

Metareferentiality through in-game images in immersive simulation games

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Abstract*

Digital games have a tenuous relationship to reality; in most cases, they are rather simulacra than simulations, offering a simulation-like situation that does not relate to any preceding reality but creates a virtual world preceded only in other fictional or virtual works. The visuals of mainstream, Triple-A games counteract this ontological disconnect through an overabundance of detail and flourish in a perennial struggle for verisimilitude. This paper discusses two examples which, while generally adhering to this convention, introduce elements of subversion into their visual logic. It will show that there are various metaleptic ludic devices – such as virtual reality environments within virtual worlds and reality-changing paintings – with which contemporary digital games reflect subtly upon their own relationship to reality, and upon the player’s oscillation between agency and powerlessness.

CCS CONCEPTS

• **Applied computing-Media arts** • *Applied computing-Fine arts*

Keywords

Metalepsis, Metareference, Defamiliarization, Dishonored 2, Prey, Looking Glass, Agency, Genre

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Introduction

Games are culturally situated artefacts. Coming from a humanistic perspective, studying them as such entails that their allusions and subtexts are analyzed, which regularly provokes

suspensions of over-interpretation, or, more radically, declarations of the absolute subjectivity of all interpretation. To show that an artefact encourages recipients to pay attention to specific aspects of itself, it has been an established practice since the inception of Russian Formalism to point towards moments of rupture, alienation, or estrangement. What these concepts share is the idea that many elements of an artefact are conventionalized in their content or mode of representation to the point where they become transparent or even invisible, and that there are aesthetic devices to counteract this.

There are many such devices, yet one of the most ubiquitous and powerful are in-game images, an as-of-yet largely understudied phenomenon in digital games. By in-game images, I mean pictures (and to a lesser degree films) in digital games which are represented as pictorial material within the gameworld, as opposed to textures, skins, etc. which are semiotically coded as natural surfaces of objects. The most common types of in-game pictures are paintings, photographs, commercial posters and billboards in gameworlds. In many, if not by now most games in virtual world, various types of images act as illustrations of the morals and aesthetics of their worlds, and more often than not, they carry more than the apparent, face-value meaning.

It is surprising that there is relatively little research on this area. On the one hand, many closely connected phenomena have been studied at some length: digital games’ indebtedness to art-historical traditions [36], in-game photography [21] [46], art games and game art [50] [52], with German scholars even declaring a ‘visual turn of game studies’ [7] [25] nearly ten years ago. On the other hand, there are plenty of games that not only prominently feature in-game images, but make interaction with them both the central game mechanic and a structural metaphor. Especially paintings quite frequently feature prominently in games, e.g. *The Unfinished Swan* [22] and *Layers of Fear* [8], and in these as in other examples, the ontological status of images is often quite challenging: not only can they be the actual subject matter of both narrative and gameplay, they function as gateways to other parts of the gameworld (like the warp paintings in *Super Mario Odyssey* [44]) or contain complete world, such as the Painted World of Ariamis in *Dark Souls* [19] (that can only be entered if the Peculiar Doll, found only by backtracking to the starting position of the game, is carried by the avatar).

We are still nowhere near having a robust, general understanding of representation in digital games, and it would therefore be preposterous to attempt a functional and/or aesthetic definition of in-game images here. This article focuses

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on one function of in-game images, their meta-referential capabilities. What I want to demonstrate is that in both analyzed example games, in-game images are used to blur the line between reproduction and production of reality. Whereas in reality, we have traditionally accepted that images can be referential or illusionistic (trompe-l'oeil), digital technologies like CGI, VR and digital games increasingly confront us with images that actively produce (virtual) realities, calling into question many established ways of thinking about the ontologic status of images. Both games render this media-technological moment of instability tangible in the use of their in-game images, defamiliarizing not only those images themselves, but by extension the whole apparatus of the games they are embedded in. As such, in-game images are, within the scope of this paper, particularly interesting as defamiliarizing devices that allow games to reflect upon themselves, or more specifically, their individual as well as generic aesthetic possibilities. To outline this dimension, questions of ontology and referentiality will be discussed only in as much as necessary, paying particular attention to the approach to metareferentiality developed by German media theorist Werner Wolf as well as visual theories of Edmund Husserl's and Nelson Goodman's.

These theories will be applied to two especially intricate examples of digital games which use in-game images. Both *Dishonored 2* [5] and *Prey* [6] foreground the tenuous relationship between digital games and the reality they depict/simulate, and the simultaneously empowered and powerless subject position of the player. While these issues might seem to be disconnected at first, I will show that the two examples construct their gameworlds, gameplay, and narrative in codependent ways that thematize the role of the player, and that they do so prominently through their use of in-game images.

To make this argument, I will first situate the two games within a genre- and design-context that frames the role of their players and connect them to theories of agency and philosophy of action. The next section gives an overview of the use of in-game images, followed by a section connecting simulation, virtuality, and referentiality with visuality to enable a more profound discussion of the games' aesthetics. These theoretical considerations will then be used in analyses of the two examples in the final section.[†]

***Dishonored 2* and *Prey* and the 'immersive simulation' tradition**

Dishonored 2 and *Prey* were released within less than a year of each other in 2016/2017. They were both developed by Arkane Studios, a developer with studios in France and the USA, which is part of the ZeniMax Media corporation that also owns

[†] Given that this argument already touches on several central theories of game studies, I have decided to treat the player-avatar relationship as well as questions of immersion as subordinate for the purposes of this paper. With regard to the relationship between the player and her representation in the gameworld, I'm following Daniel Vella's distinction between the ludically functional avatar and the fictional player-character [54]. In terms of immersion, I subscribe to Gordon Calleja's view of the phenomenon as a combination of different forms of engagement and incorporation [11].

publisher Bethesda Softworks. Arkane's founder Raphaël Colantonio and Harvey Smith were game directors on the two titles, with Smith overseeing the development of *Dishonored 2* at the French branch and Colantonio and the American team in charge of *Prey*.

The two games in question can be contextualized both within their narrower generic frame of immersive simulations and the wider of Triple-A action games as representative of a recent trend towards more daring and mature projects. Following the financial and critical success of their mainstays, the Elder Scrolls- and Fallout-Franchises, Publisher Bethesda has backed several games that were ambitious in unexpected ways. More specifically, though, both games belong in the tradition of what Warren Spector, one of the 'founding fathers' of the genre, calls "immersive simulations" [51], also known among fans as "451 games" for their recurrent use of that number – a reference to Ray Bradbury's novel and its dystopian view of the future – as a code for safes and locks. Although superficially similar to computer roleplaying games [55] and First-Person Shooters [56], they are usually not understood as belonging to either genre, but are described as hybrids [12, p. 138] that should be considered a genre of their own [45, p. 154].

Discussing the generic framework of the immersive simulation genre is relevant here because it is unusually well-defined in several respects, and because the specifics of *Dishonored 2* and *Prey* only emerge in the context of these parameters. Only a small number of games is classified as belonging to the genre, most of which were developed in a handful of studios: Looking Glass Studios pioneered the genre in the 1990s with the first two *System Shock* [37] and *Thief* [38] games, and its key creatives went on to form other studios, perfecting upon the genre formulas there. After developing the CRPG *Ultima Underworld: The Stygian Abyss* [9] under their original name BlueSky Software, Looking Glass and id games began an "arms race" [41] in the development of First-Person Shooters. While id software perfected fast-paced action in its successors to *Wolfenstein 3D* [26] and *Doom* [27], Looking Glass were aiming at more complex and sophisticated game systems. The core of their game design philosophy was to give the player different options to overcome a wide variety of obstacles in complex gameworlds. Eventually perfected by Ion Storm – the second major studio in the history of the genre – in the first half of the 2000s with the first two *Deus Ex* [28] games and the third *Thief* [29] title, the emphasis of the impact of player choices on the gameworld became crucial. To this end, *Deus Ex* introduced to features nowadays strongly associated with the genre, a branching narrative and the option to play (mostly) non-violently. These principles are clearly spelled out in *Dishonored 2*, where the first loading screen displays the hint: "There is no 'best' way to play: Focus on combat or stealth, play brutally or ghostlike – the world will react" [5].

After the eventual demise of Ion Storm, a number of other developers continued the legacy of immersive simulation games, yet in all these companies, key creatives with a background at Looking Glass were responsible for the ongoing development of the genre [53, p. 188], including not only Warren Spector, Doug

Church, Harvey Smith, Ken Levine, but even Arkane Studios' founder Raphaël Colantonio, who early in his career had worked in QA for the original *System Shock*. As such, the immersive simulation genre appears almost as the equivalent of a school of game design, preoccupied with probing the depth of not only immersion, but, maybe to a greater degree, agency.

The immersive simulation genre quite literally epitomizes Janet Murray's original definition of agency as "the satisfying power to take meaningful action and see the results of our decisions and choices" [43, p. 126]. Doug Church, one of the lead developers of *Looking Glass*, proposed a similar concept (apparently unaware of Murray's), in which he outlines two key factors for good game design: firstly, the player should be empowered to formulate intentions for actions within the gameworld: "This process of accumulating goals, understanding the world, making a plan and then acting on it, is a powerful means to get the player invested and involved. We'll call this 'intention'" [13]. Secondly, there needs to be a "clear reaction from the game world to the action of the player" [13]. These reflections upon agency show the level of awareness for the phenomenon at *Looking Glass*, which is palpable also in the fact that Church's description is already quite close to the outcome of Wardrip-Fruin et al.'s much later literature review on the topic, which defines "agency as a phenomenon, involving both the game and the player, that occurs when the actions players desire are among those they can take *as supported by an underlying computational model*" [57, p. 7, emphasis in the original]. While the differences are subtle, Murray's vision of agency is more in line with consequentialist philosophy of action [15], insofar as it characterizes the relationship between player and gameworld through an ability to cause desired effects. Church's (and, it might be fair to say, *Looking Glass Studio*'s) approach is closer to intentionalist philosophical positions [3] and decision theory [47], in that it distinguishes between intentions and decisions, acknowledging that actions are often not based in choices, and that outcomes might not always be caused by intentions. In other words, already in the early days of the immersive simulation genre, its creators were aware that giving the player a desired outcome is less important (and potentially less powerful) than allowing her to act in different ways that might all turn out to be ineffective or irrelevant [14].

In-game images

Dishonored 2 and *Prey* are, at the time of writing, the latest examples of the genre of immersive simulations. Developed almost in tandem within the same studio, they share numerous design elements and refer to each other in many small, throwaway details (such as both offering the player character to replenish health with pickled eel snacks). Their interdependence goes much further, though, and the different ways in which they employ in-game images is one of the elements that highlights this conversation about their design principles and the role afforded to their players.

In-game images are, of course, a ubiquitous phenomenon in contemporary games in virtual worlds. Diegetic visual aids

(maps, street signs, evidence boards etc.) as well as world-building elements (photographs, advertisements, political posters, medical imagery (x-rays), newspapers and magazines etc.) tend to be scattered around in contemporary gameworlds and are used to great effect both in other immersive simulations (e.g. *Deus Ex: Mankind Divided* [17]) and First-Person Shooters (e.g. *Wolfenstein II: The New Colossus* [40]).

Dishonored 2 and *Prey* go beyond this conventionalized use of in-game images both in terms of scope and use. Both games display excessive amounts of the types of in-game images found in other games, but also foreground one specific type.

In each example, one in-game image (or, in a way, imaging technology) is of elevated importance. *Dishonored 2* has a painting entitled "The world as it should be", which is not only a work of art, but a magical artefact with the power to manifest the painter's vision of the world as reality. *Prey* features an augmented-reality technology called 'Looking Glass', which is obliquely used throughout the game's narrative to call into question the ontological status of events, eventually exposing all events of the game as simulation run in the gameworld.

In-game paintings in *Dishonored 2*

The narrative of *Dishonored 2* revolves around a political coup in the steampunk city Dunwall. In the beginning of the game, the villain of the narrative, Delilah Kaldwin, step-sister of the former empress, stages a coup against the heiress to the throne. The player can choose to play as Emily, the dethroned heiress, or her father and bodyguard, Corvo, to try and win the realm back. Delilah is a powerful witch, and to solidify her reign, she prepares a spell which will form reality according to her ideals and wishes. It is the execution of this spell that the whole game builds toward, and it is intimately connected to in-game images.

In *Dishonored 2*, the visual arts permeate both the physical space and the societal discourse of the gameworld. Every house and apartment is filled with framed paintings, be they hung, stacked, piled, or displayed in glass cases. Statues and figurines are just as common, especially if one includes the countless animal trophies, taxidermied birds, reptiles, apes, etc., as well as the industry and status objects (e.g. harpoons or whaling ship models) in display cases. Even early photographic technologies are used in the steampunk world of the game, with press photographs and carefully staged, often signed black-and-white portraits hung in people's houses. All key figures of the plot practice visual arts, be it scientist-inventor Anton Sokolov or politician Luca Abele, with Delilah being singled out as the most gifted of them all.

Among all those visual arts elements, paintings occupy a privileged position. They are generally representational, tending towards a proto-expressionist romantic style (reminiscent of Goya and Turner), and serve more than a mere decorative function. Many of them have titles attached to their frames that connect them to the events and history of the game by explicitly referring to specific places or people, characterizing at the same time the art practices of the gameworld and contributing to the worldbuilding. This is even more pronounced whenever the player characters comment upon an image, stressing the

individual relevance of the depicted objects in their personal history. When player character Corvo Attano recognizes a locale from the previous game, *Dishonored* [4], in a painting and asks himself “will it get as bad as those times” (Fig. 1), the player is invited to reflect upon her memory of the first game or, if she has not played it, imagine the direness of that situation and the influence it had on Corvo. Through this simple rhetorical gesture, the game not only showcases Corvo’s recollection of the first game’s events, but solicits the player’s memories, and suggests their (at least partial) congruence. The in-game painting thus is both a representation of a class of image with a specific social function (to preserve the memory of a historic event), and acts as such an image with this exact social function for the player.



Fig. 1: Player character Corvo Attano commenting upon a painting (in the subtitle)

The prominence of the visual arts in *Dishonored 2* culminates in the game’s central plot-point, Delilah’s reality-changing spell. Its core element is a painting, entitled “The world as it should be.” Delilah’s magic draws its power (apart from occult ingredients such as skulls) from art. She combines her witchcraft with her artistic practice and is able to reverse the relationship between reality and painting, between signified and signifier: Her painting can change reality so as to conform to her wishes and ideals. The player character’s tasks revolve around foiling Delilah’s plans, which can be effected in one of two ways: kill her before she can complete the painting, or manage to transport only her into her ‘perfect’ world and exile her within it.

The two options for dealing with this final challenge are the final branching point which, in combination with a number of other pivotal decisions, determines the overall outcome of *Dishonored 2*. In the tradition of *Deus Ex*, the game has several endings that leave the gameworld more or less just and democratic. Although there is a small influence of accidental events on the final outcome, it is determined to an overwhelming degree by the decisions of the player. The feedback on these decisions is abundantly clear and almost impossible to ignore. Whenever there is a part of a mission that allows for more than one solution with different outcomes, these are clearly spelled out both as an overlay to the gameplay and in the quest log. At the end of each mission, the performance of the

player is displayed in a matrix diagram corresponding to the ethical dimensions of the gameworld (violence and invasiveness). The chosen play style of each mission affects the following ones, because one of the central conceits of *Dishonored 2* is that violent actions of the player character are mirrored in the development of the gameworld. Play aggressively, and buildings or streets in a following mission turn from populated and hospitable to derelict and plague-infested. Additionally, there is no ending in which Delilah’s plan succeeds, leaving the end-state of the game as precisely “the gameworld as it should be” according to the plans and actions of the player. While the player character prevents the gameworld to become a mirror of the villain’s ambition, the player effectively turns it into a mirror of hers.

Augmented and virtual reality in *Prey*

Prey is a science fiction scenario set in an alternate timeline from ours. Here, the USA and USSR turned their space race into a joint venture upon discovering extraterrestrial life. The game sets out from a false premise: It initially appears that the player character, Morgan Yu, is in San Francisco, undergoing final psych evaluations before the journey to the space station Talos I, which is owned and operated by Transstar, a company led by Morgan’s family. After only a couple of minutes of gameplay, it is revealed that Morgan has been on the space station for several years already, and has been participating in an experiment on the long-term effects of exposure to extraterrestrial tissue. Morgan escapes from the simulation environment by smashing what appeared to be a window, but turns out to be a screen of Transstar’s pioneering AR/VR technology called Looking Glass (Fig. 2).



Fig. 2: Breaking out of the initial simulation in *Prey*

This technology is explained and demonstrated throughout the game, and similar to the magical painting in *Dishonored 2*, it is situated in a context of not only the usual collection of realism-affirming images – medical screens, product ads, film posters, family photos – but a staggering amount of in-game artworks. The whole space station is a piece of coherent industrial design, mostly executed in a neo-Art Nouveau style, with all representation-, reception-, and community-oriented areas being decorated with paintings, reliefs, motivational posters, and other forms of corporate design. The in-game paintings and sculptures

are, for the greater part, much more abstract than those in *Dishonored 2*, mostly non-representational, and often move in different aesthetic gray-zones. Bas-reliefs in what appears as stone or crystal along some walls call into question what genre of art they are and even if they are art in the first place, or rather architectonic elements. The predominant abstract style of the prominently featured art pieces is mirrored in the omnipresent advertisements for Transstar's products, creating an impression of industrial paintings that are unashamed of their calculated, persuasive nature of commercial art (including foregrounded use of spot colors with swatches in the picture frame). As with most of its elements, *Prey* takes this approach to art to its natural conclusion and makes the curation statement for the space station's art collection available in a collectible text file, where the borderline-status of the visual art pieces is attributed to them having been commissioned from the same former street artist as the advertisements (Fig. 3).



Fig. 3: The curation statement in *Prey*

The in-game images of the greatest importance in *Prey* are, however, the Looking Glass technology screens. The opening gambit of having to smash the screen to escape is followed in rather close succession by two main missions which emphasize the importance of Looking Glass technology. Morgan needs to watch a Looking Glass recording to receive crucial information, which is only possible after visiting the laboratory of Dr. Calvino, the developer of the technology. In Calvino's laboratory, the technology is not only explained and demonstrated, but also made the key to a side quest with a considerable reward. Taken together, these elements make sure that the significance of Looking Glass technology for the gameworld is apparent. It is used throughout the station for different purposes, all of which create verisimilitude and have a potential for deception.

At the very end, the game picks up the theme of simulation and imprisonment from the beginning. Like *Dishonored 2*, *Prey* has several endings, yet all but one of them are followed by an epilogue that contains a final plot twist. It is revealed that the whole game up to this point is, even within the logic of the gameworld, a simulation. The player has not been controlling Morgan Yu, but an extraterrestrial captured by the last surviving humans, who was made to experience Morgan's attempt to save the space station – an attempt which, it is revealed, failed in

reality. Just like in the opening sequence (that, through the final plot twist, is characterized as a simulation within a simulation), there is a moral justification for keeping someone in a simulation without their knowledge: it is an attempt to find out whether the extraterrestrials are capable of empathy, and might thus be reasoned with. While the impact of this final revelation on the narrative is already massive, it is maybe even bigger on the player. All actions and decisions made during play are called into question by declaring them a simulation, which would be problematic in any game, yet which, within the immersive simulation genre, amounts to a slap in the face of the player.

Simulacra, Self- and Metareferentiality

The recontextualizations of actions which both games derive from ontologically questionable in-game images makes it necessary to connect agency to the reality, virtuality, or fictionality of gameworlds. Both games raise the question which of the player (character)'s actions actually have impact on the gameworld, or, in a sense, where the gameworld begins and ends, which effects are real (within the logic of the game) and which are only imaginary or illusory [42].

The question of the reality of objects and actions in games is obviously a highly complex one that would require a protracted discussion for which an article like this offers no room. The central problem is that the virtual worlds of digital games use “graphical objects as an information interface, enabling the player to play with a set of formally defined events”, while, at the same time, “events unfold from the player's interaction with concrete models, in a reified, quasi-physical environment. The technology of realtime graphics can perform both functions at once—as both depictive interface and concrete model—but not without conflicts and ambiguities” [34, p. 16].

Painting in the broadest strokes, five main understandings of the duality of interface and environment can be identified within game studies. a) The simplest assumption is that the entirety of games [53] or at least, with Jesper Juul, all non-rule elements of games [32] are fictional. Declaring them as such removes gameworlds to the well-explored realm of fiction and renders ontological questions a priori irrelevant. b) From a diametrically opposed ontological perspective, the reality-relation of game objects and events is anything but clear. For proponents of this approach, the real, the fictional, and the virtual can be distinguished in accordance to whether an object or action is undeniable, is only true with regard to a fictional heterocosm, or can be empirically repeated, regardless of whether they exist within reality or a virtual world [1, 2]. c) From a media-technological perspective, it makes sense to distinguish between integral parts of simulations, such as system, representation, and interface [31], focusing rather on the (semiotically speaking) signifiers instead of the signifieds. d) From a poststructuralist perspective, the politics of inclusion and exclusion of real-life elements in a (necessarily reductive) simulation comes to the foreground, stressing their inevitable subjectivity [10, p. 106-109]. e) Yet ultimately, from the strict perspective of philosophy of science, all these questions appear secondary, as the usage of

the involved terms (such as ‘simulation’ or ‘virtual’) in game studies are so far removed from their original meanings as to make all these lines of reasoning questionable. If simulations in all other fields require a real-world referent, yet can be considered non-referential in games, it is questionable if subject matter and/or concepts have any significant overlap [33].

For the discussion of in-game images, especially with regard to agency, the ontological and philosophical perspectives are most relevant. As I’ve already discussed, there is one in-game image (or, in a way, imaging technology) in each example that is of elevated importance, *Dishonored 2*’s magical “The world as it should be”, and *Prey*’s ‘Looking Glass’ technology. In both cases, the pivotal images are important because they problematize the referential relationship between image (or, more generally, sign) and object, and thus point toward general aporias of digital games.

The central question of whether play and games necessarily relate referentially to reality has been answered quite differently by existing research. Only in Kendall Walton’s very specific usage of the terms [58] are acts of play understood as being unambiguously representational: “A teddy bear is a representation insofar as that it has the function of being implemented in a game of make-believe, a game that might involve, for example, going to bed and falling asleep for the night” [34, p. 3]. For Walton, representation is something that results from games of make-believe, which leads even his followers to admit that his “broad concept of ‘depiction’ can also be somewhat misleading” [34, p. 5]. A more widely accepted understanding of representation in play might be one that uses poststructuralist terminology to characterize it as “always already simulacral” [20, p. 401], with digital games forming “a paradigmatic form of contemporary hyperreality” [20, p. 402]. This understanding of games as hyperreal and play as simulacral manages to align the game studies understanding of simulation with the use in other fields, as it points out that games do not simulate a source system to arrive at conclusions about said system, but for their own ends, be they entertainment, persuasion, or social commentary. It also addresses that “games are games because they are fundamentally self-referential” [58, p. 219] and that they are part of a “bricolage culture in which texts, images, motion pictures, games, commercials, and brands cite each other at a rapid pace” [58, p. 220], which gives them a very particular relationship to real phenomena they might otherwise be said to represent.

Studying in-game images allows one to look toward theories of representation in the visual arts for inspiration, where surprisingly similar reflections can be found. The apparent tension between realistic depictions and simulations in digital games and their (sometimes non-existent) real-life counterparts is something that, according to Edmund Husserl, is negotiated when perceiving any kind of picture. Even when confronted with a documentary, unaltered, photographic representation of reality, the perceiver still has to distinguish between the reality of the picture and that depicted by it:

“It is this “reality” that we are, according to Husserl, seeing *in* the picture [...], as opposed to the actual, present reality that we see when looking *at* the picture as a physical object. Unlike direct vision through an actual window, this image is an aesthetic object characteristically produced in the framed surface of the Bild as a physical thing.” [34, p. 6]

Husserl terms this phenomenon image consciousness (Bildbewusstsein): when perceiving an image, we are generally aware that it is an image, and interpret both its materiality and the objects it represents accordingly. Nelson Goodman has extended these reflections by asking what this means for pictures of mythical or fictional beings. He concludes that the perceiver identifies them as a specific class of representations: “What, for example, do pictures of Pickwick or of a unicorn represent? They do not represent anything; they are representations with null denotation” [23, p. 21]. We make sense of such pictures regardless, according to Goodman, because we have an awareness for this categorical difference, which is actually an awareness of two factors: “In representing, a picture at once picks out a class of objects and belongs to a certain class or classes of pictures” [23, p. 31]. The ontological status of the depicted object(s) thus determines how we interpret the sign-function of a picture, in addition to our awareness of the picture being a picture. While it would be a stretch to claim that this sufficiently explains the simulacral nature of simulations in digital games, the obvious parallels are what allows in-game images to foreground the conventionalized aporias of games.

The in-game images in *Dishonored 2* and *Prey* do this in what many might call a ‘breaking of the fourth wall’, yet that description would be misleading. Metareferential strategies in fiction are diverse: Already in theatre, we can observe a clear distinction between the actual breaking of the fourth wall – an actor addressing the audience directly, potentially even out of character, as is one of the central tenets of Brechtian Epic Theater – and the less radically immersion-breaking foregrounding of theatrical conventions by staging a play within a play. In literature, there is a categorical difference between *mise-en-abyme* – the nesting or repetition of a narrative within another – and *metalepsis* – the breaking of ontological barriers between different fictional worlds or the fictional world and reality. Even for games, different forms of *metalepsis* have been distinguished between player characters directly addressing the player and non-player characters referring to the game itself or exhibiting awareness of being a game character [48, p. 224-226]. These typologies are far from exhaustive, and still other distinctions can be made for the visual arts, film, music, etc. [24].

German media theorist Werner Wolf has compellingly argued that the common denominator of all these phenomena is that they are particular forms of referentiality [60]. He broadly distinguishes three classes of referentiality: hetero-referentiality is the most common form, where a sign points toward something that is not part of the same semiotic system (e.g. most words in natural language that refer to people, animals, or objects); self-referentiality is targeted at a sign within the same semiotic system (e.g. a rhyme-word in a poem or an intertextual reference

between two literary texts); and metareferentiality is a special form of self-referentiality which is “located on a logically higher level, a ‘metalevel’, within an artefact or performance [and] forms or implies a statement about an object-level, namely on (aspects of) the medium/system referred to” [60, p. 30-31]. Wolf offers up a number of analysis tools for metareferentiality which serve to distinguish the different forms (such as metalepsis and mise-en-abyme) in a systematic fashion, yet for the purposes of this paper, his general distinctions will suffice. Hetero- and self-referentiality correspond well to Aarseth’s, Karhulahti’s, and Walther’s aforementioned observations about the tenuous relationship of games to reality. “The world as it should be” and “Looking Glass” belong, however, clearly into Wolf’s category of metareferentiality: they are elements of digital games that highlight properties of digital games.

In-game images as metareflective devices

The inversive metalepsis of “The world as it should be”

The ways in which *Dishonored 2* uses paintings and sculptures in traditions of real-world art-historian and museal practices only to radically break with them in “The world as it should be” builds upon both Husserl’s and Goodman’s reflections. The omnipresence of fine art and its discursive practices (e.g. exhibiting, naming) in the gameworld draws attention to the parallels between the art-world of the game and that of reality. For all its differences from reality, the steampunk society of Karnaca uses visual arts in very similar ways and for similar functions as real-world Western societies do: to evoke cultural values, taste, class, status, and wealth. The paintings in the gameworld can be decoded easily, if not unambiguously: the painting of a political leader in the game appears as belonging to a certain class of painting, priming us to understand the depictive conventions and the symbolism of its representation as not-quite realistic. While we certainly possess the image consciousness to look *in* instead of *at* those paintings for the greater part, the stealable paintings problematize this facile relationship. By making them interactable objects and visualizing the act of removing the canvas from the frame (Fig. 4), awareness is shifted from the object of the painting to its materiality. The player is forced to negotiate between image consciousness and object perception, between looking in the picture to perceive its subject matter and looking at it as an interactive object in the environment.



Fig. 4: Empty frame of a stolen painting in *Dishonored 2*

This already constitutes a first layer of metareferentiality in Wolf’s terms, as it highlights the double nature of game elements [34], the depictive interface and the reified object. On its own, the metareferential potential of stealable paintings might go unnoticed, as this game mechanic has been conventionalized as a part of the design language of immersive simulation games already in *Thief: Deadly Shadows*. However, *Dishonored 2* alienates the status of interactive paintings by the central role it gives to Delilah’s magical painting “The world as it should be” (Fig. 5). For the longest time, the painting is the subject of conversations. Only very late in the game, the player actually gets to see it. Unlike the stealable paintings, it cannot be interacted with immediately, but needs to be prepared by sabotaging Leila’s ritual. When interaction becomes possible, it is of a literally metaleptic nature, as the avatar changes between different ontological levels of the gameworld when transported into the world of the painting. In its bizarre version of the game’s Dunwall Palace, Delilah can be rendered unconscious, eventually exiling her within the painting, foiling her plans in the most humane way (because she assumes the world around her to be the *actual* reality of the gameworld, transformed after her liking).



Fig. 5: Delilah entering “The world as it should be”

Expressed in terms of referentiality, the painting is depicting Delilah’s imagination. It refers to something imaginary that, through an act of magic, is supposed to replace reality. Put differently, it is a signifier which refers to an imaginary signified

with the goal of manifesting this signified in reality. In the most recent monograph on metalepsis, Julian Hanebeck identifies such a constellation as the rare phenomenon of inversive metalepsis,

“those rare transgressions in which the hierarchical relation of two diegetic universes that are connected by an act of narrative representation is unambiguously reversed [in] an exchange of the metadiegesis of the ‘world’ of the diegesis/exegesis (and thus in an inversion of their original hierarchical relation) – but not in a mutual contamination of levels” [24, p. 105].

When the player interrupts Delilah’s ritual, this inversive metalepsis does not materialize. The “World as it should be” of the painting does not replace the reality of the gameworld; it does, however, exist as an explorable world – a *mise-en-abyme* –, and it is in this world-within-a-world that the player character can perform the crucial task that foils Delilah’s plans for the reality that the painting and its secondary world are situated in.

From here, it does not require much interpretive effort to identify the in-game painting as a metareferential element of *Dishonored 2* that turns the game into a simile for digital games in general. The player character lives in a world full of political intrigue, social injustice, and abuse of power. The way in which the player chooses to perform, in accordance with this regime of violence or in (comparatively) peaceful subversion of it, determines how the world develops, if it will become a better or an even worse place. The most crucial action in this world is, however, how to deal with attempts at projecting an enforced cultural imaginary upon the world. Resistance against the regime is ultimately only possible within the realm of the hyperreal, which, once properly understood, becomes the locus of empowerment, because actions there shape the outside world, as well, and prevent the powerful to shape the world in their image. Given the parallels between the in-game image outlined above and the apparatus of digital games, it is only a small substitution to read the political subtext of *Dishonored 2* as a metaphor of the role of popular culture, and especially games, within society, recursively likening the player’s agency in the gameworld to their real-life capacity to effect changes, even (and maybe especially) through actions in the virtual environments of digital culture.

The total illusion of Looking Glass Technology

In *Prey*, the use of in-game imagery is completely different, and although Looking Glass Technology in itself is modeled to be inconspicuous – it is, after all, mostly used illusionistically to create simulations with a total impression of verisimilitude –, its metareferential potential is more pronounced. As a digital, audiovisual, partially interactive technology, its similarity to digital games in general is hard to overlook. The name of the technology makes the target of its metareferentiality more specific, evoking the immersive simulation genre through the metonymy of its original developers. By displaying the name frequently on the displays, the image consciousness is partially counteracted (Fig. 6): the technology is foregrounded, forcing the

gaze of the viewer to oscillate between looking at the picture and into it (which in this case, is a literal ‘looking into’, as Looking Glass screens have a perfect simulation of depth perception, giving the appearance of a virtual window into another ontological plane).



Fig. 6: The name ‘Looking Glass’ draws attention to both the materiality of the image and its content

The game shows in several instances that the technology is content-agnostic: some screens reproduce recordings, others render miniature models in real-time, and yet others are fed by 3D computer simulations. This showcasing of the different possibilities for input serves as another reminder of the image technology over its content: with Looking Glass, the target of the reference is not as important as the availability of the image and its verisimilitude. Neither is agency: most of the Looking Glass screens are not interactive.

Rather atypically for an immersive simulation game, although the player has many options for dealing with the gameworld’s challenges, there is little immediate consequence to this diversity of feedback. While *Dishonored 2* reacts by (sometimes radically) transforming the gameworld to mirror the player’s decisions, in *Prey*, it is mostly the way that agents in the gameworld react to the player character which changes. The player can e.g. choose to upgrade the avatar with alien tissue to unlock the extraterrestrial’s ability to e.g. shapeshift. This means, however, that the security turrets which are instrumental in protecting from enemies in the beginning of the game will detect the alien DNA in the avatar and shoot on sight, inverting their allegiance based on the player’s strategic decisions in leveling up the character. This reinforces the overall future-orientation of *Prey*’s game design (which again forms a contrast to *Dishonored 2*’s strong emphasis of consequence): Resources, especially the ones needed to level up the character, are scarce, making different upgrade paths mutually exclusive, and while unlocking completely different skill-sets, no upgrade path is intrinsically stronger than another. On the contrary: the main decision of whether or not to use alien DNA is tied closely to the game’s narrative, not only through the overarching plot, but through carefully constructed setups. The psych evaluation player character Morgan Yu undergoes in the opening sequence of the game (i.e. which the extraterrestrial playing her might have been undergoing repeatedly for a long period of time) probes

Morgan's (and the extraterrestrial's) reasoning and humanity with several iterations of the notoriously ambivalent trolley problem. The philosophical problem – is it ethical to sacrifice the lives of a few or of one's own to save others? – raises hypotheticals that have no clear ethical solution, but are often taken as indicative of both an individual's and a society's value system.

The significance of the trolley problem only becomes apparent in the end, when the final plot-twist reveals that the whole gameworld has been a simulation. Within the logic and moral framework of the gameworld, this test is unethical and imperialistic (testing the humanity of an alien), yet at the same time coded as a necessary act of desperation, a last-ditch attempt at communicating with the alien invaders and saving what remains of humanity. As there does not seem to be an unequivocally acceptable solution, this conundrum clearly resonates with the trolley problem the player gets confronted with in the beginning of the game. For the player, this final reveal creates a parallelism between her experience and that of the alien whom she has been playing: both explore a virtual world under a false premise, have to question the relevance of their decisions and actions, while the final cut-scene makes a strong statement for the relevance and reality of their moral decisions. Read metareferentially, this imbues *Prey* with a very strong poetological message: in immersive simulation games, the consequences of one's actions are not as important as the reflections and intentions of the player, the reactions of the gameworld, and the emotions the tension between the two elicits.

As already argued, the game's metacommentary does not result from breaking the fourth wall. Instead, it reveals the layers of its mise-en-abyme structure of nested simulated environments until, in the end, it arrives at what appears the 'actual' or outermost layer. It is through the provocation of declaring all actions in the game non-actual that the attentive player is prompted to reflect upon the general 'actuality' of in-game actions, and to realize that *Prey* problematizes what it means for something in a game to be real, virtual, or fictional [2]. When the game changes ontological levels after the first few minutes of gameplay, revealing Morgan's apartment to be only a simulation, this metalepsis ironically affirms the reality of the ontological level the rest of the game takes place. At the same time, the opening sleight of hand makes the second re-contextualizing of what seemed like intra-ludic reality as a simulation-within-a-simulation more palpable, as this possibility has been established and thus cannot come as a total surprise – especially not in the light of the allusive naming of the imaging technology.

Upon replaying the game, the priming of a metareferential reading of the game already begins in the opening title sequence. As a part of the simulation within the simulation, Morgan Yu is taken by helicopter from the roof of a condo building to Transstar headquarters. It is a short flight, during which a (never seen) pilot points out some landmarks. The credits for developer studio, distributor, the game title and several other pieces of information are arranged as huge floating words in-between the logotypes and billboards on the facades of the buildings in the

(doubly virtual) skyline of the alternate-reality, science fiction San Francisco. On the first playthrough, this might seem merely as an ostentatiously cinematic way of presenting the opening credits. Knowing about the narrative's twists and turns, though, the opening credits appear as a rather direct foreshadowing: The pilot flies the helicopter in a unnecessarily elaborate path and consequently points out landmarks that have credits on or next to them in what amounts to the game's only real breaking of the fourth wall, as his remarks are addressed at least as much to the player as to the player character. This becomes abundantly clear when he bids farewell to his passengers by saying: "Mind the glass on the way out. Good luck to you." (Fig. 7) – in a situation where there is no glass anywhere near the helicopter door. The pilot's words address simultaneously Morgan Yu (who will soon have to break the glass of the balcony door to escape the simulation within the simulation), the extraterrestrial playing Morgan in the second simulation (whose mind is trapped inside the Looking Glass VR system), and the player (who, by paying attention to the Looking Glass technology, might anticipate the final plot twist).



Fig. 7: The pilot's farewell

Conclusion

This argument should have shown that in-game images are a quite specific tool in the aesthetic repertoire of digital games, and that they have been used to great effect in the two discussed recent immersive simulation games.

While *Dishonored 2* deals with visualization that creates something that does not replace reality, yet shapes it, *Prey* instead exposes the fakeness of its virtual world, only to affirm the authenticity of the reactions it elicits. *Dishonored 2* uses the idea of inversive metalepsis as a negative foil against which it positions its gameworlds. Their limited malleability and consequentiality form both a metaphor and a model for resistance to cultural imperialism, demonstrating through its metareferentiality that games which allow for ruminations of cause and effect in politics and violence are culturally valuable. *Prey* on the other hand foregrounds and defamiliarizes its own audio-visual representation, going so far as to negate the relevance and reality of all its events. Instead of focusing (like *Dishonored 2*) on the potential for simulating that games possess at least on a symbolical level, *Prey* crafts a procedural congruence between the situation of its player character and its

player, stressing intently that the reactions to a game are real and relevant, no matter what it is meant to simulate, how well it does so, and how much agency players possess.

Given that both games were developed in close conjunction by an overlapping team of developers, their differing positions towards the possibilities and significance of their own genre is surprising. However, it would be shortsighted to see the games' subtexts in open conflict. Quite on the contrary, they seem to be each other's companion pieces: *Dishonored 2* reflecting upon the power of agency and consequences, especially as a tool for conceptual empowerment in a political setting, and *Prey* instead probing the emotional impact of immersive simulations, even if the player is aware that everything is just a game, or a game within a game, or a game within a game within a game. Taken together, Arkane's two games give one of the strongest testimonies of the maturity and aesthetic rigour Triple-A games have reached in recent years.

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