"The Dark Descent":
Amnesia's Debt to Victorian Physiological Psychology

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Abstract:

Amnesia (2010) is arguably one of the most successful horror games to date, particularly if its success is measured by the level of fear it has instigated in its players. Developed by Frictional Games, *Amnesia* is set in 1839 and follows an English protagonist named Daniel as he traverses a mysterious and merciless Gothic castle. This paper seeks to situate *Amnesia* in the context of both nineteenth-century psychological theory and the ways that those theories have been inflected in neo-Victorian literature and criticism. While critical discussions of neo-Victorian literature have drawn attention to questions of sense perception and the body, this essay draws on video game studies to show how *Amnesia* is designed to elicit reactions from players, based in fear, that mirror Victorian concepts of physiological psychology and the works of Alexander Bain, while adapting their presentation to a contemporary and interactive medium. Focusing on the nineteenth-century theoretical antecedents in a contemporary video game will demonstrate the value of placing video games with particular historical settings alongside the cultural resources of those settings. This project allows both neo-Victorian and video game studies to continue developing an interdisciplinary vocabulary in order to encourage further study of the ways in which games (re)present the Victorian past.

Keywords: *Amnesia*, Alexander Bain, fear, immersive experience, mind and body relation, physiology, physiological psychology, survival horror, video games, viewer response.

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Upon its release, *Amnesia* (2010) was recognised as a video game that turned a popular and perhaps well-worn genre, survival horror, on its head by removing many of the genre's most common features (such as weapons and pre-rendered cut-scenes[1]), while still providing a terrifying game experience with a by now (in)famous reputation for frightening its players. A cursory search on YouTube displays a variety of videos showing players screaming in terror as they play through some of the game's more intense moments.[2] Part of what makes *Amnesia* work so well is its historical setting;

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casting the player back into a decrepit castle in nineteenth-century Europe
crafts an environment that is at once familiar for its Gothic undertones but
also deeply unsettling. Until *Amnesia*, horror games had often been set in
the present, but would allude to the influence that the past exerted on the
present (see Kirkland 2012: 110). By instead setting the game in the
nineteenth century, *Amnesia*'s developers evoke a distinctive set of cultural
and narrative associations for players. For example, the method by which
players primarily make narrative discoveries is by recovering pages from the
main character's journal, which have been dispersed throughout the castle,
making this narrative collation reminiscent of the reading experience of
serialised novels, which reached their zenith during the nineteenth century.

       This essay explores how *Amnesia* repurposes both Victorian
narrative techniques, especially those related to Gothic and sensation fiction,
and Victorian discourses of the interrelation between body and mind, so as
to precipitate, manipulate, and exacerbate players' visceral reactions of
unease and terror. In particular, I re-contextualise *Amnesia* in terms of the
works of Alexander Bain, one of the fathers of physiological psychology,
who emphasised the crucial role of physical sensation and sensory
experience on knowledge acquisition and states of mind. By situating video
games within their specific historical settings and corresponding cultural
imaginaries, the essay aims to throw new light on the strategic ways in
which games contribute to the present-day (re)presentation of the Victorian
past.

1.   Neo-Victorian Video Games
While much neo-Victorian critical scholarship has focused on film and
literature, a growing number of video games have taken on Victorian
settings and narrative frameworks. Games like *Sunless Sea* (2015),
Assassin's Creed Syndicate (2015), and *The Last Door* (2013) each draw on
the literary tradition of the Victorian period. Ann Heilmann and Mark
Llewellyn have argued that the term 'neo-Victorian' is best limited to works
that are "in some respect […] *self-consciously engaged with the act of
(re)interpretation, (re)discovery and (re)vision concerning the Victorians*"
(Heilmann and Llewellyn 2010: 4, original emphasis). In many of the above
cited games, players are offered the opportunity to enter into a narrative
simulation of sorts, mirroring Andrew Stauffer's contention that "our
Victorian period will henceforth always be a simulation or constructed

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model" (Stauffer 2015: 1). Within video games, developers can draw players into a constructed digital space that is dependent upon twenty-first-century technology, while at the same time returning to nineteenth-century narratives and/or fictional worlds, as for instance, in the case of Holmesian games such as *Sherlock Holmes: Crimes and Punishments* (2014).

This combination of contemporary technology and Victorian simulation is apropos of Heilmann and Llewellyn's identification of the "two levels of reading" in neo-Victorian texts (Heilmann and Llewellyn 2010: 17), in which more knowledgeable readers can attain a deeper appreciation for the forms of appropriation within a novel.[3] This same process takes a somewhat different but analogous shape in the case of video games. As I will argue in the case of *Amnesia*, neo-Victorian video games offer varying levels of experience to players, some of whom might simply enjoy a Gothic horror game, while others will become more immersed in the game's use of Victorian science, narrative, and culture to frame its story.

Contrary to Heilmann and Llewellyn's contention that neo-Victorian narratives should entail a level of intentionality on the part of their creators, however, video games' unique characteristic as a digitally coded framework make the emergent correspondences between a game's historical setting and Victorian culture and literature more reliant on individual players. In *Rules of Play*, Katie Salen and Eric Zimmerman point out that play "arises from the game as the player engages with the system. The game designer creates a set of rules, which players inhabit, explore, and manipulate" in often quite different and individual ways (Salen and Zimmerman 2004: 316). In typically postmodern fashion, players thus become 'co-producers' of the game 'text' or world, only to a much greater extent. But in many cases, designers do more than create a set of rules; they create navigable environments that immerse players in particular historical moments. By way of a literary analogy, one might think of A. S. Byatt's *Possession* (1990), which offers a multi-faceted exploration of this process in text: through immersion in the correspondence and works of the fictional Victorian poets Randolph Henry Ash and Christabel LaMotte, Byatt's two present-day protagonists experience a textual navigation through the poets' reconstructed illicit love affair. By means of what might be termed readers' investigative 'player-counterparts', Byatt's narrative draws her audience further into the fictional literary history that the novel creates.

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In considering how these navigable environments, whether textual or digital, function for readers and players, Kate Mitchell provides the helpful argument that neo-Victorian fiction offers the past "as a cultural memory, to be re-membered, and imaginatively re-created" (Mitchell 2010: 7). Mitchell's formulation of this process parallels Michael Nitsche's description of the "fictional space" within video games, which he defines as the space that "lives in the imagination, [...] the space 'imagined' by players from their comprehension of the available images" (Nitsche 2008: 16). I would expand on Nitsche's definition and suggest that the fictional space involves more than the imagined reality that the player constructs; rather, it functions as an active *collaboration* between the developer and the player. In other words, the ways in which a game develops a fictional space, set in a historical period, will often involve the appropriation of elements whose origins allude to the (alien) historicity of the setting but also allow for a sense of uncanny familiarity. A game can represent history effectively by at once instilling a sense of temporal otherness in the players, while also drawing upon cultural touchstones that serve to provide a foundation on which the fictional space can be built.

On the surface there is little about *Amnesia* to suggest that its historical setting is really that important. This is not, for example, a game like those in the *Assassin's Creed* franchise (2007-2015), which have sought, albeit in a fantastic way, to situate players in specific historical moments.[4] *Amnesia*, in contrast, traps players in a dark castle, within a Gothic and horrifying tale of torture and death. Of course, the nineteenth century is book-ended by two novels that helped to create modern horror, not just in literature but also on screen: *Frankenstein* (1818) and *Dracula* (1897). So a nineteenth-century setting for a game in which players contend with monstrous and grotesque adversaries is consistent with that cultural heritage. Just as significantly, however, *Amnesia*'s fascination with questions of sanity, memory, and perception parallel nineteenth-century developments in psychology. Indeed, scholarship in Victorian studies has, over the last few years, begun to explore how much nineteenth-century literature was intertwined with new theories of the mind.[5] The recent renewed interest in the impact of Victorian psychology has opened new avenues for understanding how these nineteenth-century theories still reverberate in contemporary media. Rosario Arias, for instance, has shown how concepts of "sensory perception" in neo-Victorian literature are

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connected to Paul Ricoeur's delineation of the cerebral, psychical, and textual traces; these traces are then "linked with [readers] being affected in a bodily sense" (Arias 2014: 120). In the case of *Amnesia*, I will highlight how aspects or 'traces' of nineteenth-century physiological psychology are instantiated in the game to generate particular kinds of psychological and bodily reactions in players.

2.   Nineteenth-Century Physiology and Video Games

During the nineteenth century, physiological psychology developed as the field that explored, by both scientific and pseudoscientific means, the relationship between the mind and the body. It was pioneered by a diverse group of researchers and writers, all of whom sought to articulate an understanding of the specific myriad operations of the mind and its role in the functioning of the body. One particularly well-known contributor to this body of work was Alexander Bain (1810-1877), who, as a Professor of Logic at the University of Aberdeen, often combined physiological research with questions of literary practice in his writing. With his two great works, *The Senses and the Intellect* (1855) and *The Emotions and the Will* (1859), Bain sought to demonstrate the potential for a combination of psychology and physiology, while making physiology "subordinate" to psychology (Rylance 2000: 151).[6] Recent scholarship in Victorian studies has increasingly attended to the role that physiological psychology played in nineteenth-century culture.[7] Some of these studies have suggested a lasting influence for physiological psychology, but the exact nature of its impact has yet to be fully explored, an omission this essay aims in part to redress.[8] One of the most promising features of the new work being done on nineteenth-century psychology and physiology is its demonstration of the ways and extent to which those theories, once thought to have been supplanted by Freudian psychoanalysis, still resonate in our thinking about the mind, the body, and narrative today. Furthermore, the emphasis on the body in these nineteenth-century theories creates striking parallels to the ways that interactive media, and video games in particular, directly engage the body. By placing Bain's physiological theories in *The Emotions and the Will* in conversation with *Amnesia: The Dark Descent*, I argue that Victorian physiological psychology can provide unique and invigorating insights into the ways that video games with particular historical settings can create experiential opportunities to enact the past.

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Nineteenth-century works of psychology and physiology – or physiological psychology – often looked to the novel as a site ideally suited to illustrate a variety of theories. Nicholas Dames points to the notion of "engrossment" as the conceptual intersection between nineteenth-century physiological study and literary criticism (Dames 2007: 44). In Bain's formulation, engrossment is a state in which "the attention is strongly fixed upon one object [and] other impressions falling upon the senses have no effect" (Bain 1859: 7). We can well imagine many of today's parents finding Bain's description an accurate one for the way their children are 'glued' to various screens. Of course, Bain relates this physiological theory to the novel rather than to contemporary digital entertainment:

> The novel, which is the greatest elaboration of the pleasures of ideal pursuit, is also the occasion for the greatest excesses in this mode of excitement. […] Instead of that temporary suspension and lull that we experience in a chase for objects of moderate desire, we have a series of devices for alternating suspense […] for the greatest length of time without fatigue. The novelist […] has worked it up to perfection […]. (Bain 1859: 197)

In Bain's formulation, then, the novel is an almost machine-like apparatus focused on keeping the user engaged for the longest amount of time possible. Under the sway of the novel's engrossing narrative, readers are carried out of themselves and their very bodies cease to respond to external stimuli.

Similar responses in video game players have often been cited as reasons to be suspicious of the medium's impact. The psychologist Philip Zimbardo, whose derisive position on video games has (unsurprisingly) failed to gain traction within video game and media studies, draws upon a physiological argument to suggest that excessive game-playing can rewire a user's brain to the point that "navigat[ing] the complexities and risks inherent to real-life relationships, school and employment" becomes increasingly difficult, or even impossible (Zimbardo 2012: n.p.). Zimbardo's argument parallels similar concerns about the novel in the nineteenth century, in particular the genre of the sensation novel, which was both wildly popular in the 1860s and highly criticised. While Bain's use of

the novel to describe a physiological concept reads as largely dispassionate, the critic H. L. Mansel famously decried sensation novels for "supply[ing] the cravings of a diseased appetite, and contributing themselves to foster the disease, and to stimulate the want which they supply" (Mansel 1863: 483). Of course, according to Bain's formulation of the relationship between the body and the novel, Mansel's observations about the effects of sensation novels should not be restricted to that particular genre. Although sensation may have presented the fullest embodiment of the anxieties Mansel articulates, for Bain the novel as a whole had a unique and powerful relationship with the reader's mind and body.

I describe the sensation genre as *embodying* these concerns with a deliberate sense of the ways in which sensation novels were thought to physically affect those who read them – in other words, the signs of sensation could be located in the body as well as in the mind. This bodily participation is also indicative of the ways in which video games provide an interactive narrative form in which players are invited to participate in the unfolding story. Indeed, as Debra Journet argues,

> video games make virtual experiences feel embodied or real to players through their narrative shape […]. This sense of embodied meaning is created not only by the player's growing understanding of the game's unfolding story lines, but also by the developing narrative of game play generated by her own dramatic engagement with the game itself. (Journet 2007: 93)

Journet's explanation of the relationship between players and video game narratives is suggestive of the deep connection between the body and digital interactive narrative.

In a way, the experience of playing a game partakes in a bodily extension – through the controller or keyboard, players reach into their digital worlds. The pressing of buttons or the rotation of joysticks are the player's way of extending her/himself into the environment displayed on screen. In a description of haptic feedback features in modern controllers, where the controller vibrates or shudders to mimic resistance or explosive force, for example, Ian Bogost even refers to the "controller's body" (Bogost 2011: 80). While Bogost's word choice comes as part of a benign

reference to plastic moulding, it is telling that the very vocabulary we use to describe mechanical controls alludes to the ways in which video games offer a link between players' bodies and digital worlds. This coalescence of body and machine to create a narrative experience is precisely why a re-examination of Victorian physiological psychology is so important. If the nineteenth century saw "the relationship between the human and the machine […] become a pervasive theme" (Coleman 2011b: 5), then a return to the intellectual resources of physiological psychology can aid us in tracing the ways in which narrative has been (and is sometimes still) understood to mediate bodily sensation and response.

Additionally, the very nature of the discourse in physiological psychology bears a certain similarity to contemporary discussions of video games. In his history of nineteenth-century physiological psychology, Rick Rylance posits that "the story of Victorian psychology" cannot be told as a "plain narrative" which "suggest[s] pure linearity and closed destinations" (Rylance 2000: 13). He thus settles on a "taxonomy" rather than a narrative, since "the material yields no clear sequence, chronological or otherwise" (Rylance 2000: 13). Rylance ends up categorising and examining the varied practitioners of physiological psychology in a manner reminiscent of a Victorian naturalist (much like William Adamson of Byatt's 'Morpho Eugenia' [1992] transposes his observational and experimental techniques of the animal kingdom to the human household of the Alabaster family). Rylance's 'naturalist' approach to his subject is mirrored by Ian Bogost's call in video game studies for "more media entomologists and media archaeologists overturning rocks and logs to find and explain the tiny treasures that would otherwise go unseen" (Bogost 2011: 148). But where do we begin this media archaeology that Bogost encourages? In his study of oaths and oath-taking, Giorgio Agamben whimsically suggests that cultural archaeology should seek to cover "historical currents stretched between anthropogenesis and the present" (Agamben 2011: 10-11). Of course, returning to the beginnings of humanity is not truly possible, but in many ways the nineteenth century is often identified as the century in which computing had its genesis, with the work of figures like Ada Lovelace and Charles Babbage. In effect, then, studying the nineteenth century does offer us a kind of access to a time when the world of computing was still without form and void. As a result, my focus on physiological psychology offers a

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way to excavate some of the residual influence that the nineteenth century has on video games.

3.   *Amnesia* **and Narrative**

My combination of the narrative theories that developed out of nineteenth-century physiological psychology and present-day video game studies might be deemed suggestive of what Espen Aarseth has called "the recurrent practice of applying the theories of literary criticism to a new empirical field, seemingly without any critical reassessment of the terms and concepts involved" (Aarseth 1997: 14).[9] For Aarseth, drawing from narratology, narratives in video games involve two distinct components: kernels and satellites. A kernel is any part of a story without which the story ceases to be itself; for example, eliminating Scrooge's reformation from the end of *A Christmas Carol* (1843) would irrevocably change Charles Dickens's famous story. In contrast, a satellite is any part of a story that can be replaced, removed, or changed while still maintaining the narrative's essential quality; keeping with *A Christmas Carol*, one such satellite might be whether Jacob Marley's chain carries three or four cash boxes. Within this configuration, Aarseth places novels (like Leo Tolstoy's *War and Peace* [1869]) at the level of "Pure Story", meaning that the world is inaccessible, the objects in the world are non-interactable, and the events are fully plotted (Aaarseth 2012: 132). However, part of what an examination of nineteenth-century physiological theory shows is that the novel has not always been understood in such static terms; indeed, these early theoretical models for novels and novel-reading bear some significant similarities to the ways in which video games are theorised today.

In *The Emotions and the Will*, Bain theorises that an effective narrative hinges on the reader's emotion of pursuit. In other words, in the case of a successful novel, the navigation of the story through its kernels and satellites was designed to kindle the reader's excitement by tapping into an ingrained desire to pursue the narrative's completion. The best novels, according to Bain, do this in a way that convinces the reader to continue reading without creating a sense of fatigue or boredom. And yet, nineteenth-century novelists were toying with this model in ways that suggested novels were understood as far more interactive than we might now assume. Dames, for instance, has shown how William Makepeace Thackeray toyed with the notion of the fully attentive and enthralled reader by weaving suggestions of

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distraction or reflection into his narratives. In Thackeray's work, Dames argues, the novelist writ large inculcates the reader's desire to pursue the narrative precisely by attenuating that drive through moments of distraction (see Dames 2007: 121ff.). In this way, Thackeray's fiction is designed to capitalise on the interactivity that fiction provides to its readers; where the reader may desire immediate gratification and progression in the narrative, Thackeray's novels push back against the reader's inclinations. Dames's description of this paradoxical drive in Thackeray's fiction is indicative of the kinds of theorisations of narrative and the novel that physiological psychology was developing in the nineteenth century. In a way, then, the physiologically driven narrative is attentive to the ways in which readers participate in the narrative's unfolding, and authors can develop ways to both captivate and distract the reader within the same narrative.

For *Amnesia*, narrative pursuit is also encouraged and attenuated, but in a way that underscores its distinctive approach as a survival horror game. Part of the uniqueness of *Amnesia*'s design lies in the fact that its narrative structure is often evocative of the narrative conventions of the nineteenth century that formed the basis for the narrative theories discussed by physiological psychologists. To begin with, as Laurie Taylor has pointed out, survival horror video games often use "textual fragments" as a way to offer players a trail of evidence to discover as they venture through the game world. For Taylor, these kinds of textual fragments are emblematic of the Gothic, in which "lost histories are often uncovered through the castle or haunted house" (Taylor 2009: 53).[10] Of course, this narrative design was also popularised by Wilkie Collins in his sensation novels *The Woman in White* (1859) and *The Moonstone* (1868). In both of Collins's texts, the narrative is formed from a collection of letters, written statements, and journal entries, which have been collated by one or more of the principle characters as a record of their experiences and of the crime or crimes at the heart of the mysteries. As a result, the novel itself becomes an experience in textual discovery for the reader, as each successive section reveals another component to the story from a new textual source. As a horrifying tale set in the nineteenth century, *Amnesia*'s narrative design sits at the crossroads between the traditional Gothic and sensation fiction: it offers both a fragmented narrative scattered across a foreign castle and takes on the quality of sensation's narrative collation, in which the process of discovery becomes the narrative itself.

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   Amnesia's collated narrative is something of a Gothic tale with echoes of W. B. Yeats's early short story 'Rosa Alchemica' (1896). The protagonist is known only by his first name, Daniel, and awakens at the beginning of the game in a dark, foreboding castle with no memory of his past and only a brief note saying that he must find the Baron Alexander of Brennenburg and kill him. Over the course of the game, Daniel's 'backstory' is filled in: Alexander is a member of a group of alchemists, who have been working for centuries to open a gateway to another world. After tampering with an artefact during an excavation in Algeria, Daniel found himself being pursued by some kind of malevolent force. Baron Alexander reached out to Daniel with an offer of help, but this came at a high cost: Daniel had to assist the Baron in harvesting the life energy of numerous victims by torturing them to death. Preying on Daniel's fear, the Baron convinced him that the victims were all criminals and thus deserving of their fate. Ultimately, Daniel realised that the Baron was in fact only using him to accomplish his own plans; to cope with his guilt, Daniel consumed a substance that erased his memory. It is at this point that the game begins.

   One of the advantages of video games is that their visual, aural, and physical qualities allow them to communicate narrative in a variety of ways. Acknowledging video games' unique position as "integrated crossmedia packages" (Aarseth 2012: 130) is not to overlook the important role that the senses have played in neo-Victorian literature and criticism. In describing the effect of Michel Faber's *The Crimson Petal and the White*, for instance, Silvana Colella underscores how the "senses define a liminal area between past and present where connections become possible" during the reading experience (Colella 2009: 89). Colella's argument primarily points to the way that the sense of smell, and its capacity to function as the sense best linked to memory, makes smells "spectral ambassadors from a past that remains difficult to name" (Colella 2009: 92). Colella's focus on smell is helpful especially because this is one sense that video games have not generally evoked, which underscores the limitations of games themselves, which are often lauded as so much more immersive than printed or digitised texts.[11] Still, the senses' representation in novels is always, of course, textually mediated, allowing video games to explore its integration of sensory perceptions in ways that novels cannot. *Amnesia* also uses this integration to explore the "liminal area between past and present", by

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connecting the story directly to memory loss. Since the player begins the game at the same moment Daniel has lost his memory, the novelty of our sensory experiences is narratively linked to the character's, driving our curiosity to learn what has happened. What makes Daniel's story engaging is that we as players are just as ignorant as he is, a quality shared by many sensation novels, in which a character apprehends that some kind of malfeasance has taken place, but must diligently search to uncover the truth behind the mystery. This identification between reader and protagonist is heightened in the case of video games, where the player often identifies *as* the protagonist, usually in the form of their playable avatar, rather than just *with* the protagonist. Ewan Kirkland suggests that it is in part because of this overlap between player and protagonist that "the repressed memory trope works well in keeping the degree of knowledge between the two relatively comparable" (Kirkland 2012: 114).[12] By framing the game narrative with the revelation that Daniel has lost his memory, *Amnesia* is able to deploy several devices that foster narrative progression and pursuit in a way that is suggestive of Bain's characterisation of novel reading.

     Returning to the textual trace, the primary form of narrative pursuit in *Amnesia* consists of Daniel's recovery of pages from his journal, written prior to his memory loss. Within the game, these pages are highlighted by an ethereal glow, marking them as significant, but also uncanny artefacts for players. This glow often contrasts with the darkness that pervades the game's digital space, and the collection of these written memories becomes a welcome reprieve from the dangers of exploring the castle. As Daniel begins to search Baron Alexander's estate, he discovers that it is patrolled by violent and grotesque monsters, which appear to be the reanimated and mutilated corpses of his own victims. These creatures provide much of the game's horrific ambiance. Hence the journal fragments ironically become small havens of narrative to stave off the inevitable return to the castle's threatening interiors, while also functioning as traumatic hints or memory prompts indicating his historical guilt.

     This same glow also demarcates useful and readable text from the piles of detritus that fill many of the castle's rooms. Bookshelves and desks are often piled with nondescript tomes and scraps of paper, but these 'texts' are blurred and unreadable. This is understandable given the difficulties inherent in providing complete text to every single page that is graphically represented in the game.[13] Still, the emptiness of these texts reduces the

many books in the game, which can still be carried and thrown by the player, to little more than bricks with the appearance of books – that is, they are static objects whose function in Brennenburg Castle is to fill space, to give the *appearance* of history. In this way, these books begin to suggest the very isolation that the player is meant to experience through the narrative. Like Coleridge's Ancient Mariner, alone and faced with an ocean of undrinkable water, *Amnesia*'s players are alone and faced with a castle of unreadable books.

Drawing on the concept of isolation, Bain's discussion of "aesthetic emotions" begins by distinguishing aesthetic pleasure from the "gratification" of sustenance, since eating and drinking "are in the main subservient to the keeping up of our existence" (Bain 1859: 247). In a word, such gratification, because it is linked primarily to survival, is not to be categorised as aesthetic. A key component to Bain's argument here is that the experience of sustenance is always one of isolation, because "two persons cannot enjoy the same morsel of food, or the same draught of exhilarating beverage" (Bain 1859: 247). In Bain's formulation, then, experiences related to survival are inherently isolating, since the particular sensations derived from actions promoting survival cannot be shared. It is important to note that Bain's articulation is meant to be quite narrow; since his concept is limited to the specific physical sensations of an act like eating, he does not mean to suggest that people cannot share those experiences by translating them into other communicative modes (like a verbal or textual description of flavour). Still, it would seem that the experience of isolation in *Amnesia* is apropos of Bain's argument, precisely because the goal of the game is to *survive*. And the process of narrative collection and collation that the game creates serves as a metaphorical representation of that survival. With each page retrieved, there is a sense that we have managed to survive to read (or hear) the next chapter in the story – the journal pages become a kind of narrative sustenance.[14]

At the same time, the pursuit of the narrative can also serve to increase the tension within *Amnesia*, particularly because the game is designed to prevent backtracking. Often, when a player progresses beyond a certain area of the castle, that area becomes inaccessible. This mechanic is accounted for by the game's narrative, since the castle is slowly being filled with a kind of poisonous organic material – the manifestation of the vengeful power that Daniel released during his trip to Algeria. In terms of

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the video game experience, this means that if players fail to collect all of the textual fragments in a certain area, those portions of the narrative are lost and there is no way to return to retrieve them later. Nineteenth-century and neo-Victorian literary narratives often hinge upon the lost text, or the marred text, as a significant narrative device. In Elizabeth Gaskell's *Mary Barton* (1848), the paper wadding used in the gun that kills Harry Carson is a lost text that, when found, serves to identify Carson's murderer. Likewise, in Dickens's *Bleak House* (1852-53), the mass of papers that fill the offices of attorneys and interested parties of the Chancery Court only obfuscates the court's ability to adequately adjudicate its cases, until very near the novel's end, when the one scrap of paper that could settle the entire Jarndyce v. Jarndyce case is discovered. Kym Brindle argues that the textual collation that occurs in nineteenth-century literature most often handles these texts as "empirical or legal evidence to resolve disruption of property ownership, inheritance, marriage, and identity crises", whereas neo-Victorian narratives tend to deconstruct "how investigatory reading and interpretation take place" (Brindle 2014: 24). In a way, then, as a narrative set in the Victorian era, *Amnesia* draws upon, accentuates, and deconstructs both of these elements of textual gathering and interpretation. The player's discovery of Daniel's diary pages leads to a growing awareness of Daniel's identity, while at the same time making the awareness that these textual traces provide contingent upon the player's exploration. In my initial playthrough of the game, I realised that I had failed to collect certain diary pages when it was too late to go back for them; losing pieces of the textual narrative invokes a degree of guilt and frustration not unlike Daniel's own emotions, as he slowly uncovers the truth of his participation in Baron Alexander's plot. Players take on the role of building Daniel's identity through his diary, while also recognising their own participation in the success or failure of this narrative project.

     Even in the event that a player does recover every page of Daniel's journal, *Amnesia* deploys narrative devices in the loading screens such that part of the story always seems to be missing. As is common in video games, *Amnesia* often has a short pause as players move from one area to another in order to load the adjacent digital space; during this process short phrases appear on screen, as in this example: "The crying had stopped and he could hear a whisper coming from the cell. They were up to something and he would have to punish them" (*Amnesia* 2010). These phrases tell different,

although related, components of Daniel's history; and yet, loading screens are even more ephemeral than the pages of Daniel's journal, which, once collected, can be examined from the player's inventory screen. The loading screen, however, is at once part of the game and not; it exists only for a moment, punctuating the player's movements in a way that is meant to be as unobtrusive as possible. However, *Amnesia*'s use of loading screens to offer narrative trace texts that cannot be recovered conspicuously foregrounds and exacerbates the game's quality of narrative loss.

For Bain, loss and pain are lesser emotional states that are magnified in the emotion of terror. Whereas with "pain, as […] when any one suffers a loss, there is a corresponding and measured stimulus to protection and precaution", with fear "a large and indefinite amount of exertion is brought into play" (Bain 1859: 79). Terror, in Bain's estimation, becomes the emotion of "excess" (Bain 1859: 79). *Amnesia* is designed to simultaneously provide narrative detail while also making these details ephemeral. While the effect is drawn out slowly over the course of the game, I would suggest that *Amnesia*'s terrifying quality is in part due to the way that its narrative disperses even as it coalesces through these fugitive textual traces. In a medium that is often characterised by how well players are able to assert control, *Amnesia* insists that its players must surrender themselves to the terrifying reality that the game's narrative cannot be controlled.

4.   *Amnesia* and the Body
It is through *Amnesia*'s deployment of these narrative techniques that its physiological impact is fully realised. As I have shown, the narrative itself is already steeped in nineteenth-century physiological theory, and the unique capacity that *Amnesia* has to provoke physiological reactions in its players is an integral part of the experience. Immediately, the first of the textual traces from Daniel's journal underscores the relationship between the body and the dangers of the castle. In his instructions to his amnesiac self to destroy the Baron, Daniel offers this morsel of comfort: "Go to the Inner Sanctum, find Alexander and kill him. His body is old and weak, and yours, young and strong. He will be no match for you" (*Amnesia* 2010). Of course, this first journal entry does more than evoke the physiological power that Daniel has over his antagonist; it also fulfils a basic video game function by providing an objective: kill the villain. As far as it goes, this objective is identical to that of many games, but in this case the objective is framed in a particularly

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telling way: *Amnesia*'s developers make specific references to the bodily strength of the protagonist as opposed to the frailty of the villain. From the beginning, then, this video game both transports us to a strange and uncanny past, while also linking the mind and the body – Daniel has lost his memory but retains his bodily strength.[15]

The assertion of masculine strength in a British protagonist threatened by a foreboding foreign other is well-known in scholarship of the nineteenth century. Walter Hartright leaves England together with Sir Percival Glyde's partner in crime, the scheming Italian Count Fosco, for South America and returns a stronger, more confident, and effective protector of Laura Glyde in *The Woman in White*. Similarly, Jonathan Harker, while initially incapacitated by the Transylvanian Count Dracula and his undead brides, ultimately defeats the vampire and wins back his wife Mina, cleansed of her vampiric contamination much as *Amnesia*'s protagonist seeks to cleanse himself of the taint of evil. However, *Amnesia* twists this trope by asserting the character's strength in the textual trace, while simultaneously depriving the player of weapons or any other means of combatting the castle's dangerous creatures, which immediately undermines the game's initial affirmation of Daniel's physical abilities. In a way, then, this contrast paradoxically exemplifies the connection between the mind and the body, because it is through this rhetorical assertion of power in the midst of functional powerlessness that the game so successfully evokes terror in the unexpectedly incapacitated player.

In a 2011 speech delivered at the Game Developer's Conference, Thomas Grip, the Project Manager for *Amnesia*, discussed several key design features that make *Amnesia* a unique survival horror video game. In its very name, the genre of survival horror implies the presence of physical danger that must be survived; furthermore, it suggests a conclusion distinctive from the sense of victory that typically accompanies the completion of video games – here it is only survival that players can achieve. Grip suggests that survival horror is a distinctive genre, because it is specifically designed to evoke emotion (Grip 2011: n.p.). Of course, all kinds of video games have the potential to evoke emotions in their players, but Grip's characterisation of survival horror indicates that designers of these games must invest more intentional preparation in order to elicit specific physiological responses that are analogous to the terror and psychological stress experienced by the digital characters.

For Bain, terror is a paradoxical response precisely because it is so often a feature in narrative art, which he characterises as a pleasurable experience. In his estimation, "a slight fear, with speedy relief […] acts like a stimulant on the nervous system" (Bain 1859: 92). This mixture of science and cultural critique was a common feature of Bain's and other physiological psychologists' work. For Bain novels were important to his work, because they represented "a common form of reception on which to test [his] theories of response" (Dames 2007: 10). In other words, the novel, as a near-universal form of reception, was ideally suited to consider the physiological responses involved in that reception. In the case of terror, then, Bain offers us a way of examining how terror was understood in the nineteenth century, and by extension, how a similar view of terror informs our reception of *Amnesia* today.

Bain first establishes a distinction between pain and terror, suggesting that while pain is often characterised by physical suffering, the "apprehension of evil is a more specific agent of terror than present suffering" (Bain 1859: 73). The instantiation of terror is thus oriented toward the future; it becomes a form of potential energy for which pain is the kinetic realisation. This exact sentiment is stated in a very similar fashion by Baron Alexander; in one particular flashback, Daniel recalls the Baron instructing him on torture: "The point of presentation is terror. The human mind is extremely efficient, as it will trigger itself into greater fear simply by imagining it" (*Amnesia* 2010). Both Bain and the Baron regard the apprehension of the possibility of pain as proof of the human psyche's ability to have a dramatic impact on the body. For Bain, this apprehension leads to a kind of instability or insecurity, and results in the physical feeling of losing "bodily support", as in the sensation of falling (Bain 1859: 74); we might think of the initial drop of a roller coaster as a similar sensation. In its design, *Amnesia* approximates Bain's sense of terror insofar as the game's structure provides very little in the way of support. While Brennenburg Castle is rife with dangers, players are given no weapons or tools with which to defend themselves. The only options available are either to run or hide from danger. The castle is full of old wardrobes and darkened corners, but even these may not be enough to evade a particularly hostile monster. Grip points out that video games have too often turned to weapons as a design crutch, and as a result, "if a player has an opportunity to kill something, they will" (Grip 2011: n.p.). In this way, *Amnesia* creates a sense

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of instability for players by denying them the very foundation upon which so many video games are built: weapons as the means of both attack and self-defence. As a result, terror is heightened and the resulting player reactions become more extreme.

Part of *Amnesia*'s lasting impact on video game culture has in large part been due to the responses of players to the terror that they have experienced while playing the game. Many players have taken to the Internet to creatively express their emotional responses to the game through artistic renderings of moments from the game or videos of their terrified responses as they played the game for the first time. What is fascinating about these representations of fear, in both video and image, is that they are often played for laughs. Part of the enjoyment of these records of players' experiences is seeing the facial and bodily contortions that the game effects in its players' bodies. While the person playing the game might be experiencing a real sense of terror, the spectator is expected to look on these experiences with a sense of humorous enjoyment, knowing that there is no real danger attached to the circumstances evoking the reactions they are witnessing. One particular image, from the DeviantArt artist NadzomiViro (see http://fav.me/d37b7n7), provides a good sense of how these kinds of artistic expressions manifest themselves, speaking to the way in which *Amnesia* impacts its players' bodies in very specific ways. Two players are drawn with their faces contorted into horrible grimaces while one of them shouts, "Get the fuck out of the water!" (NadzomiViro 2011: n.p.). As viewers of this image, we cannot see what these two figures are witnessing on their computer screen, but in seeing how their facial musculatures have been twisted by their experiences, the power of the game's capacity to frighten its players becomes clear.

Due to *Amnesia*'s eschewing of weaponry and traditional video game combat mechanics, the common reflexive responses in video games, such as aiming and shooting, end up being channelled into the kinds of responses to terror that Bain enumerates.[16] Situations that in any other game might have resulted in a violent conquest over a digital enemy transform into senses of foreboding, anxiety, suspicion, panic, and the (virtual) fear of death. Obviously, players are aware that dying in the game will not adversely affect them in reality, but *Amnesia* is predicated on the assumption that the environmental and adversarial tension generated by playing the game will lead players to flee from danger in the digital world as

if they were in real danger. Ironically, however, in-game consequences for 'dying' are fairly innocuous (players simply continue from the place where they were overtaken by the monsters, but with the monster transported to another area in the game). The game is designed so that players will fear the tension of encountering the monsters enough to outweigh the realisation that dying does not adversely impact their progress in the game. For Bain, terror physically manifests in the "tension of [the body] beyond an ordinary degree […]. The tension is seen in the stare of the eyes, […] a convulsive clench of the hand […]. The vocalizing muscles are strongly affected" (Bain 1859: 76). Many of these effects are illustrated in the comical drawing cited above, and even more intense expressions of these effects can be found on YouTube, where many players have filmed themselves (or their friends) reacting to the game's more terrifying moments.[17]

A second mechanic, beyond removing weapons, escalates the player's connection to the game by generating visual metaphors that approximate various signs of terror. Throughout the game, Daniel's 'sanity' is tracked via a graphic of a brain and spinal cord on the game's menu. If the player stands in the dark for too long, lingers on disturbing elements in the environment like corpses, or encounters a monster, Daniel's sanity decreases. As a result, the image on the screen begins to be distorted and increasingly disturbing sounds, similar to crawling insects, pulse through the environment. Other survival horror games have also experimented with a sanity mechanic, but these tended to be simply 'power-up' meters, which would fill as the player killed more enemies, culminating in a special ability after accruing a certain volume of kills.[18] In contrast, *Amnesia*'s implementation is deliberately *debilitating*, inducing intense anxiety for the player. In essence, the game creates a cyclical reflexivity whereby the player's tension is reflected by and contributes to the game's measurement of Daniel's sanity. Our fear of the unknown compels us to try to watch a monster's movements, while the game penalises us for succumbing to this reflexive instinct. Through the bodily image of the brain, the game clearly connects its conception of sanity not only to a psychological state, but also to the physiological impact of that (terrified) psychological state, in a way indicative of the connections established by nineteenth-century physiological psychology.

Finally, in assessing the nature of the bodily impact of emotion, Bain is careful to point out that emotion and its manifestation in the body should

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not be understood as separate, but as inseparable. In other words, "if the currents from the brain to the moving organs and viscera were arrested", then fear would not be the same emotion that we are familiar with – the "signs of the emotion are a part of its own essential workings" (Bain 1859: 10).[19] The reflexive movement and frantic reactions to *Amnesia* are demonstrative of this formulation. Additionally, Victorian physiological psychologists developed a particular concept that encompasses this effect: 'unconscious cerebration' (Ryan 2012: 2). What this game does so well, is to connect the process of narrative discovery to the heightened moments of fear, rather than feelings of relief, accomplishment or victory. Without participants necessarily understanding why, *Amnesia* draws players deeper into the terrifying bowels of the castle, and we accede to this experience because with each step we come closer to understanding the full extent of Daniel's role in this Gothic tale. So our exploration, curiosity, and even our intense moments of flight and concealment, are all part of how the game links its story to a clear set of interconnected physiological and psychological responses.

As a result of the collection of textual traces throughout the game, Daniel creates a portfolio with which he can (re)write his lost memory.[20] Because of his crimes and the amnesia potion that he consumed, Daniel attempts to rectify his past transgressions by appealing to the moral self he hopes will emerge after erasing his memory. In effect, Daniel's story resonates with other late-Victorian tales of fantastic adventure like H. Rider Haggard's *She* (1887) and Richard Marsh's *The Beetle* (1897), making his quest an assertion of British morals over and against the corrupt and diabolical machinations of the Prussian baron.[21] Without knowing whether or not his plan will be successful, Daniel embarks on a risky, but ultimately courageous effort to atone for his participation in Alexander's crimes and to prevent anyone else falling victim to the Baron's evil deception. In this way, *Amnesia*'s protagonist exhibits a form of unconscious cerebration, by responding to his environment and situation in instinctive, nonstrategic ways. While it would seem that Daniel's erasure of his memory would prevent him from succeeding, this decision helps him to carry on, unburdened (at first) by his guilt. Furthermore, the player's will to survive, which so often manifests itself in the terror I have been discussing, functions as part of that involuntary thinking as well. In fact, the unconscious nature of the player's contribution to this decision is all the more poignant, since

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their participation in the game is ultimately part of Daniel's effort to repent for his criminal complicity in Alexander's machinations. As the game draws closer to its conclusion, all the previous moments of instinctive survival become inflected within Daniel's narrative of absolution.

5.   Coda
Video games remain one of the few popular forms of media that actively engage our bodies in narrative creation. Whether through gestures on a tablet, or waving a Wii Remote through the air, or even in the case of the standard WASD keyboard and mouse layout that *Amnesia* uses, we have a physiological connection to the events as they unfold before us. I have shown how the physiological psychology of the nineteenth century still resonates in contemporary video games, but particularly in narratives, such as that of *Amnesia*, which draw upon Victorian literary genres for their own stories. Vanessa Ryan has described nineteenth-century physiological psychology as a "prehistory of neural science largely forgotten by cognitive scientists today" (Ryan 2012: 2). To better understand the relationship between the body and video games we may do worse than looking to the work of Alexander Bain and other Victorian physiological psychologists and their early attempts to theorise the way that narrative impacts human physiological response. Indeed, if we consider the influence that the nineteenth-century novel has had on narrative across a variety of media today, then we should also consider how physiological psychology might be reflected in contemporary media that adapt narrative forms. The Victorian development of physiological psychology honed the way that nineteenth-century narrative was structured, and these narrative structures have been inherited and innovated upon in contemporary digital narratives. Furthermore, because of its focus on the body and reflexivity, physiological psychology has great potential to help elucidate the narrative and interactive structures that video games create in order to generate player experiences which reverberate in both mind and body.

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<u>Notes</u>

1. In video games, a "cut-scene" refers to any moment during which the player's control over the game is suspended to allow a pre-determined cinematic scene to play. These scenes are often used as a way to advance the plot of the game.
2. See, for example, 'Amnesia: The Dark Descent (Best of Reactions)', https://youtu.be/L1RKuM57nPA, which compiles a series of clips depicting people playing the game. Admittedly, some of these might be exaggerated for comic effect, but many of the reactions appear to be genuine.
3. Tellingly, Heilmann and Llewellyn refer to neo-Victorian novels' capacity to be read on two levels as "games-playing," (Heilmann and Llewellyn 2010: 18), showing how neo-Victorian stories constitute a playful resurrection and re-examination of a particular literary period. This notion of play also reinforces my contention that video games, as a genre for which play takes on a special significance, can contribute new perspectives on both Victorian and neo-Victorian studies.
4. In *Assassin's Creed*, the player assumes the role of a contemporary character who uses a fictional device, the Animus, in order to relive ancient ancestral memories that have been stored within the character's genetic code. The majority of the game is played out within these historical settings; previous games have taken place in medieval Palestine, Renaissance Italy, and the eighteenth-century Caribbean. However, the games' latest instalment, *Assassin's Creed Syndicate* (2015), is set in an alternative Victorian London controlled by Templars.
5. Recent investigations in this vein include Nicholas Dames's *The Physiology of the Novel* (2007), Kay Young's *Imagining Minds: The Neuroaesthetics of Austen, Eliot, and Hardy* (2010), and Vanessa Ryan's *Thinking without Thinking in the Victorian Novel* (2012).
6. Rick Rylance further argues that Bain was largely responsible for "physiological associationism", which "set itself to explore connections not just between the contents of consciousness but also between mind and body, and mental organism and environment" (Rylance 2000: 170), suggesting that Bain's project was invested in understanding how awareness could be studied through an examination of both the body and its physical context.
7. Dames's *The Physiology of the Novel* was the first major critical study to demonstrate that deep connection between the discourse of physiological psychology and the theorisation of the novel in the nineteenth century, while Rick Rylance's earlier *Victorian Psychology and British Culture, 1850-1880*, from 2000, underscored the role that psychology played in Victorian culture more broadly.

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8. Some scholarship has suggested a connection between the nineteenth-century physiological theorisation of the novel and contemporary neuroscience, as in Ryan's *Thinking without Thinking in the Victorian Novel*, or between contemporary neuroscience and nineteenth-century culture, as in Young's *Imagining Minds*. Arguably, however, the full cultural resonances for physiological psychology have yet to be articulated.

9. While I am drawing on literary history and literary theory in this argument, I have tried to avoid the problems that Espen Aarseth rightly identifies in his critique. However, in any study that seeks to draw historical parallels, there is bound to be some degree of "translation" (Aarseth 1997: 14) between the various backgrounds through which the different traditions developed. In approaching this topic, I have sought to provide a balance of resources and critics in order to honour the vocabulary and approaches that they each bring to this discussion.

10. Ewan Kirkland draws a strikingly similar conclusion in his discussion of survival horror and the Gothic: "Gothic narratives are about protagonists haunted by mysterious secrets of the past, and this structure ideally suits videogames where players piece together embedded narrative fragments" (Kirkland 2012: 113).

11. *Kotaku*, a popular gaming news site, did report on a start-up company called Sensory Acumen, which is developing an olfactory response system for video games, with the unfortunate name 'Game Skunk'. While playing a cooking simulator, Patricia Hernandez reported that the device emitted a smell "*resembling* chocolate" (Hernandez 2013: n.p., original emphasis), indicating that the technology was not really ready for the market.

12. This identification is heightened by the fact that *Amnesia* is played from a first-person perspective, meaning that the player looks out on the digital world as if through the eyes of the protagonist. James Paul Gee calls this "virtual identity", which is to say that players engage in a process of developing an "identity as a virtual character in the [game's] virtual world" (Gee 2007: 49).

13. On the other hand, the Elder Scrolls series (1994-2015) has made a point of always making every text in their fantasy worlds readable – even if the number of readable pages is far fewer than the apparent number of pages a book might contain, and many of the books are repeated throughout the game world.

14. Although my metaphorical comparison between Bain's opinion of eating as solitary and the narrative process of *Amnesia* may seem arbitrary, Marie Banfield's work on Bain's later book *The Senses and the Intellect* shows that Bain saw a connection between metaphor and narrative. As Banfield notes,

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"Metaphors […], Bain observes, can represent what is obscure or concealed from view. […] The poetic and fictive possibilities of metaphor implicit in Bain's account are revealed when he notes the capacity of metaphor to reveal hidden thoughts and feelings, and when he describes the ability of association to facilitate the retention of narrative detail" (Banfield 2011: 108).

15. The loss of memory also works as a parallel to the player's state of mind upon beginning the game. As with most narrative experiences, we begin with little or no knowledge of what the current state of affairs really is. The blankness of the player's knowledge is in a way mapped onto the protagonist – our lack of knowledge becomes his amnesia.

16. *Bioshock: Infinite* (2013) provides many experiences like this, where a brief moment of terror is attenuated by players' immediate response to use their massive arsenal to lay waste to the enemies that may have briefly scared them.

17. A good example can be found here: https://youtu.be/LYJYu9NiOic, but there are many others. (However, some of the videos are probably parodies, with players seeming to exhibit deliberately exaggerated reactions to the game.)

18. Bernard Perron describes a quite different "insanity meter" in *The Suffering* (2004): "Every time the player-character Torque kills creatures, the meter fills. When it is full and pulsates, Torque can transform himself into a powerful creature, becoming as vicious and bloody as the [monsters] attacking him" (Perron 2004: 130). Unlike *Amnesia*, this mechanic is used to give the player immeasurable power to defeat enemies, whereas *Amnesia*'s players are conditioned to understand insanity as a disabling affliction.

19. Perron has also described the player/game relationship in a way that recalls Bain's description of the mind/body connection: "The gamer becomes *attuned* […] with the game; on the same wavelength as the game, he resonates to the rhythm of events as they happen" (Perron 2004: 137, original emphasis).

20. Laurie Taylor points out that textual collation is a common feature of survival horror games, and that its origins can be found in the Gothic. As a result, survival horror games follow "Gothic texts by drawing on technologies of communication to illustrate cycles of miscommunication while also repeatedly emphasizing the importance of written texts, textual materiality, and its processing" (Taylor 2009: 53).

21. In both Haggard's and Marsh's novels male British protagonists contend with foreign supernatural threats, either in the form of the immortal Ayesha in *She* or as the shapeshifting titular beetle of Marsh's novel. The recurrent narrative thrust in these narratives, which is also present in *Dracula*, is that British masculinity must rightfully assert itself as superior to these foreign threats. Daniel's efforts against the Baron follow in this same pattern.

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