jumped upon by an adult version of Alma Wade, her face rapidly changing into that of Becket's real-life companions, mocking him for sleeping on the job. Becket's experiences could be interpreted as naturally induced dreaming (e.g. through sleeping), especially since his fellow-squad member scorns him for drowsing off on the job, but since the appearances of Alma Wade are a continued phenomenon, not only in this but in all instalments of the series, the category psychological/psychical inducement is more fitting.

Besides psychological and mechanical methods of dream inducement, we find *magic* as yet another possibility to lure from consciousness into a state of specifically conducted activity. As mentioned above, magical inducement is not always so easily distinguished from other means or (technological) methods; the conclusive element is the in-game narrative context of the inducement itself (see the discussion above). The dream of Aurora in *Child of Light* is an example of such an inducement, when Aurora finds out about her stepmother's evil intentions when she tries to murder her stepdaughter using magic. However, the magic spell is partly diverted by Aurora's magical crown: she survives the attack but is brought into a dreamlike scenario in which she relives the last memories she has of her deceased mother.

The last subcategory of artificially induced dreamlike phenomena contains those, which are produced by *divine intervention*. Again, while not always easily distinguished from magical or psychological inducement (see above), this subcategory focusses on a kind of transcendent or supernatural source causing the phenomenon: a god or godhead, an angel or a demon, and so forth. The source is beyond our world of understanding, both practically and theoretically, but is from *outside* or *above*. That is why this subcategory is named *metaphysical inducement*.

An example of such a metaphysical source is found in the game *DmC. Devil May Cry*. In a narrative heavily filled with references to Christian sources, myths and legends (Bosman and Poorthuis 2015), the protagonist and gamer's avatar, Dante is in the process of rediscovering his lost past. Dante and his twin-brother Virgil are the offspring of a forbidden love between the angel Eva and the demon Sparda, making the twins *Nephilim* or half-breeds. When Eva and Sparda's love was discovered by the demon-king Mundus, he killed Eva and imprisoned Sparda. However, Sparda's premonition induced him to hide his children, wiping their memory as a precaution.

During the game, Dante meets Kat, a human witch who is able to make a portal from the human world to demon-controlled Limbo. The Limbo-landscape is roughly the same as the human world, but is subtly twisted and more vibrant, and there is often demonic growth covering every surface. Within Limbo, Dante receives apparitions of young Virgil and himself playing together in their parents' mansion. Eventually, Dante discovers his family's coat of arms, triggering a dreamlike sequence.

The camera pans slowly into Dante's eye, showing within the iris of his eye an unknown statue. Having passed the eye, the camera rushes through red and white structures, roughly resembling human brain synapses. Then the screen fades, first to

white, and then returns with a surrealist scenery with spatially twisted and partially destroyed buildings and pieces of buildings free-floating in mid-air. In the middle, a giant statue of Sparda is situated, with heavy long chains attached between the statue and several places on the floating blocks. When the player is given control of Dante again, the player hears his avatar asking himself: "Where am I? Am I dreaming?" (*DmC. Devil May Cry* 2013).

During this sequence, Dante is introduced by the game to his ever-growing arsenal of angelic and demonic weapons and their features. This is done by forcing Dante/the player to go through a kind of training parcourse, especially focused on training each new ability. After working through the obstacle course, Dante destroys one of the chains attached to the statue of his father, upon which the statue's eyes start to glow. Then the screen fades to white again, showing very briefly only Dante's mother Eva, who is slowing walking towards Dante/the player. Afterwards, Dante finds himself back at the starting point of his dream vision. Eventually, when all dream sequences-cum-training courses have been found and completed, Eva will have told Dante – in short, but increasingly longer sessions – everything he needs to know about his own place in the universe.

Although this and other comparable sequences in the game could be identified as just a person remembering something that he seems to have forgotten, the scenery of the sequence is too unworldly and Dante's reaction is too surprised to qualify as such. Since Dante gets his visions only when he has entered the Limbo-dimension, it is narratologically contextualized as belonging to another transcendent reality above or beyond ours. The same applies to Kat's interference with Dante's entering the other dimension, due to which Dante's visions could be interpreted as conjured up by magical means. While this is not entirely untrue, Dante's entering of Limbo is –

among others – caused by Kat's magic, and the entering of the actual dream sequence is done by the interconnection between Dante and his rediscovered family home.

In some cases, the inducement can be *dual in nature*. Batman's experience checks all the usual narrative patterns of such near-death experiences (Moody 1975, Ring 1980), including the notion of a big, white light, the meeting with deceased loved ones, and the urge to return to earth because of some very important unfinished business. Batman's dreamlike experience is therefore classifiable as both natural (near-death experience) and artificial (generated by poison) at the same time. Finally, there are some dreams and dreamlike phenomena that do not seem to have any traceable or conceivable form of inducement: they are simply there. An illustrative example is found in *Assassin's Creed Syndicate*, where the question remains as to how the dreamish sequence is inflicted upon Evie/Jacob.

Characteristic 5: Ludological and Narratological Functions

After establishing four characteristics of dreams in digital games, I can focus on the ludological and narratological function of these dream sequences. In short, their function is to teach the player the relation between certain inputs and input sequences as a response to certain output provided by the game in the form of verbal and visual (and possible tangible, in the case of controllers with vibrating functions) feedback. These dreamish sequences give the game's developers the opportunity to decrease the amount of usual in-game freedom for the player, in order to hyper-focus on the explanation of and training in certain output-input-sequences, while arranging a narrative context in which the restrictions are not experienced as such and/or giving the player a reasonable explanation for his temporarily limited avatar-control.

In *F.E.A.R. 2*, Michael Becket is placed in a very small game-world, while the player is restricted in controlling Becket. Even if this is never made explicit, this first sequence functions as a first in-game tutorial for the player, while simultaneously (primarily emotionally) introducing him to the story. In *Dishonored* and *DmC. Devil May Cry*, the ludological function of dreams as an in-game *virtual* training ground is more apparent. Arno and Dante have to be taught how to utilize their special powers, respectively various supernatural powers, such as teleportation and the like, and the use of special abilities like Ophion Demon Pull and Ophion Angel Lift. In both cases the possibilities to stray from the given path through the specific level is very limited, but is brought into a reasonable frame by arranging a proper narratological embedding, either a dream induced by an outside force, or memories triggered by the retrieval of old family heirlooms.

The whole narratological embedding of the *Assassin's Creed* series is one giant dreamish experience. The premise of the series is the invention of the Animus, a perfect virtual reality machine by which the subject can experience the lives of deceased people, if DNA material of the said dead person in available. In the first instalments, the player controls Desmond Miles, who is, in-game, placed in the Animus by which Desmond takes control of his ancestors. In later game instalments, the second narratological layer is removed, so that the player is directly controlling a specific historical character, even though the game maintains the narratological embedding of an in-game virtual machine (Bosman 2019b). The whole operation is reminiscent of the idea of a dream-in-a-dream-in-a-dream, like portrayed in the film *Inception* (2010) and the *Rick and Morty* cartoon episode "Lawnmower Dog" (2013). Even in the first instalment, the Animus is also used in an even more literary way as a training module, teaching the player and Desmond Miles how to control their historical avatar Altaïr.

In *Fallout 3*, *Fallout 4*, *Assassin's Creed Unity,* and *Assassin's Creed Syndicate* the dreamish sequence is utilized primarily as a tool of narrative revelation, just as Burkhead suggested earlier in the context of analogue literary dreams. In *Fallout 3*, The Lone Wanderer finds out where her lost father could be found, while the Sole Survivor receives some answers concerning the history of his long-lost child. In *Unity*, Arno is initiated into the Assassin Brotherhood during a dreamish sequence clearly inspired by happenings from his own past. In addition, in *Syndicate* the dream sequence attains a certain narratological independence, comparable with *Super Mario Bros. 2*.

Conclusion: Dreams as Games vs. Games as Dreams

Looking back on the earlier literature about dream research approaches in general and on dreams as literary devices specifically, some interesting connections can be found. Most of the dreamish sequences discussed above have an egoistic interest as the driving force behind the experience, as Freud suggested, even though the desires of the avatar and the player are seldom explicitly sexual. The majority of game dreams concern the direct interest of the game's protagonist, which is not surprising since digital games are designed to deliver an interactive experience to the player, resulting in the narratological necessity to make the dream appealing to the protagonist's greater story and (therefore) whet the player's interest.

Also Foulkes' and Domhoff's idea of actual dreams as a kind of *protoconsciousness*, designed to train individual humans for survival in the real world, presenting a kind of virtual reality simulation within the partly deactivated consciousness of the individual himself/herself, can be connected to both the ludological function of digital dreams,

and to at least three examples of game dreams above, especially the games involving a simulated virtual reality system, like *Fallout 3, Fallout 4*, and the whole *Assassin's Creed* series.

Turning to the theories on dreams as literary devices, we have seen examples of Burkhead's exposition (*F.E.A.R. 2*), development (*Fallout 4*), climax (*Assassin's Creed Unity*), and ending (*Super Mario Bros. 2*). Also, all of Porter's more formal characteristics – literary dreams are longer than actual dreams, are intended for an audience instead of only the dreamer himself and are adjacent to interpreting frameworks – are found in digital dream sequences. Finally, we have encountered two of Nuijten's four characteristics: their didactic function interlocks with the ludological function of digital dreams, while the perceived communication with the dead are found in games like *Fallout 4, Super Mario Bros. 2*, and *Batman. Arkham City*.

However, digital dreams have their own medium-specific characteristics, as we have seen. In the context of digital games, dreams share some characteristics that set them apart from their analogue literary counterparts. Most importantly, the overall majority of dreams and dreamlike phenomena in digital games are of the lucid kind, due to the interactive quality of digital games in the first place. This lucidity is apparent on the level of the avatar-cum-protagonist and on that of the player. The game's narrative suggests a lucid capacity within the protagonist's dream that is necessary for the player to be allowed to continue his control over his avatar and thus maintain the interactive nature of the medium itself. Of course, sometimes in a digital dream sequence, the control is taken away from the avatar/player in the form of a non-interactive cutscene, but this is the exception to the rule. Inducement can take many forms, both natural (as a by-product of sleep) and artificial (through mechanical, pharmaceutical or other agencies within the game's narrative).

The entering and exiting of the dream are, due to the simulated lucid nature of the experience itself, within a certain degree of control by the avatar (narratologically) and the player (ludologically), although not always understandable as such by the avatar/player. Usually, the entering of the dream is voluntary, although the player may not always be aware of what he is about to enter. Likewise, the exiting of the dream sequence is within the control of the player, that is, when and if he succeeds in reaching some predetermined ludological and/or narratological goals, in the form of successfully reaching the correct output-input sequence required by the game, and successfully absorbing a certain narrative exposition given within the specific sequence.

For the last section of this article on dreams and games, let us return to Gackenbach, Kuruvilla, Dopko and Le's notion, in the context of their research on gamers and their dreams, that both games and dreams are constructed alternative realities. Even though the virtual realities we encounter in *Fallout 3, Fallout 4*, and the *Assassin's Creed* series are technologically much more advanced than we can produce in our time, the development of virtual reality is rapidly taking place. Bown, White and Boopalan (2017, 255) call this the hunt for the "ultimate display". It is:

> "[…] the perfect sensory reproduction of something real with the bending or breaking of physical laws of nature. The feeling of presence is something that naturally arises when media is powerful enough to trick the mind into belief." (Bown, White and Boopalan 2017, 255)

This description of the perfect VR machine is reminiscent of the mechanically induced dreamlike experience we have discussed above. This implies that – in the foreseeable future – games will become a kind of dream experience in themselves. Dreams will no longer be a possible phenomenon *in* games, but games will begin to function *as* triggerable, controllable, mechanically induced dreams, in which the user's conscious

is not so much de-activated or severely reduced, but more hyper-focused on a fictional story in a virtual environment, and which can be entered and left at the subject's will. The games discussed speculate narratively on a future situation in which the boundaries between the real and the fictional, the real and the simulated, are at least blurred or maybe even erased altogether. If dreams and games share, as Gackenbach suggests, the fact that both are constructed alternative realities, then maybe it will become possible to dream – lucidly – at will, including the quality and quantity of the dreams' content.

The first step in this long journey was the transition from the experience of an actual dream to a passive, that is non-interactive, rendering in literature. The second transition was that dreams were transposed from analogue media to an interactive environment, where they became, in their ludic capacity, *experienceable* by players. The third transition will be from our interactive, but semi-immersive digital games of the present day, to truly immersive virtual reality environments and systems that will blur or even erase the difference between dreaming and playing. We will be able to *dream a game*.

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