Model and Image. Towards a Theory of Computer Game Depiction

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Introduction

Screen-based computer game representation is a paradox. On the one hand, the player perceives and interacts with a modelled environment, and in this respect games are comparable to, for example, architectural models or theme parks. On the other hand, this particular type of modelled environment is accessible to the player as images rendered on a screen. Drawing on Kendall L. Walton's theory of depiction in *Mimesis as Make-Believe* (1990), this paper seeks to clarify the nature of this duality, and suggests some implications for a theory of computer game representation.

My central thesis is that it is important to distinguish between two kinds of depictions in computer games: *depictive models* and *images*. Whereas depictive models are, in Walton's terminology, self-representational, images are not. Depictive models are co-present, which means that they establish the depicted as objects in space. Images, on the other hand, are world-projecting rather than co-present. Whereas depictive models recognise the player's agency as fictionally relevant, images do not.

Looking at computer games, there is a large and significant group of games in which the interactive image is the dominant modality of depiction, and I suggest we may call such games hypermedia games. The majority of contemporary computer games, however, are real-time games, in which the dominant form of depictive representation is not interactive images, but dynamic, screen-rendered depictive models. At the same time, the resonant image is still playing along also in real-time computer game depiction.

Let me start with an illustration. In Bård Ask's video work *Notio Viri Placet* (2005), 12 singers from the Norwegian State Broadcasting boys' choir Sølvguttene ("silver boys") were filmed individually, performing their part of a short composition by Jan Erik Mikalsen. The individual recordings were combined into a coherent composition, with all the vocals mixed together into a choir. When exhibited in Bergen Kunsthall in 2005, each singer was displayed on a separate screen, and the screens arranged as in the image below. The choir alternated between singing the composition and taking long breaks while looking into the camera.

Whether by intention or not, the effect of this particular audiovisual and spatial arrangement was startling. Seen in isolation, each individual screen was nothing special: a person singing and looking directly at us through the camera. However, the arrangement of the screens, and also the way in which individual voices were singing together, generated a distinctively sculptural effect, forcing the impression that there was actually a choir there in the room with us. As I was moving around in the room, the singers followed me with their eyes, like sculptures come alive, eerily preoccupied with my presence.

Notio Viri Placet, Bård Ask

The striking perceptual effect is in this case the result of a very particular paradox: a video image staged as a model. In order to explain why this is a paradox let me begin by giving a condensed account of Kendall L. Walton's theory of depiction.

Depiction

In *Mimesis as Make-Believe*, depiction is a particular form of *representation*. A representation, Walton states, is anything that has the function of being used as a prop in a game of make-believe. A teddy bear is a representation because it has the function of being implemented in a game of make-believe which involves, for example, going to bed and falling asleep for the night.

The same would go for novels, sculptures or paintings: their defining function, Walton says, is to be used as props in games of make-believe. When we are looking at a painting, we pretend that we are actually looking at, for example, a ship at sea. Through such acts of make-believe, prescribed by props and rules (*games* of make-believe), we establish the depicted as *fictional*, that is, as being true in a fictional world, or "fictionally the case". In Cézanne's painting *Still Life with Kettle*, for example, it is fictional (it is fictionally the case) that we see a kettle. Because fiction is prescribed by props and rules, it is not a matter of subjective imagination. Fiction is objective and shared, just like things and events in the actual world. In Walton's own words: "Fictional worlds, like reality, are 'out there', to be investigated and explored" (1990:42).

A *depiction*, then, more specifically, is the kind of representation that is meant to function as prop in a *perceptual* game of make-believe; we pretend that we are *looking* at a kettle, or we pretend that we are touching a teddy bear. Any depiction is warranted by a certain level of analogy between the act of looking at the depiction (or hearing, touching, carrying, walking around) and what it would be like to actually perceive the things depicted; we may for example move closer to the kettle in order to be able to see its finer details.

How can we assert that a representation is a depiction? The litmus test is that the game of make-believe in which it functions a prop allows us to point at it and say *there;* "The kettle is there", or "Teddy is under the bed". Depictions allow participants to engage in a perceptual game of make-

believe, sharing the pretence of perceptual presence. With verbal representation, this would not make sense; we would not point at the word 'horse' and say that the horse is *there*.

Real and fictional space

For Walton, it is important to emphasise that a prop – typically props that we consider 'works', like a novel or a painting – has its own fictional world, apart from the fictional world that is generated by the games we choose to play with these works. Whereas the games that we play may differ considerably from person to person, the work world (the world of the work) is nevertheless the stabilising factor; what is true in the world of the work is true in *any* game in which it functions as a prop.

Interestingly, Walton also notes that there is a difference between what he calls as a 'world prop' (a novel or a painting) and a doll or a teddy bear. The latter kind of representation is typically not seen as having a 'world' of its own, independently of the world of game in which it serves as a prop. Walton suggests that this difference could have something to do with *space*:

> "...a doll's location in real space is significant in a way in which the actual location of a painting is not. The fact that a doll is in Heather's arms or on her bed probably makes it fictional (in her game) that a baby is in her arms or on her bed. But the fact that the Unicorn Tapestries hang on the walls of the Metropolitan Museum does not make it fictional that there are unicorns there". (Walton 1990:62-63).

So even if we are able to point at a unicorn and say that it is 'there' – because the tapestry is a depiction – the unicorn is not 'there' in the same way as a doll would be; it is not *here*. So there must somehow be, in perceptual games of make-believe, two different kinds of presence. Walton's suggestion is that "It might be said that paintings, (many of them anyway) create their own "fictional spaces", whereas dolls operate in "real space", in Heather's playroom, for example" (1990:63). He notes that this distinction seems important, but concludes that it is unrelated to the distinction between work-worlds and game-worlds.

The notion of fictional spaces seems to correspond quite well to how people typically understand the concept of a 'world' of a representation. Walton admits this (1990:63), but is nevertheless much more interested in the "cluster of fictional truths" associated with a representation, and prefers to reserve the concept of 'world' for this purpose. However I would argue that the unique status of world props – depictions that create their own fictional spaces – is too important to be treated as footnote in a theory of representation, and certainly too important to be overlooked if we want to consider the messy composites of representation that we find in computer games.

Reflexivity and the image

Even if *Mimesis* does not make such a connection, I want to argue that the central difference between dolls and paintings, underpinning Walton's opposition between 'real' and 'fictional' space, is a difference in terms of *reflexivity* – another core concept in his theory of representation[1].

1 Strictly speaking, Walton discusses two different types of self-representation, and my interest here is only with what we may call strong reflexivity, namely representations that "refer to themselves as themselves". The alternative variant (representations that do not refer to themselves as themselves) is a relatively common form of self-reference, as when for example a film (Walton's example is Blazing Saddles) shows a scene in which there is a theatre where the film itself is shown.

> A doll directs players of the game not just to imagine a baby but to imagine the doll itself to be a baby. So it generates fictional truths about itself; it represents itself. Let's call it a reflexive representation (...) It is fictional in Titian's Venus that a woman reclining on a couch, but it is not fictional of the painting or any part of it that it is a woman or a couch. Venus does not in that way represent itself. (1990:117)

It is precisely this reflexivity that is lacking in the Unicorn Tapestries. Even if the depicted is present in a certain way (we can point and say 'there'), it is not present as an object in space. This peculiar kind of presence, I suggest, is a characteristic of the *image*. Walton's unicorns are not fictionally present by way of being manifested as objects in space, but by way of being manifested as image.

Neither can the *viewer* of an image be present as an object in space. If we walk around Edvard Munch's *Self-Portrait in Bergen*, this does not mean that we are fictionally walking around Edvard Munch. His eyes will be looking at us no matter where we are positioned in relation to the painting, but this does not mean that fictionally he is following us with his eyes; it just means that our position as bodies in actual space is cancelled, made irrelevant; this is what images do. Fictionally, when I am looking at Edvard Munch, the position from which I am looking at him is determined within the image itself. The position of my look is located in another world (and, by implication, in another body): the world of the image. Even if my actual body, in this space, may be moving around, my fictional body, in fictional space, does not move. And vice versa: even if I am sitting still, the (moving) image can take me travelling.

This fictional re-location of the viewer means that it is quite common in art and literature to think of an image as a kind of interface, a window or a magic mirror, which places us at the threshold to a different space, a different dimension. Images are indeed, in Walton's words, 'world-props'; they are *world-projecting* rather than self-representational.

Let me emphasise that I am not here concerned with notions of the image in the abstract or metaphorical sense ('mental images', 'travelling images' etc), but more narrowly with a particular form or modality of depiction, that is, as that which is being constitutive of perceptual games of make-believe of a certain kind, of the world-projecting kind. Translated into Waltonian language: anything that has the function of being used as a non-reflexive prop in a perceptual game of make-believe, is an image.

Crucially in relation to representation in play and games: because it is not fictional that unicorns, kettles, or Norwegian painters are *here*, in this space (our space), we cannot play with them, touch them or indeed act towards them in any way. Or more accurately, we neither can nor cannot talk to, touch, or otherwise act towards an image, just like we neither can nor cannot save the hero when we are watching a tragic drama. Our *agency* is not recognised in this kind of game, the question of acting or not acting never raised.

The depictive model

Conversely, a *reflexive* depiction, for example a doll, generates fictional truths about itself as a present object; the depicted is therefore fictionally not just present but *co-present*, in our space, as an object among other objects. We can expect to be able to fictionally act in relation to it, and we are being assigned a location, a position in relation to it; when we are walking around the doll, we

are fictionally walking around Dorothy or Nora. Because a doll is a self-representational depiction, it opens up a space for the participant's fictional agency, the kind of agency that relevant and meaningful within the game of make-believe.

Stepping outside Walton's conceptual framework, it seems to me that a productive comparison, especially if we want to apply Walton's theories to computer game representation, is the concept of the *model*. Following standard military use of the term, a model is "a physical, mathematical or otherwise logical representation of a system, entity, phenomenon, or process"[2]. The concept of the model does not primarily have to do with representation at all, in Walton's sense of the term, and its scope much broader than what could conceivably fall under the category of reflexive representation, In order for a "logical representation" – for example a climate model – to become depictive or indeed representational at all we would need some sort of visualisation or concretisation that would allow us to use it as a prop in a game of make-believe. Equally, a geometrical model would need to be drawn as some sort of pattern or figure, which would enable us to engage in a perceptual game of make-believe.

Still we can point to a strong correspondence between reflexive depictions and *physical models*, which is a category that would definitely include also dolls and toy trucks. Any physical model, whether an architectural model or a Lego dinosaur, implies an aspect of pretence; otherwise it would not be a model *of* something. Admittedly, due to the factual purpose of an architectural model, people may not attend much to the fictional dimension, but nevertheless: the whole point of actually building a miniature model, rather than just stick to a drawing (or even a list of measurements) is to be able to engage the viewers in a richer perceptual game of make-believe. The fictionally co-present model is supposed to help us imagine what the real thing would be like if it was actually present.

What I would like to suggest, therefore, as a way of situating reflexive depictions within a more familiar context, is the term *depictive model*. From a Waltonian point of view, a depictive model is a type of depiction among others. From the point of view of simulation and modelling, a depictive model is a type of model among others.

Ambiguity, paradox and the navigable image

Photos or paintings must not necessarily be assigned the function of the image, even if this how we are used to thinking about them. Children, as Walton notes, will typically treat pictures like depictive models, and so is the case with much religious practice (religious icons, wall paintings, voodoo etc). Indeed, in the case of depiction, the potential for reflexive appropriation is more readily at hand than what is the case with verbal representation. This relates to one of Walton's central points about depiction: because the perceptual act of looking at paintings is analogous to looking at things, this act itself is a reflexive prop; when we are acting *as if* looking at what is being depicted, our act of perception is representing itself. Consequently, there is always a risk of what we may call reflexive contamination on the part of the depiction: we may step over from merely perceiving the painting into also acting towards it, thereby negating the painting as image. However, in books or galleries, the generally accepted function of paintings or photographs dictates that we do not.

2 See Online M&S Glossary, Defense Modelling and Simulation Office, at https://www.dmso.mil/public/resources/glossary/ [accessed 25. July 2005].

The dichotomy of image and model is not meant as an attempt to reduce the complexities or straighten out the ambiguities that are often involved in our engagement with depictions. On the contrary, one of the aims is to draw attention to how ambiguities are not just a matter of complexity, uncertainty and openness, but also a matter of tension between incompatible principles. In *Mimesis*, Walton observes that the marble head of Constantine the Great in Rome is an unclear case, because it is " – not at all obvious that fictionally Constantine (or his head) is wherever the marble sculpture is" (1990:118). This kind of uncertainty, which I would argue is intrinsic to sculpture as an art form (not just busts), is not simply a matter of *degree* of relative reflexivity, as Walton seems to argue. Rather, the ambiguity of sculpture points to a tension between two principles of representation that are mutually exclusive.

My opening example, *Notio Viri Placet*, is unique in this respect, because it forcefully throws both modalities of depiction at us at once, in a way that makes it impossible or at least very difficult to avoid relating to both at the same time. By bringing the tension to its peak, it creates a striking paradox and a productive contradiction. Because each video recording is displayed in a separate frame and with its own individual singing, we experience the choir as a co-present depictive model. But the singers' looks still situate us in image-space. A group of images is tricking us into perceiving the depicted as if they were present in space. They become magically animated sculptures, following us with their eyes, like a portrait in a haunted mansion.

The unusually sharp paradox found in *Notio Viri Placet,* it seems, also stems from the fact that the images in question, which are being 'hijacked' by a sculptural audiovisual arrangement, are *moving* images. Moving images – whether animation or cinematography – are arguably an important exception to the rule of reflexive contamination. With film or video, displayed on a screen, the model function is less readily available, and much more difficult to realise. The world-projecting function is harder to undermine, harder to subordinate to the principles of self-representation, co-presence and fictional agency.

A related kind of paradox can be found in the case of murals and similar kinds of depiction, where painted scenes stretch around the room, often including the ceiling, to create an impression of visual immersion. However, in such cases, the perceptual persuasion or reflexive depiction is less forceful. Because there is no physical manifestation of the depicted, other than the painted surfaces themselves, which would be comparable to *Notio*'s separate screens, reflexive representation can only rely on expanded surround-vision. Unlike the sculptural presence of a group of screens, the represented has no co-presence that would be potentially *tangible*, and which could recognise the viewers' movement and position in the room (so that you could look at what is depicted from a different angle). With murals and similar kinds of depictions, the fictional relevance of our movements (in the cases where there is any) can only come from depictions sliding in and out of view as we turn around or walk along.

Visually immersive murals, therefore, belong to the category of *navigable image*s. This category would also include, among other things, framed paintings or photographs that are very large. Such depictions allow, to a more or less significant extent, an extension of the (reflexive) perceptual act of looking that Walton discusses. However, compared to small framed paintings or photographs, they cannot be appropriated as models through for example being carried around or put gently to bed. They may be immersive in a purely visual or sensorial sense, but as representations, they fool no one. Their primary function is not tangible co-presence, but intangible world-projection.

What does this mean for computer games? Let me point towards an answer by making three general observations.

Hypermedia games

First, it seems clear that a large group of computer games, not least historically, rely primarily on image-based depiction. Point-and-click adventures, strategy games, and role-playing games, as they are traditionally conceived, would all fall under this category of gaming. We may see them as a game-specific form within the broader family of *hypermedia*, a category that would also include hypertext literature, interactive cinema, database storytelling, multimedia encyclopaedias, and the like. In hypermedia games, image-based and world-projecting depiction typically goes hand in hand with a strong reliance on verbal representation, storytelling, and text-based interaction (dialogue trees, menus, inventories).

The central rationale behind hypermedia games is that it is possible to map media elements (pictures, video, spoken or written text, animations) onto a game structure. Instead of depictive models like dolls or toy trucks, which would be the default option for imaginative play and games, hypermedia games are constructed around *interactive images*. The term 'interactive' is very appropriate here. In everyday language, a central idea behind the notion if 'interactivity' is that the computer somehow allows us to interact with that which we do not expect to be recognising agency. In other words: instinctively, we all know that images – unlike dolls or Lego men – *should not* support interaction, but when they are computerised, they still do; so they become interactive[3].

In hypermedia games, images become interactive by being combined through triggers and links, creating a structure of causal and thematic relationships. Interactivity typically secures some level of fictional relevance for the player's actions. Fictionally, the player's puzzle-solving and navigation through the game becomes, for example, a successful investigation of a crime mystery. This kind of thematic and causal navigation can operate safely within the paradigm of the interactive image.

However, when images are linked together in order to create *spatial* relationships between them, not just causal and thematic relationships, we have a similar kind of paradox as in the case of navigable images in murals: there is a self-representing depiction of navigable space, but to the extent that spatial navigation is not supported by each individual drawing or animation, the image function still remains dominant in make-believe. Typical examples of this would be classical point-and-clickers like *The Secret of Monkey Island*.

In the clickable adventure *Myst,* images of first-person navigation generate an interesting representational ambiguity; each picture slide within the hypermedia structure, taken in isolation, functions as an image, but together as a whole the pictures function as a depictive model. The viability of this persistent ambiguity, however, is heavily dependent on the depiction of desolate and static landscapes, which naturally blurs the distinction between world-projecting image and depictive model.

Interactive hypermedia games are characterised by a kind of split or disconnect between game action and narrative fiction. It is as if literary or cinematic story worlds are being bolted onto a game – an observation that has been discussed at some length by a number of computer game

3 This is also why screen-based computer games, especially when implemented on TV technology (set-top boxes), are often referred to as 'interactive games', a somewhat puzzling expression which nevertheless makes perfect sense. It is the screen that is 'interactive', not the game. In contrast, we would not say that a doll or a Lego construction set is 'interactive' – unless, of course, they become screen-based and computerised.

researchers[4]. In any case it is clear that interactive narrative fiction offers a peculiar brand of representational ontology, a unique kind of artistic flavour, which essentially relies on the appropriation of images for the purpose of play. The central idea is to make depictions playable without undermining their status as world-projecting images.

Real-time games

Secondly, I would argue that the dominant form of representation in computer games today, its default mode – also in the public perception of games – is not world-projecting imagery, but reflexive depiction. This positions computer games closer to Lego villages or theme parks than to paintings or films.

But what would then qualify as a depictive model in computer games? What makes it different from interactive or navigable images?

My quick answer, at least for now, is real-time. The dynamic modelling of real-time behaviours and real-time player interaction negates the image and puts the player into tangible contact (or potentially tangible) with a world that is co-present rather than projected.

Real-time was the magic of *SpaceWar!* in 1962. The depicted microworld on the screen was actually *there*, on *that* surface, in this space, here and now. Via what David Sudnow (1983) in his analysis of *Breakout* refers to as the "extended touch" of the player, the small space ships on the screen became tangible objects, not controlled via commands or instructions, but directly and hands-on via the custom-built controllers. The action took place on a screen, but was nevertheless more comparable to a pinball machine than to a piece of animation.

But is there not a radical and unbridgeable ontological divide between the space (and the body) of the player and the screen-mediated information space of the game? How can we talk about co-presence across this divide?

There is if of course a boundary between my world and the screen-world. In the most trivial sense, I cannot actually travel into the fictional world behind the screen, and I cannot fictionally relate to the screen (by moving around it, carrying it, giving it some sun, etc) in the same way that I can relate meaningfully to a doll, a sculpture – or even, in some cases, a painting.

However, this divide is not similar or analogous to the kind of world-projection that images do. With an image, the absolute boundary between the world of the depiction and the world of the depicted is part of its definition. If the boundary is undermined, broken or ignored, there is no longer an image. In real-time games, the situation is different. There is a boundary between two different kinds of materiality, but this boundary is there to be broken; crossing it, transcending it, acting as though it does not exist, is precisely the whole idea.

Real-time depiction in screen-based computer games is rooted in 3 central principles or strategies of co-presence: tangibility, miniature, and avatar.

4 Arguably, the majority of research on computer game representation so far operates is within a conceptual paradigm of representation versus action – see for example Diane Carr et.al (2006). This is a perspective that seems to be mainly inspired by Espen Aarseth's analysis of adventure games (1997), and which also resonates with Lev Manovich' approach to computer games in his influential *The Language of New Media* (2001).

The *tangibility* of screen-based depiction is a product of the unique capacities of the computer. When we are playing *SpaceWar!*, the computer performs an essential translation. It implements an abstract (or 'logical' according to the military definition above) model, which is expressed through set of instructions, and hands over the result to the player, in real time, in the shape of a dynamic and playable depictive model. This is the essence of tangibility in computer games, and the foundation of the promise of perceptual realism. Real-time behaviours and tangible interaction prompts us into perceiving what is actually a second-order model (a model of a model) *as if* it was a first-order model. From the point of view of player interaction, the models of spaceships are not abstract and non-depictive – which is how they are seen from the point of view of the computer – but rather concrete and depictive. So it is not we who are crossing the divide into screen-space, but the computer is doing it for us, through its capacity to turn the abstract and algorithmic into the concrete and depictive.

In the Waltonian sense, therefore, we can say that the primary level of fiction is the depictive model itself. Whereas in *actuality* there is a non-bridgeable divide between our space of direct perception (looking, touching, acting) and the abstract information space behind the computer screen, there is, fictionally, a co-presence established in our relationship to a concrete, tangible and depictive model. At this level of fictionality, according to the rules of this perceptual game of make-believe, it does not matter whether the depicted is a non-specific blob or if it is also – on a second level of fictionality – a spaceship. The main attraction, and the magic of computer game depiction, is real-time, co-presence and tangibility.

Historically, the *miniature* is the default representational archetype in real-time games, and the central strategy for negotiating the boundary of the screen. The framed surface of *SpaceWar!* does not project its world into 'fictional space', but is comparable to a snow globe or a model train set. It is a miniature world, a microworld, co-present but separate and self-contained, like an ant colony. Miniatureness, in the words of Chaim Gingold, "...makes a garden intelligible in the mind of the player, and emotionally safe in his heart. Miniature scale, clear boundaries, and inner life help players to wrap their heads, hands, and hearts around a world" (Gingold, 2003:7-8).

As David Sudnow (1983) argues in his phenomenological analysis, the simplicity of the typical arcade-action microworld, and it's focused and frenetic pace of interaction, makes game play analogous to playing a musical instrument.

In certain types of real-time microworlds, however, like *Super Mario Bros*., two defining features point towards the breakdown of the miniature. First, tangible interaction is channelled through a privileged mediator of agency, an *avatar*, which extends from the player's fingers – with much practice and habituation – like a prosthetic extension. Second, we can see in *Super Mario Bros*. how game space begins its transformation from a framed surface to a navigable environment, accessible to the player through a travelling window or – ultimately – through a virtual camera.

In the contemporary umbrella genre of the 3D action-adventure, pioneered in mid-nineties by games like *Doom*, *Super Mario 64* and *Tomb Raider*, the privileged prosthetic extension of the player becomes the virtual camera itself, which functions as the player's remotely controlled perceptual presence within the modelled 3D-environment of the game. This is not world-projection but telepresence, via an 'avatar' in the original sense of the word, not as playable character but as embodied incarnation[5]. A relevant analogy would be, for example, a remotely controlled submarine, or military drone vehicle. The central promise to the player is: you can be present in this world.

5 See Klevjer (2007).

In avatar-based telepresence, the representational archetype is no longer the miniature, but the theme park (or the shopping mall), mediated through the lens of the cinematographic camera. This opens up a new range of experiences for the player, and closes down others.

To conclude this point: In the tradition of real-time gaming established by *SpaceWar!*, the dominant form of depictive representation is not interactive images, but screen-rendered depictive models.

The resonant image

My last observation is in a way stating the obvious, while at the same time only hinting at a very complex relationship: in real-time computer game depiction, more so than in real life, the image is always resonating.

By 'resonant' I mean something akin to the way in which Bjarke Liboriussen, in his analysis of architecture and landscape in online virtual worlds (2008), distinguishes between 'landscape-image' and 'landscape-environment'. According to Liboriussen, "...you could either be said to experience an environment affording certain actions or to experience an image akin to those known from landscape painting, i.e., an object of contemplation." (2008:144). Following a similar line of thought, the Walton-inspired concept of image that I am proposing has analytical relevance for real-time games beyond its ubiquitous manifestations in cutscenes and similar elements of world-projection.

Outside games, our visual perception of the world carries resonances from the images that saturate modern life. This image-track that accompanies everyday perception, as a parallel and intangible "object of contemplation", may be seen as a kind of projected space, or even as, by a stretch, in Walton's terminology, a fictional space. In real-time computer game depiction, especially when mediated by the cinematographic eye of a virtual camera, this image-track is obviously more manifest and readily perceived, but the analogy to the way in which images resonate in real life is still, it seems to me, important and valid. When we are engaged in a form of make-believe that is essentially hands-on and reflexive, the image recedes to the background, not necessarily less important, but resonant.

These were just three brief and very general observations, to indicate a possible starting point for thinking about how Walton's theory of depiction can contribute to our understanding of what is going on in the messy domain of computer game representation. My main claim has been that the difference between images and models matters in computer game depiction. For future research, this approach also seems relevant to the analysis of narrative and cinematic language in different games and game genres.

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