A Novel Narratological Framework for the Analysis of Self-Involving Interactive Fictions

Early scholars of video game studies were preoccupied with a methodological, and theoretical, problem that has, in many ways, been reissued, dismissed, and ignored for the entire history of the study of video games: namely, can video games be addressed as mimetic, semiotic systems, or must we, as scholars, make recourse to other fields, disciplines, and theories in order to understand video games as an aesthetic and representational form? Identified as "*narratology* (game as stories) versus *ludology* (games as something unique)" by Jesper Juul (192), as the question of whether "the concept of narrative [is] applicable to computer games" or whether instead "the status of an artifact as game preclude[s] its status as narrative" by Marie-Laure Ryan (181), and as the understanding that "classical narratological concepts are not perhaps applicable to games as such" by Jonne Arjoranta (697), the "ludology versus narrativism (or narratology) controversy" (Ryan 181), is, as I will illustrate, alive in the oversights and difficulties faced by modern applications of literary and cognitive narratology as well as Kendall Walton's theory of fiction to the study of video games, even if it has been abandoned in those terms within the field of video game studies itself. Through a constructive dialogue with these previous efforts to apply narratology, both literary and cognitive, and Kendall Walton's theory of fiction, including in publications by Michael Nitsche, Jonne Arjoranta, Jesper Juul, Espen Aarseth, Marie-Laure Ryan, Jan-Noël Thon, Grant Tavinor, and Marissa D. Willis, I will elaborate a novel narratological framework for the analysis of video games, and perhaps particularly those video games that are self-involving interactive fictions, as they are described by Jon Robson and Aaron Meskin.

To begin the construction of a novel narratological framework for video games, I will first address those scholars, such as Marie-Laure Ryan, Michael Nitsche, Jonne Arjoranta, and Jan-Noël Thon, who attempt to utilize narratological concepts explicitly in their analysis of video games. In general, their application of these concepts can be problematized through reference to specific video game phenomena arising from video games' procedural status, reference to what Espen Aarseth identifies as the "dual materiality of the cybernetic sign process" and the intrinsic status of the "internal, coded level" of the cybernetic sign process (40), and reference to Mieke Bal's narratological program as outlined in *Narratology: Introduction to the Theory of Narrative*. The first of these applications, Marie-Laure Ryan's "Computer Games as Narrative" in *Avatars of Story*, makes a variety of arguments about the narrativity of video games from a theoretical, aesthetic/functional, and methodological/practical perspective, which introduce, respectively, a typology of games which I will replicate the distinctions of in a semiotically grounded structure, a concept of narrative/ludic subordination, and suggestions for further research which I intend to fulfill in the present study. The second of these applications, Nitsche's "Focalization in 3D Video Games," addresses, of course, the concept of focalization in relation to 3D video games, though, I will argue, in an incomplete manner, particularly in regard to interactive affordances, embedding, and doubling. The third of these applications, Arjoranta's "Narrative Tools for Games: Focalization, Granularity, and the Mode of Narration in Games," addresses focalization, granularity, and what is described by Arjoranta as the mode of narration, but Nitsche's failures persist despite the extension of Arjoranta's concepts to address the procedurality of video games, albeit in a restricted manner. The fourth of these applications, Jan-Noël Thon's "Transmedial Narratology Revisited: On the Intersubjective Construction of Storyworlds and the Problem of Representational Correspondence in Films, Comics, and Video Games," takes a cognitive

narratological approach that emphasizes the concepts of the storyworld (291), the principle of minimal departure (292), representational correspondence (293), external and internal explanations (293), the principle of charity (293), and both representation-by-origin and -by-use (296), which clarify many previously discussed distinctions, but only through neglecting those literary narratological distinctions whose emphasis on the meaning created both by narrative signification using signifiers of various forms and the incompleteness of fiction – which Bal describes as "the fundamental arbitrariness of the elements of the fictional world" that means there is "no end to the need for motivation" of description (27) – which should, I will argue, form the basis of any transmedial narratology.

Marie-Laure Ryan's "Computer Games as Narrative" serves as a worthy starting point for the project of developing a novel narratological framework for games in its direct and productive participation in a discussion of narratology and ludology sensitive to the objections of ludology to a narratology of games. In it, Ryan rejects a view of narrative that requires a language-based text, instead making reference to Bordwell's more open definition of narration as "signs […] arranged in such a way as to inspire the mental construction of a story" (185), or in Bal's terms, of a fabula. Such a position would, of course, make many of the arguments Ryan rebukes in the course of the article tacitly incorrect, for if a narrative is an arrangement of signs that inspires the mental construction of fabula, it need not be necessary for there to be a "distinction between story and discourse" (185), a fixed or open order of events (186), or a representation of events as past so that it is possible for "the narrator to select materials from memory and to configure them according to narrative patterns" (186), as she herself acknowledges despite engaging with arguments of those forms (187). Additionally, though Ryan rejects Frasca's dichotomy between representation and simulation, characterizing simulations as "state-transition machines" with "a

mimetic dimension" (188) and claiming that a "distinction between a game as a system of rules, and a particular instance of playing a certain game" would make "the narrative status of games […] easier to grasp" (189), such a clear distinction between the game as non-narrative and its playthrough as narrative is misleading in no small part because Ryan's engagement with these objections ignores focalization and motivation, both of which are literary narratological concepts defined by Bal that I will argue are present in the simulation itself - that is, in the interactive affordances and procedures - of video games and not solely in their playthroughs, even if, as Aarseth suggests, they can "only be fully experienced" in the playthrough (40). Focalization and motivation will be explored more thoroughly in this study's response to Nitsche and Ajoranta's contributions but are almost entirely absent in Ryan, even though they are also a marker of the distinction between story, or the fabula, and discourse, or the narration.

In light of Ryan's refutation of Espen Aarseth's argument that "the proper model for the gaming experience is life itself" (Ryan 189), the distinction between story and discourse and the concepts of focalization and motivation are of even greater importance. In confronting this argument, Ryan makes an important distinction between constative acts and performative acts, where the video game player's actions are performative in the sense that they "make events happen" while the "replay[ing] on screen" of those actions is a constative act "of the system" (190). She goes on to note that this dual nature of the video game player as both narrative agent and spectator comprises the unique quality of video game narratives (190), which Robson and Meskin may term self-involvement (167) and Juul may label half-reality (40). Elaborating on this distinction, Ryan presents a hierarchical and dichotomous typology of games in which actions taken in life may be practical or ludic, ludic actions may be abstract or mimetic, mimetic actions may simulate practical actions or ludic actions, and so forth in a recursive trend (194). Necessary

to this is the analysis of ludic objects "into a physical and a symbolic, game-specific component" (Ryan 194). This, however, cannot strictly be the case. Instead, I would like to posit that narrative video game representations consist of a narrative sign, a ludic sign, and a material sign, which interact in meaningful ways to constitute the game experience.

Consider, for example, *The Elder Scrolls: Morrowind*. In *Morrowind*, it is possible for the player, in the course of their adventure, to move through walls behind which there is no structure and to fall through the ground until they rest in an endless pool of water. Do the signs presented to the player in these cases indicate anything about the fabula or the fabular world itself? It is the intuition of the player that this is not the case, that on the fictional island province of Vvardenfell, castles are not built of impossible to pass planes upon which an image is projected from one side and invisible from the other as if it were a one-way mirror and that underneath what appear to be grass, dirt, and rock it is not the case that there is livable empty space before a yawning sea. If the symbolic, game-specific component identified by Ryan is also, synthetically and binarily, abstract or mimetic, how would this phenomenon, in which the signs presented to the player can be interacted with and are defined, in Ryans terms, both ludically and mimetically but fail to signify the fabula, be understood? In what sense are the actions of the player performative if the constative presentation no longer signifies the fabula? Instead, it may be said of such a scenario, that the signs presented to the player have lost their narrative and ludic status and are now strictly material.

To illustrate these distinctions, consider the example of a simulated chess game. Imagine that it is true, at some point in this simulated chess game, that one should be able, by the rules of chess, to move a knight onto a pawn, moving through other pieces, in order to capture that pawn. Imagine as well that the mechanical input associated with this move may be given, but the move

does not occur while another move which is illegal by the rules of chess is allowed. In such a scenario, it is the player's intuition that they are no longer playing chess, or perhaps more clearly, that chess is no longer being played with the material that is the software and hardware they are using; the software developers have made a mistake in their *implementation* of chess, in Juul's sense of the word, such that it is not "possible to unambiguously map one-to-one correspondences between all the possible game states in the computer version and in the physical […] game" (536). In such a case, according to Ryan's typology, the state-transition machine has simply lost its mimetic dimension, failing to be a simulation of a chess game. Is it the case that the mimetic dimension lost is the same as that in the previous example in *Morrowind*? Or rather, is a semiotic approach, which identifies both a symbolic, game-specific component and a symbolic, narrative-specific component as well as a physical component merited as I have proposed? In such a case, it would appear that the signs presented were never narrative signs or only narrative signs insofar as chess itself can be said to present narrative signs, but that the signs presented were, in fact, ludic signs signifying specific rules, goals, and patterns, before the mistake in implementation that led to incongruity between possible ludic signs and the sign presented. At such a point, the present signs are reduced to their material significance, indicating a particular material arrangement without an associated ludic meaning. Note that this final turn, from the ludic to the material, is unaccounted for in Ryan's formulation in which the intuition of the player should appreciate the software as a game separate from chess. I find such a response to be highly unlikely in this case, though not impossible, and a rite of passage of sorts for those in the speedrunning community.

Finally, consider the case of a game of chess to which a player-character and a non-player character sit down in a larger, narrative video game. Imagine that the same scenario takes place:

the player wishes to move his knight to legally take a pawn and is disallowed while a separate illegal move is allowable. Imagine further that after inputting the illegal move, the non-player character plays another legal move, never in the course of the chess game playing an illegal move, and other illegal moves, let us say one per turn, continue to be allowed at the same time that some other legal moves continue to be disallowed for the player. What then is the player's intuition? Would it be the case that the player feels, as in the previous example, that chess has failed to be implemented properly? This is possible, but because the chess game being played is narratively - that is, fictionally - a chess game and not a real chess game, other possibilities arise. In this case, what may be at first appreciated as ludic signs of an embedded chess game presented on screen are revealed to be ludic signs of the narrative game in which the chess game takes place. The disallowance of legal moves and allowance of select illegal moves appear no longer merely as a mechanical sign of failed implementation, but rather as a focalization of interaction through the player-character, who would not make certain legal moves against his opponent but would cheat at the fictional game of chess in which he is involved. The same signs conversely indicate that that the fictional character with which the player-character is playing does not notice or does not wish to correct the illegality of the moves of the player-character. As a comprehension aid, imagine, perhaps, that the player-character is a young son who always loses and the non-player character a mother gifting her son the game.

It still may be the case that these three examples do not exceed that of Ryan's typology. In the first scenario with *Morrowind*, one might identify ordinary play as mimetic simulation of practical actions and the scenario itself as a reduction to ludic actions. In the second scenario with simulated chess, one might identify ordinary play as abstract simulation of ludic actions and the scenario itself as a reduction to ludic actions. But how might one identify the final example?

Is chess being simulated in the final example in the same sense that it was being simulated in the second? Juul differentiates dichotomously between implementations, in which there is a one-to-one correspondence between game states in two physical instantiations of a game, and adaptations, in which there is not, but to simply identify the fictionally embedded chess game as an adaptation misses the larger import of implementations themselves. Juul exemplifies the import of implementations by noting that a game in which "two players take turns picking a number between 1 and 9" where "each number can only be picked once" and "the first player to have 3 numbers that add up to 15 has won" is a valid implementation of Tic Tac Toe in the since that every possible ludic action and game state in the first game shares a one-to-one correspondence with those in the second (557-564). Semiotically, however, these games are quite different; the ludic signifiers of one are numerical while those of the other are spatial. This cannot be captured by Ryan's typology, and quite often, the player engages in what Ryan describes as "the heuristic use of narrative" (200), in which, by making game-objects memetic, developers "efficient[ly …] facilitate the learning process" involved in beginning to play the game "rather than listing a series of abstract rules" (200). This is, of course, represented quite well in the tripartite semiotic system outlined above, while being absent from Ryan's own typology. Narrative signifiers can also be ludic signifiers that are also material signifiers; if an object is represented by a visual signifier on screen, what that fictional object does, such as a car, in Ryan's example (200), can also signify what the ludic object does, and how that ludic object is implemented materially. A fictional chess board is used to play chess, fictionally, even if it has not been materially implemented; the fictional, or narrative, ludic signifieds remain, while the real ludic signifieds are altered and may have narrative significance. It is my hope that this account fulfills Ryan suggestion that the heuristic use of narrative be investigated, even if it does

not also address the relation of narratives to video game incentive structures, the structure of narratives in relation to the video game itself, or the question of why video game rules and the events they create in fictional worlds are frequently inconsistent with the fictional world itself, though this last point will be explored in response both to Arjoranta's and to Juul's papers on fictional representation in video games.

Nitsche's scholarly contribution to the study of narrative in video games is an application of the concept of focalization, though this application is incomplete and fails to consider aspects of even Ryan's account of video game narration. According to Mieke Bal, focalization "is the represented colouring of the fabula by an agent of perception, the holder of the point of view" with the "seeing" that is colored to be "taken in the widest sense of perception and interpreting" such that it "constitutes the *object* [emphasis in original] of narrating" (12). This may not immediately seem far from Nitsche's explicit formulation, which he also takes from Bal, "defin[ing] *focalization* as 'the relationship between the "vision" the agent that sees [sic], and that which is seen" (1), but it is far from his application of the concept, which lacks an attention to focalization as the constitution of narrated objects, the realm of perception and interpretation of those objects, and the goal, the object, of narration itself. Focusing instead on the status of focalizers as internal or external to the player-character and ignoring the possibility of embedded focalization – that is, the state of focalization created by another focalizer just as a narrative may be created within a narrative by another narrator (Bal 22) – or doubled focalization – that is, the state of focalization in which focalization and focalizer vary ambiguously in terms of synchrony, character, et cetera (Bal 54) – Nitsche "argues, that camera entities – much like Bal's *focalizers* – [can] become detached from the event creating entities and operate in the narrative situation that generates the perspective to [sic] the game world" (2). The failure of Nitsche's account as it

relates to embedding or doubling is what leads to the difficulty of confronting the example from *Max Payne* in which "the camera," representing an external focalizer, "still looks *at* the hero," while what is shown is "seemingly filtered through his eyes" (3), as Max himself is an embedded, character-bound focalizer.

Through this focus, Nitsche also reduces focalization to "the visual presentation" of the video game (3), even when discussing the ways in which video game "*focalization* [emphasis in original] includes interactive options while interpreting the space and assisting the player" such that they "receive an articulate vision" of the game space (2). To Nitsche, the interactive options included in *Super Mario 64* that qualify as focalization are not the options given to the player to control the player-character and interact with the video game environment, that is, not the options that constitute the objects of the game world, i.e. the objects of interaction. Instead, "the player's decisions (e.g. controlling Mario's maneuvers)" are said by Nitsche to *shape* the focalization along with "rules defined in the system" that restrict possible camera movements (2). Despite this, Nitsche does acknowledge that focalization can be "seemingly filtered through [the] eyes" of the focalizer in a way that reflects perception rather than simply reflecting spatial positioning, doing so through reference to a moment in *Max Payne* when the supposedly external focalization, in the form of an over-the-shoulder camera angle, reflects an altered perception internal to the player-character, not an objective, fictional world (3), or in Bal's terms, not the fabula. This form of focalization is, of course, easily understood through the concept of embedding: an external focalizer embeds the focalization of Max Payne who focalizes the fictional world, just as Bal describes in the literary case (18-19). Contrary to Nitsche's singular focus on visual presentation, however, to understand all video game phenomena narratologically requires focalization, and the attendant phenomenon of motivation, or granularity as it is referred

to by Arjoranta (709), to be present on the level of interactive affordances and represented existents of the fabula as well as their mediated sensory representations. Similar issues are present in Arjoranta's approach.

In Arjoranta's "Narrative Tools for Games: Focalization, Granularity, and the Mode of Narration in Games," focalization is said to be "the point of view things are seen from" that can include "evaluations, judgements, or feelings" (700). Arjoranta further makes use of Genette's categories of perspective: zero focalization, in which "the story is not focalized into a character" (700), external focalization, in which it is focalized into a character without access to thoughts and emotions, and internal focalization, which is focalized into a character and accesses thoughts and emotions (700). To illustrate these different focalizations in video games, Arjoranta discusses *Command & Conquer* as a video game with zero focalization, *Dawn of War II* as a video game with internal focalization (701), and *Half-Life* as a game with external focalization (702). Arjoranta further suggests that video games have a unique character-bound focalization that is "embodied in the physical perspective of the character being played but does not allow access to their mental landscape in the manner of internal focalization" (703). This last category, however, is problematic for the sense of focalization used to define the other categories, that of visual presentation, but reveals, as I intend to explore, the necessity of a different sense of focalization or the development of a new, but related, term as it relates to interactive affordances and procedurality. In order for the category of embodied focalization to exist, focalization must take on the role of specifying interactive affordances, as without the specification of interactive affordances, embodied focalization would be nothing more than a form of external focalization with an embedded character-bound focalization dictating field of view, level of detail, et cetera, and yet, though he does acknowledge, in a novel way, the game's user interface as integral to

focalization (704), Arjoranta does not consider the specification of interactive affordances an aspect of focalization, but rather solely an aspect of narration.

Arjoranta does, however, introduce control over interactive affordances and represented existents from the fabula into his distinction between "modes of narration" that divides "narrating characters to teller characters and reflector characters" (706). Unfortunately, this distinction is unstable enough that not only does Arjoranta equate teller and reflector to "narrator and focalizer" respectively (706), thereby eliminating the status of the reflector as a narrating character, but he also reaffirms that "a reflector character is not a narrator" (707) at all shortly thereafter. The introduction of interactive affordances and represented existents from the fabula into this concept of narration itself comes in the form of examples from *Call of Juarez: Gunslinger* and *Dragon Age 2* (707). In the first case, Arjoranta describes the player-character of *Call of Juarez: Gunslinger* as an unreliable narrator, noting particularly that "Indians turn into bandits in the middle of a fight" and "a duel already won never happened" when the player-character's "narration is questioned" (707). In the second case, Arjoranta notes that in *Dragon Age 2*, the player is briefly allowed to play as a more powerful and hyperbolically depicted version of the player-character who is reduced to the player-character of the fabula as the embedded "exaggerating narrator" is "coerced to remain closer to the truth" (707). In each of these cases, an embedded narrator fabricates or embellishes the events of a fabula and in doing so, particularly in the case of *Dragon Age 2*, shows the ludic signified of the game not to be signifiers of the frame fabula itself.

The most interesting discussion of Arjoranta's, and the discussion that most clearly reflects the considerations of the tripartite semiotic approach to video games discussed above is his discussion of granularity (14), or what Bal would call motivation (27). Bal defines motivation

as “the ways in which descriptions are inserted” as brought about by “speaking, looking, and acting” (27). She considers motivation “a function of focalization” (27) and notes that it “occurs at the level of text when the character itself describes an object, as a character-bound narrator; at the level of story [or narration/narrative] when the vision of the character supplies the motivation; and at the level of fabula when the actor carries out an action with an object” (28). In his discussion, Arjoranta suggests that granularity belongs to visuals, “textual description, sound[,] and simulation” (710), connecting level of granularity in a negative correlation to mediation: the more granularity, the less mediation (710). Arjoranta suggests that what games “choose to simulate […] is usually associated with the genre and theme of the game” (710), but he also entertains the, misguided, concept that granularity is a signifier of the fabula of a game. In a discussion of how food functions ludically in *The Elder Scrolls V: Skyrim*, Arjoranta makes the argument that, given the way food firstly, benefits the player less than potions, secondly, is unnecessary for the player-character’s survival, and finally, is farmed by inhabitants of the game world, the player must make one of two readings: either nutrition functions radically different in Tamriel, that is the story-world of *Skyrim*, or the game’s world is incoherent in Juul’s terminology and “has different rules for the protagonist than for the rest of the population in order to accommodate the needs of playability” (711). In the first case, Arjoranta considers the ludic signified as a narrative signifier: food is less helpful, unnecessary to eat, and can be consumed in copious amounts to no ill effect in the game, so therefore the same is true in the fabula. In the second case, Arjoranta does not consider the ludic signified to be a narrative signifier: the way food functions in the game has no bearing on the way food functions in the fabula. Because Arjoranta analyzes granularity and focalization separately, the consideration that the way food function in the game may in fact be motivated by the perspective of the player-

character in the way described previously in the case of the simulated fictional chess game is not considered, even if it may not be entirely suitable to this case.

To follow Arjoranta's suggestion, however, Juul's typology of fictional worlds in games from *Half-Real: Video Games between Real Rules and Fictional Worlds* merits reformulation. Juul identifies five "main types of games" as they relate to fictional worlds (1239): abstract games in which the entirety and components of the game are not mimetic, iconic games in which the components of the game are mimetic but not its entirety (1241), incoherent world games in which the entire game is mimetic but some components are contradictory or unexplainable as mimetic (1248), coherent world games in which "nothing prevents us from imaging [their fictional world] in any detail" (1249), and staged games "where an abstract or somewhat representational game is played in a more elaborate world" (1250). He elaborates on these categories in "On Absent Carrot Sticks: The Level of Abstraction in Video Games," which deals particularly with the issue of granularity or motivation. According to this article, "all content in a representational game will […] fall into one of three categories" (1), fiction implemented in rules, fiction not implemented in game rules, or rules not explained by fiction (1), corresponding to the game types of coherent world games in the first category, both incoherent and coherent world games in the second category, and incoherent world games in the last category. The fact that incoherent world games and coherent world games may be identified as their type each while presenting more than one of the content categories that Juul identifies is a clear weakness of the typology. For example, in *Half-Real: Video Games between Real Rules and Fictional Worlds,* Juul notes that *Donkey Kong* is an incoherent world game because it includes a mechanism through which Mario receives three lives and extra lives at various scoring intervals, returning to the challenge even after "being hit by a barrel, by a fireball, or by an anvil [that]

should reasonably be fatal" (1212). In other words, *Donkey Kong* includes a rule not explained by fiction, and is therefore incoherent. In the same book, Juul notes that *Counter-Strike* is also an incoherent world game, because "two teams compete in a number of ontologically unconnected fictional worlds" (1538). It is unclear why this would make *Counter-Strike* an incoherent world game. If the presence of ontologically unconnected fictional worlds renders a game's fictional world incoherent, would all games with multiple endings fall into this category? Such a conclusion seems unlikely to be Juul's intention, especially when the same descriptor is used in reference to the game *Pengo* in which transition screens between levels show the eponymous penguin dancing (1371-4). It seems that *Pengo* is considered incoherent because there is no fictional explanation for why the same character, the penguin, would be in separate worlds in a particular sequence. Compare these identifications with that of *Skyrim* as an incoherent world game thanks to its supposed representation of contradictory fiction – food is relatively worthless but farming is a widespread and worthy occupation – and it seems the category of incoherent world games may not be coherent or useful, even if the later identification of content categories is.

Of course, Juul's content categories in "On Absent Carrot Sticks: The Level of Abstraction in Video Games" are incomplete and can perhaps be further analyzed considering the tripartite semiotic structure suggested earlier. Rather than focusing particularly on the realization of fiction, it may be beneficial to categorize the interpretation of phenomena as signifiers. Video game signs may be narrative, ludic, or material, so 8 binary combinations are possible, as shown in figure 1 below.

Figure 1 Interpretations of Phenomena Based Upon the Presence of Signifiers

Typ	Narrative	Ludic	Material

e			
1	+	+	+
2	+	+	-
3	+	-	+
4	+	-	-
5	-	+	+
6	-	+	-
7	-	-	+
8	-	-	-

Juul's content categories - rules not explained by fiction, fiction implemented in rules, and fiction not implemented in rules - correspond to type 5 and 6 phenomena, type 1 and 2 phenomena, and type 3 and 4 phenomena, respectively. It is important to note that ludic signifiers could, and perhaps should, be further analyzed into signifiers of rules, goals, or states, and narrative signifiers could be further analyzed into signifiers of the narration, focalization, or fabula. Type 7 phenomena are often referred to as glitches, type 6 and 2 phenomena include failed implementations in abstract and narrative games respectively, type 5 phenomena include character levels, some phenomena known as exploits, and most phenomena in abstract games, type 4 phenomena include some room descriptions without objects or exits in text-based adventure games, type 3 phenomena include some skyboxes displaying distant lands, and type 1 phenomena include most actions in narrative games. Interestingly, only those phenomena with a ludic signifier and without a material signifier – types 2 and 6 – are unique to video games.

Important to remember is that, in this typology, phenomena are identified by their interpretations by the player which are subject to change given the presentation of additional signification. For example, in *Morrowind* non-player characters can recite descriptions of various diseases that note that the player-character may contract each disease from specific creatures in the game-world. These descriptions may be initially interpreted by the player as a signifier of the fabula, – these creatures carry these diseases – a signifier of the game, – the associated disease status may attach to the player character after contact with these creatures in-game – and a signifier of the software, – the software has been programmed to present me with the appropriate ludic and narrative signs indicating that this is the case. The initial interpretation of this phenomenon is therefore type 1. However, it is not the case that each disease description in the game accurately identifies the carriers of the disease and, in fact, some diseases are present in the game's code and data but cannot be contracted by any means in the game itself. After never having contracted some diseases, having contracted others from sources unidentified by the non-player characters, and having contracted others still from the sources identified by the non-player characters, the player's interpretation is bound to change. One possible interpretation is that these descriptions are not a signifier of the fabula *and* an embedded narration focalized by the non-player character but simply a signifier of the embedded narration alone. If this were the case, the description has been reinterpreted as a narrative signifier of the ignorance of the non-player character and not as a ludic or material signifier, becoming type 4. Alternatively, the player may believe that each creature listed in these descriptions was intended to carry the mentioned diseases, but the developers improperly implemented this feature. If this were the case, these descriptions are still interpreted as signifiers of the fabula and game, but not of the software, becoming type 2.

One benefit of such a typology is the ability to distinguish between non-narrative phenomena arising from a mismatch of motivation on the narrative and ludic levels and non-narrative phenomena arising from other sources. For example, Juul notes both that Donkey Kong is an incoherent world game due to the presence of lives (1219) and that "incoherent fictional worlds are often emergence games" where "the incoherence of the fictional world is less likely to be experienced as a problem" when compared to "progression […] game[s]" (1736). Incoherence derived from emergence, in Juul's sense, is caused precisely by a mismatch of motivation on the narrative and ludic levels and is exactly the phenomenon identified by Arjoranta in *Skyrim*'s representation of food. In *Skyrim*, the fact that food can be eaten at any quantity in an infinitely short fabular timespan with the ability to heal grievous wounds and with no negative side effects is not a signifier of the fabula but is a signifier of the game and the material underlying the game. Alternatively, the fact that food benefits the player's health is a signifier of the fabula, the game, and the underlying material. This difference, that to one degree of granularity or motivation the phenomenon is both a narrative and ludic signifier but at another degree of granularity or motivation the phenomenon is only a ludic signifier, is significant and defines a subtype of type 6 phenomena that I have previously referred to as exploits. In this way, exploits are an epistemologicallly privileged phenomenon in that the lack of motivation in simulating a phenomenon can lead to emergent behavior in the simulation that transgresses the fictional or narrative signification given to elements of the simulation.

Thus far, I have clarified applications of literary narratology to the study of video games in the articles of Nitsche and Arjoranta through reference to Mieke Bal's *Narratology: Introduction to the Theory of Narrative* while connecting these applications implicitly and explicitly to the conclusions made by Juul in both his book, *Half-Real: Video Games between*

Real Rules and Fictional Worlds and his article "On Absent Carrot Sticks: The Level of Abstraction in Video Games." Additionally, I have sought to rectify oversights in Marie-Laure Ryan's application of cognitive narratology to video games in her article "Computer Games as Narrative" through reference to the concepts of focalization and motivation as defined by Bal and an account of video games as a tripartite semiotic system, in which signs may signify on the narrative, ludic, or material level. I have additionally shown how this semiotic account applies to specific examples, some of which are hypothetical and others which take *The Elder Scrolls III: Morrowind* as a case study. With this basic system in mind, what follows will identify the deficiencies of Jan-Noël Thon's transmedial narratology in addressing the discoursal relevance of the form of the signifier, or the manner of implementation in Juul's terms (536), the deficiencies of Kendall Walton's account of fiction, as represented by Grant Tavinor, in addressing video games, as well as that of Espen Aarseth's response to this account in "Fictionality is Broken: Ludo-Realism and the Non-Fictionality of Game Worlds." These insights will then be expanded by taking into account the difference between primary and secondary sign production, as identified by Espen Aarseth in *Cybertext: Perspectives on Ergodic Literature* (40).

In "Transmedial Narratology Revisisted: On the Intersubjective Construction of Storyworlds and the Problem of Representational Correspondence in Films, Comics, and Video Games," Thon develops a transmedial narratology, noting that the term can refer both to "the study of the realization of narrative meaning in various media" and to the identification of "transmedial strategies of narrative representation that manifest themselves across a range of narrative media" (287). Though Thon is not committed to either conception of the term, most of Thon's exemplifications of transmedial narratological concepts in the article deny the importance

of anything but narrative signs, even when the form of the narrative signifier is itself significant. Rather than concerning transmedial narratological study primarily with the "mental models of the storyworlds", or fabulas in Bal's terminology, "that recipients construct on the basis of a given narrative representation" (290), perhaps transmedial narratological attention should instead, or rather further, investigate the ways in which the unique form of narrative signifiers in various mediums, such as the status of many narrative signifiers in video games as ludic signifieds, allow particular discursive, epistemological, and rhetorical strategies. This is not a stance of media relativism in which "the toolbox of narratology must be rebuilt from scratch for every medium" as Thon quotes from Ryan (288), but rather an invitation for astute scholars to turn their attention to the implication of their findings in a broader context.

The first concept Thon introduces in the article is that of the storyworld. According to Thon, rather than being a purely mental phenomenon, a storyworld is an "intersubjective communicative construct" (289) such that "recipients may […] construct more or less accurate or appropriate mental models of a storyworld based on one and the same narrative representation" (290). Thon thus defines storyworlds as "normative abstractions about ideal mental representations based on actual media representations" (290) that "consist not only of existents, events, and characters but also of the spatial, temporal, causal, and ontological relations between these elements" (291). In a bold claim, Thon also suggests that while

> …the medium-specific strategies of narrative representation employed […] appear to be particularly salient with regard to the representation of local situations […] the ways in which these situations are located within the global storyworld as a whole – that is, the ways that the spatial, temporal, causal, and ontological relations are (or are not) established between various represented situations – generally appear to be more

> transmedial, since recipients […] take their cues from what is being represented as opposed to specific elements of the representation" (292).

Setting aside the concept of the storyworld, which differs insignificantly except for its identification of the normative element assumed in other definitions of the fabula, it would appear from the previous examples shown within video games, that this is not the case in that medium.

Simulations are both necessarily mimetic and specifically capable of representing spatial, temporal, causal, and ontological relations, and in the examples surveyed above these representations are shown to be taken as narrative signs. As an additional illustration, take the example of attacking an enemy in *Morrowind*. When the player inputs an attack in *Morrowind*, an attack animation is displays in which the weapon object moves towards the target and may even connect with the target. Occasionally, the target will emit a sound, play an animation, a yellow bar on the left side of the screen will appear shorter than before, and a particle effect of blood or viscera appears at the site of contact. In the combat system of *Morrowind* each attack has a calculated chance to hit the target dependent upon a variety of different variables and each time an attack input is given, a pseudorandom number is generated to determine whether the attack hits the target or not. There is no sign of this chance to hit in the game, and instead, it must be inferred by the lack of damage dealt to the target, as signified by the yellow bar to the left side of the screen remaining the same size, by the lack of an emitted sound, by the lack of a played animation, and by the lack of a bloody or visceral particle effect. Novice players are often confused by this set of signifiers. They see their attack land on their target, take that as both a ludic signifier that damage should be done and a narrative signifier that the blow has landed. These novice players assume that the lack of damage done is a signifier that there is no

implementation in the software of the ludic signified they have identified. In this case, the novice player interprets the phenomenon as type 2, and may abandon the video game. Players who have either read the game manual or played the video game long enough understand there is a chance to hit mechanic signified by the absence of damage when an attack visually lands on a target but none of the signs of damage accompany it. These players interpret the visual of the attack landing on the target as a ludic and material signifier, but not a narrative signifier, when that attack does not elicit the signs of damage; that is, they interpret it to be a type 5 phenomenon. These players instead assume that, due to their character's skill or abilities or sheer bad luck, the attack that visually connected has missed or landed without significant damage. When, however, that attack does elicit the signs of damage, these players interpret it to be a type 1 phenomenon in which their character has landed an effective blow, they have directed that blow effectively, and the software has registered that blow correctly. In other words, in this scenario the visual representation, what Espen Aarseth might term a secondary sign production (40), which was made the center stage of narratological conversation in the discussion of some literary narratologists, is subordinated to the primary sign, "the code object" in Aarseth's terms (40), and if the recipients take cues from what is being represented, physical combat, rather than from the specific elements of that representation and especially those ludic elements regarding causal relations, in this case, chance made dependent upon weighted variables, their mental construction of the storyworld will be less felicitous. A similar oversight plagues Marissa D. Willis's discussion of playthrough truths, those things that are narratively signified in a playthrough of a video game, and video game truths, those things that are narratively signified by a video game as a cohesive whole (52-3). By analyzing the signification into an extrinsic production in the playthrough and an intrinsic production in the video game, Willis seemingly ignores Aarseth's

conclusion, supported by the example outlined above, that "the internal, coded level […and] the external, expressive level […] are equally intrinsic, as opposed to the extrinsic status of a performance of a play vis-à-vis the play script" (Aarseth 40), even as she identifies the facts that "video games [as material] themselves, apart from their playthroughs, do not serve as props in games of make-believe" (49) and relate more to serial fiction than to plays (50).

Next, Thon discusses the Marie-Laure Ryan's "principle of minimal departure" by which recipients "fill in the gaps" of a narrative representation "from their actual world knowledge" as it is conditioned by "various forms of medial and generic knowledge, or even a specific 'textual universe as frame of reference" (292). This completion of necessarily incomplete fictional worlds "also routinely 'ignore[s]' some aspects of narrative representations" which would otherwise, in the quoted words of Kendall Walton, "render the fictional world uncomfortably paradoxical" (Thon 293). This process, named the principle of charity by Walton, makes reference either to "external explanations related to (hypothetical) authorial intentions or (transmedial as well as medium-specific) representational conventions before trying to imagine contradictory […] storyworlds based on […] internal explanations" (293). It is for this reason that Thon makes a distinction between presentational and representational aspects of narrative representations (293). These concepts are not themselves particularly problematic except in the manner in which they are applied by Walton, Thon, and others to eliminate the importance of the form of the narrative signifier. Take, for example, Walton's discussion of Shakespeare's *Othello* as quoted by Thon (294). In this discussion, Walton notes that Othello "is capable of improvising superb verse while distraught" even though it is "fictional that Othello lacks special literary talent" and that therefore the recipient, to use Thon's term, may "deny that fictionally those are Othello's words" and that Othello instead "utters an unspecific vernacular paraphrase of the

words" (294). Readers and viewers may, of course, take there to be a gap "between representing and represented character speech" (294), but that does not mean that it is insignificant to the narrative or insignificant narratively that character speech is presented, in order to be narratively represented, in the way that it is. Correlation between the syntax, word choice, or other structural aspect of speech from one event in a verbally represented narrative and another event in a verbally represented narrative is often significant even just in so far as it allows recipients to anticipate events that will follow, even if, and perhaps particularly when, that signification of structure is disrupted. Additionally, such a supposed gap may be evidence of focalization which is itself a narrative phenomenon and not outside the purview of a transmedial narratology. This failure of Thon's transmedial narratology is, of course, not limited to the verbal.

In a discussion of Charlie Kaufman's *Adaptation.*, Thon introduces the concepts of representation-by-origin, in which a pictorial sign is indexical of a real-world object whose fictional counterpart is signified, and representation-by-use, in which a pictorial sign is symbolic of a fictional object and indexical of a real-world object with no relation to the fictional object (296). For example, the film *Adaptation.* contains a lot of footage in which a figure indexical to Nicolas Cage at the time of filming appears and this figure represents the fictional characters Charlie and Donald Kaufman. In addressing this fact, Thon claims that "asking for an internal explanation of why Charlie Kaufman and Donald Kaufman in *Adaptation.* look like the actor Nicolas Cage […] would constitute what Walton calls" a silly question (300), and yet an actor of certain characteristics was chosen, and in using the same actor, in this case Nicolas Cage, to represent two separate characters, Charlie and Donald Kaufman, both of which are tasked at various points in the film with adapting a journalistic memoir into the film the recipient is now viewing, the events of the fabula are focalized in such a way that the characters blur together

indistinguishably even as they, assumedly, wrote the double role into the fictional script of the movie itself. In other words, in *Adaptation*., the use of Nicolas Cage to represent two characters is signified as fictional in such a way that it is an integral component of the storyworld, and beyond that signifies a specific relationship between the writer, the actor, and the work. When viewing *Adaptation*., it is not the recipient's desire to attempt to externalize or ignore the deliberate choice taken by the film's creators in casting the same actor and a specific actor, Nicolas Cage, in two roles in order to more clearly understand the narrative and, in fact, to do so would be to develop a less felicitous mental construction ignorant of the spatial, temporal, causal, and ontological relations established between various represented situations. Briefly consider, for example, whether a new version of *Adaptation.* in which Charlie and Donald Kaufman were played by different actors of different proclivities would evoke the same fabula.

In discussing video games, Thon turns to Juul's concept of incoherence, refusing Juul's view that the construction of a storyworld in incoherent world games is optional, noting that "what may appear to be incoherent (or even logically impossible) representations do not necessarily result in the intersubjective construction of incoherent (or even logically impossible) storyworlds" (306). This is precisely what the examples from video games referred to previously have been intended to show, in some cases making use, though far less extensively, of the principle of minimal departure and the principle of charity. More important in Thon's discussion, however, is the distinction between interactivity and non-linearity and the discussion of game-space and story-space (307). According to Thon, the term interactivity refers to the experiential result of those ludic actions the player-character is capable of undertaking without those ludic actions being narrative signifiers, while the term non-linearity refers to the experiential result of those ludic actions the player-character undertakes that must be ludic and narrative signifiers

(307). It is important to note that players may not appreciate ludic actions as non-linear when initially undertaken, but instead such actions are affirmed as non-linear by a ludic signifier of an achieved win condition, frequently in the form of a cutscene, save point, or credits sequence. Such a distinction between interactivity and non-linearity relies on narratological distinctions of the form made by Barthes between nuclei and catalyses (248). My preferred terminology for the distinction between the experiential result of ludic actions which alter the presentation of narrative nuclei and the experiential result of ludic actions which alter the presentation of narrative catalyses is interactivity and agency.

Finally, in his discussion of story-space and game-space, Thon notes that, though video games are frequently lauded for the indexical relationship between their story and game spaces, it is possible for this not to be the case, with *Diablo III: Reaper of Souls* "employ[ing] randomly generated game spaces that are rearranged whenever the player reloads the game" (307). In the case of *Diablo III: Reaper of Souls*, the presentation of the story-space appears to be under-motivated in relation to the game-space, producing a type 5 phenomenon. A similar issue of story- and game-space relation is evident in *Morrowind*. According to the fictional book *Guide to Vvardenfell* readable by the player and player-character in *Morrowind*, the dark elf, or Dunmer, tribes that live in the "dry, inhospitable wastelands surrounding the lower slopes of Red Mountain" are known as Ashlanders and are meant to be nomads who "hunt for game" and herd livestock despite "sparse grazing" (Howard et al.) In-game, these herds are absent and rather than being nomadic, the Ashlanders stay in restricted areas near permanent settlements or small tents next to campfires. Additionally, consider the absence of children from *Morrowind*. Both suggest that the game-space is indexical to the fictional island of Vvardenfell, but not to its contents, which are motivated through a particular focalization.

These faults of the cognitive narratological paradigm invoked by Thon as transmedial are, in many ways, replicated by Waltonian theorists. In Grant Tavinor's "Videogames and Interactive Fiction," he gives just such a Waltonian account of the fictional worlds of video games, identifying ludic objects as "fictive props" (25), which, as will be shown, is easily rebuked by Espen Aarseth. Additionally, Tavinor claims that one can contrast interactive engagement with a simulation "with the fictive engagement one has with a film or novel" in the sense that, when given interaction, the recipient's "epistemic access" to the world of the fiction "is [not] constrained by narration" (26). It is my hope that by this point in my elaboration such a notion has been thoroughly disabused; it is abundantly clear that the recipient's epistemic access to the world of the fiction is not only constrained by narration but constrained by narration constituted by the rules of the video game. To continue, Tavinor asks what he calls "a deeply ambiguous question," namely, "what is it to interact with a fiction?" (27). To interject, it is certainly *not* to interact with a game.

Consider the case of a tabletop roleplaying game, which Tavinor suggests should "be seen as [a] structural precedent for videogames" (34). The course of events at the table when one is playing as a character in such a game may follow something like this. The game master or referee describes a particular setting, perhaps narrating particular events in the setting or embedded non-player character speech. The player then responds to the game master with a potential course of action and a desired result, for example, "I take my sword and attempt to wedge it between the door and its frame to prevent them from locking us out." The game master then makes a determination as to what dice should be rolled, if any, and responds, based upon the result with another description and narration. In such an instance, what is the player interacting with? Consider contrastingly the case of combat in a tabletop roleplaying game. The game

master begins by asking all players in the combat to roll initiative, determining a turn order that did not previously exist within the game. The players then each identify from a set list of possible actions of varying outcomes related to variables representative of particular fabular states what they wish to do, being restricted to a certain number of actions in a turn. In such an instance, what is the player interacting with? Is it the same thing?

I will argue that in the first instance, the player is interacting directly with the fabula of the game, with that interaction being narratively and ludically coded by the game master while in the second instance, the player is interacting directly with the rules of the game by taking ludic actions which then results after narrative coding in set of innumerable realizations based upon motivation and focalization. In the first instance, the motivation of the player's narration of their action may be mismatched with that of the narrative and ludic code through which its outcome is determined, but that code is subordinate to the narration: it is not the case that the player's narration is discarded in favor of a more or less motivated or significant narration based upon the narrative code. In the second instance, the player's narration of their action can never be mismatched with that of the narrative and ludic code through which its outcome is determined: the player's narration will, almost assuredly, be discarded in favor of a more or less motivated or significant narration when the game master realizes the narrative code. To be narratively coded, in this sense, is to be reduced to nuclei by which differential outcomes are identified. In this way, a video game is never an interactive fiction, in which narrative signified serve as ludic signifiers and the recipient's epistemic access is unconstrained by the narration, but is instead, a game whose ludic signifieds serve as narrative signifiers such that epistemic access *is necessarily* constrained by the narration. According to Tavinor, "pantomime, *Dungeons and Dragons*, and importantly, childhood games of pretense, all derive their responsive malleability from the fact

that other people are props that are responsible for the fictive content of the game" (31), and it is this "malleability and creativity of a human mind" that the computer serves to replace. I invite Tavinor to investigate whether it is the narrative coding of the game master or the extensible ruleset itself, particularly the ruleset for combat, that has been implemented in computer role-playing games, such as *Morrowind*, and to explain the benefit of such a model in explaining the role of the computer in multiplayer role-playing games, such as *World of Warcraft*, in which other players are introduced while complex, calculable rules remain. I find little benefit myself.

The difficulty with which Tavinor attempts to separate these two representational and interactive forms derives from his conflation of the fictive prop with the video game object. According to Espen Aarseth in his lecture entitled "Fictionality is Broken: Ludo-Realism and the Non-Fictionality of Game Worlds," the concept of a game object as prop conflates the role of the prop as a narrative signifier of a fictional signified with the role of the game object as a real ludic signified to which a fictional and ludic signifier are attached (22:25-26:33). For example, a video game door is, in Aarseth's terms, a ludic signified that causes collision and can prevent movement fpr specific other ludic signifieds, and it is signified by its visual representation while that same visual representation is a signifier of a fictional object that may or may not be signified by the ludic signified, depending on the ludic signified's behavior. A video game door that cannot be kicked in, burnt down, et cetera, but can be swung through player-characters or poked through with firearms does not signify a fictional object with those same characteristics, it is a failed prop in Aarseth's terms, but it does signify a game object of those characteristics that can be directly experienced by the player (28:18-28:34). While this is a persuasive argument, the reduction of the ludic signified to the material leaves unaccounted for many prevalent, if not

important, phenomena, including the immediately familiar and identifiable glitch, and it is for this reason that I suggest the tripartite structure rather than the bipartite.

To summarize the novel narratological framework outlined in this article, video games consist of three semiotic levels, that of the narrative, the game, and the system – the mimetic, ludic, and material levels – and in any given phenomenon presented in a game, a signifier of that level may either be present or absent, resulting in 8 distinct phenomenal types as interpreted by the player. The concept of focalization and its attendant phenomenon of motivation are signified not only in the sensory presentation of the video game but also in its rules, win conditions, and game states. The appearance of incoherence in the fictional world of video games is often a result of motivation and reveals what I have termed ‘the exploit’ as a privileged epistemic form. The focus of transmedial narratology belies the importance of the form of narrative signifier, especially as it relates to focalization. Video game interactions do not occur at the level of the fabula through narrative and ludic coding, as in tabletop roleplaying games in which the game is subordinated to the narration, but, instead, occur pre-coded at the level of narration and must be interpreted as narrative by the player. Finally, given this understanding of video game interaction, all interactions can be interpreted by the player as agential, in the sense that they cause the production of narrative nuclei, or interactive, in the sense that they cause the production of narrative catalyses.

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