

Spatialised Memory: The Gameworld As Embedded Narrative

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Daniel Vella

The virtual spaces of digital games, evocative and elusive despite being rigidly rule-bound and definite, present a unique critical and theoretical challenge. Game spaces and gameworlds have recently proven to be a rich area of study, whether approached from a semiotic, architectural, ludic, aesthetic or formal perspective, and within this nascent aspect of game studies, Henry Jenkins' notion of environmental storytelling, and his attempts towards presenting an outline of the possibilities inherent in what he defines as the *narrative architecture* of games, has proven to be one of the most influential contributions. The gameworld, Jenkins argues, can be - and often is - designed with the objective of enabling the construction of a narrative. The result of this is that games, in contrast to media such as literature or film, can offer narratives that are encoded spatially rather than temporally: story is actually inscribed into the gameworld. In practice, this means that the game's topographical arrangement - and the shape into which it moulds the player's path - can become the narrative's chief organising principle: 'the organization of the plot becomes a matter of designing the geography of imaginary worlds'.¹

With this in mind, Jenkins suggests a number of paths by which the gameworld can become a narrative space: through the deployment of semiotic codes connoting possibly very wide-ranging generic and cultural milieus, for instance, gameworlds can become 'evocative spaces': such is the case, for instance, in the vast number of role-playing games, from *World of Warcraft* (Blizzard Entertainment, 2004) to *Dragon Age* (Bioware, 2009), whose bringing-to-bear of the received

¹ Jenkins, p.124-5

iconography of the medieval fantasy genre creates a fictional sphere already charged with immediately identifiable cultural associations.

My focus for this paper, however, will be Jenkins' assertion that the gameworld can also function narratively through the introduction of an *embedded narrative*. By his definition, the term - generally used, across media, to refer to any story-within-a-story structure - is reserved for a specific formulation of that structure: one in which the architecture of the gameworld bears the scars of events that happened there prior to the player's arrival. As such, the notion suggests a narrative that is 'prestructured but embedded within the mise-en-scene awaiting discovery'. The game world becomes a kind of information space, a memory palace'.²

Essentially, this frames the gameworld as a repository of traces of the past, a tissue of its own history. If we adhere to this understanding of the embedded narrative, therefore, we are framing the embedded narrative as a specific example of what Mikhail Bakhtin termed the *chronotope*. Literally meaning 'time-space', chronotope refers to the particular organisation of time and space prevailing within a literary text. Under certain chronotopes, he suggests, temporal events are inscribed in space, in such a way that 'a locality is the trace of an event, a trace of what had shaped it'.³ This is precisely what the embedded narrative structure represents: in other words, what we have is a translation of the normally temporal organisation of narrative into a spatial format, or, at least, into a spatial repository of information from which a temporal narrative might eventually be abstracted.

Initially, this might seem too narrow a focus to warrant attention as anything more than a highly specific structural technique. This impression begins to change, however, when we note the sheer, seemingly disproportionate number of games that utilise the embedded narrative structure.

² *ibid.*, p.126

³ 'Forms of Time and Chronotope in the Novel', in *The Dialogic Imagination*, trans. by Michael Holquist (Austin: University of Texas Press, 1981), pp.84-258

Marie-Laure Ryan, who also touches upon the notion of the embedded narrative, refers to *Myst* (Cyan Worlds, 1993), but a representative (and by no means exhaustive) sample could also include the abandoned space colony of *Super Metroid* (Nintendo, 1994), the mansion in *Resident Evil* (Capcom, 1996), the Black Mesa Research Facility in *Half-Life* (Valve Software, 1998), and the stricken spacecraft in *System Shock 2* (Irrational, 1999). The question, however, remains: why is it that the embedded narrative has taken on such prominence within the medium of digital games? In order to answer this question, we need to gain a clearer insight into the concept of the embedded narrative itself, as well as at the ways by which the specificities of the medium allow for digital games to reveal new facets and possibilities within this narrative structure.

The ruins of the past

First, however, it is imperative that we obtain a clearer picture of the implications of the embedded narrative. As an initial observation, it should be immediately clear that the chronotopic structure of the embedded narrative implies certain properties of the fictional milieu it constructs: not every narrative, or even every narrative space, is ideally suited to this particular structure. Certain properties are demanded of both the narrative and the site upon which it is inscribed in order for the situation to qualify as an embedded narrative. Most evident is an essential past-orientedness - it is a defining element of the embedded narrative structure that the gameworld can only be deciphered by reference to past events, and the logical conclusion we might wish to take this to is that the natural home of the embedded narrative is the ruin. In this regard, it is perhaps telling that ruins feature so prominently as game settings. The list of titles given above all feature ruins in some form, and they represent the rule rather than the exception. Dunstan Lowe, in his study of ruin-imagery in videogames, has remarked on the 'quantity and diversity' of ruins as the setting for games, and this

observation certainly seems to be borne out, whether the ruins in question are the ancient remains being explored in *Tomb Raider* (Core Design, 1996), or the post-apocalyptic wasteland of *Fallout* (Black Isle Studios, 1997).⁴

The term 'ruin' here is intended with a somewhat broader reference than normal, including within its remit not only ruins in the archaeological sense, but also, for instance, industrial ruins, or the ruins of a war-ravaged town. Minimally, if the site of an embedded narrative has not fallen into ruination in the physical sense, it needs to be, at any rate, a building or site that bears the indelible mark of an event that has changed it from its original state: the Black Mesa Research Facility in *Half-Life*, for instance, is marked by the results of the incident that opens the game. This is the necessary prerequisite for the gameworld to satisfy the conditions of a story, at least if we adhere to Gerald Prince's attempt at setting criteria for what he terms "minimal story" - that is, the minimum requirements a set of events must possess in order to qualify as a story:

A minimal story consists of three conjoined events. The first and the third events are stative, the second is active. Furthermore, the third event is the inverse of the first. Finally, the three events are conjoined by conjunctive features in such a way that (a) the first event precedes the second in time and the second precedes the third, and (b) the second causes the third.⁵

The first and the third events are states - in the case of the ruin, the first is the building's original, complete state, and the third is the building as it is now, in ruination. The second, active event (or sequence of events) is the bridge between the initial and the final state, the catalyst of the change in the building's state - in other words, the agent of ruination.

How is the gap bridged between a site bearing traces of past events, and the actual story of these events? If the fictional space presented by the gameworld is to be regarded as a text,

⁴ "Always Already Ancient: Ruins in the Virtual World", in *Virtual Worlds of Classics: A Guide*, ed. by Marek Kretschmer, Thea Selliaas Thorsen and Staffan Wahlgren (Trondheim: Tapir Press, forthcoming)

⁵ *A Grammar of Stories* (The Hague: Mouton, 1973), p.31

constituting a spatial distribution of semiotic elements literally *plotted* according to an architectural organization, then the translation of these elements into a story is dependent upon an act of interpretation on the part of the player, who constructs it out of the information gleaned from an exploration of the gameworld. As Jenkins puts it, with the model of the embedded narrative, ‘narrative comprehension is an active process by which viewers assemble and make hypotheses about likely narrative developments on the basis of information drawn from textual cues and clues’.⁶

This is not a structure that is exclusive to the videogame medium; on the contrary, this process of narrative interpretation of a site marked by its own history represents a recurring pattern that can be traced in the attempts, in whatever medium, to reconstitute a lost past. In his seminal work on the aesthetics of ruins, Robert Ginsberg observes that ‘we continually make sense of the ruin’⁷, and such a process can be identified, if we are to return to the very source, in the Old English poem-fragment *The Ruin*. The poem begins, as all embedded narrative texts must, in the present, with a description of the ruin as it is, as it appears to the viewer - that is, in the final state of the narrative. ‘Roofs have collapsed, the towers in ruin, / the frosted gate is unbarred’, the poet remarks, painting a grim picture of decay that binds together the pall of winter and the inevitability of death under an entropic intimation of ‘the hard grasp of the earth’. Out of this reverie, however, emerges a vision of the ruin in its original state of wholeness, bright, lively and upright where it is now faded, silent and collapsed.

Bright were the stronghold's buildings, the many bath-houses,
the abundance of high arched structures, the great sound of warriors,
many a meadhall full of the celebrations of men - ⁸

⁶ Jenkins, p.126

⁷ *The Aesthetics of Ruins* (Amsterdam and New York: Rodopi, 2004)p.36

⁸ In *Old and Middle English c.890-c.1459: An Anthology*, ed. by Elaine Trehearne (Chichester: Blackwell, 2010), p.97

The contrastive intention of juxtaposing this vision of the ruin's past and present state is evident: Nor does the poet waste any time in linking the two states by means of a causal event: the stronghold's glory days, we are told, continued 'until fate, the mighty one, changed that'. Although the spectre of war raises its head, no specific enemy is identified: if we are to look for an agent of ruin here, it is to be found in the unrelenting forces of decay and mortality themselves.

...the days of pestilence came.

Death carried off all the sword-brave men,
their battle places became deserted sites,
the site of the city crumbled.⁹

All three events are thereby collected (and connected) within the space of the ruined city: a description of the city in ruins opens onto glimpses both of its original state, and of the series of events leading to its fall into ruin.

The same narrative structure can be observed at work around ruin-images inhabiting not only widely divergent generic contexts, but also different media. In the Danny Boyle science-fiction film *Sunshine* (2007), the crew of the Icarus II, a space mission tasked with restarting a dying sun, intercepts a distress signal from Icarus I, an earlier mission with the same task that had lost contact with Earth seven years earlier. Boarding the seemingly deserted spacecraft - a replaying of the *Mary Celeste* trope - the crew carefully explore its interior, hoping to gain an insight into what went wrong. As they venture through the craft, clues are obtained, which accumulate into a narrative - which the film never spells out, but which gradually dawns on the audience simultaneously with the protagonists.

With *The Ruin*, we noted the enduring presence of the first and second events - the original wholeness and the fall into ruin - within the ruined city of the third state. *Sunshine* literalizes this

⁹ *ibid.*

presence: the Icarus I boarded by the second ship's crew is, in both physical and metaphorical senses, saturated with its own past. The dust that coats every surface and clouds the atmosphere of the abandoned ship is immediately associated with its former crew - we hear the assertion that eighty per cent of dust is dead human skin, and the link is cemented when the crew members are discovered, their bodies burned to ashes after apparently having chosen to expose themselves to unfiltered sunlight at such close proximity to the sun: the dust's nature as an actualization of the 'ashes to ashes, dust to dust' refrain becomes impossible to miss. And the first state - the Icarus I mission before it went awry - remains equally present. Its physical trace - a predictably jovial group photo - is uncovered, in a mundane act of archaeology, beneath the dust; but its presence extends beyond the physical and to the borders of spectrality. Boyle edits constant, near-subliminal flashes of details from the group photo - the smiling faces of the dead crew - into the scene, shattering the continuity of the filmic diegesis and punctuating the action in the present with imprints of the past that suggest its continuing presence within the very fabric of the site.

The embedded narrative and games

Sunshine therefore draws us closer to the tropes and formal devices by which the embedded narrative functions in digital games. This sequence represents a bifurcation of the film's narrative into two distinct levels - the narrative of the Icarus II crew's exploration and the narrative of the events on the original Icarus mission that they gradually manage to piece together, with the latter narrative level emerging through an accumulation of clues and indications encountered in the former. This constitutes the basic functional apparatus of the embedded narrative structure, and it is preserved unchanged in videogames: the first narrative level, which we can term the *exploratory* level, plays out in the moment-to-moment actions of the player, the other - the embedded narrative

proper - happening, in effect, prior to the player's entering the picture, emerges out of her exploration of the gameworld. The player is effectively cast in the role of a *de facto* detective, uncovering clues that go towards answering the basic question: 'What happened here?' In Ryan's words, 'this structure covers any attempt by the player to reconstitute events that took place in the past. It connects two narrative levels: the story to be discovered, and the story of their discovery'.¹⁰

This statement reflects the extent to which games adhere to existing formative strategies when making use of the embedded structure; at the same time, however, it also points to the divergences from earlier media that are the result of the new medium's unique affordances. Whatever the medium may be, the embedded narrative depends on a distinction – within the boundaries of the text - between the site as it appears to the visitor in the unfolding process of discovery, and the site as it exists objectively, independent of this narrative of exploration. The implication is that the site has an ontological status independently of its being uncovered by the exploratory narrative – it predates this exploration, and is neither limited nor determined by it. It need hardly be noted that such a distinction cannot exist in the literary or filmic text except problematically: in *The Ruin*, the site as presented to the reader is constituted by the linguistic discourse of its interpretation, while in *Sunshine*, Boyle's filmic montage merely suggests a physical space that, in concrete terms, does not exist beyond the frame of the images: Noël Carroll notes that the idea that 'film images have existential import – the film image re-presents some *x* from the past' is a fallacy based upon a dubious equation of representation with re-presentation. As such, in both cases, the site of the embedded narrative has no existence beyond its unveiling - the exploratory narrative represents not an unpacking, but a construction.

¹⁰ "Beyond *Ludus*", in Atkins, Barry, and Tanya Krzywinska, ed. *Videogame, Player, Text*, (Manchester and New York: Manchester University Press, 2007) p.16

By their very nature, however, videogames possess the capacity to grant the embedded narrative site an ontological status that does not depend on the exploratory narrative. To reduce the argument to the point of banality, the gameworld, as a complete, three-dimensional fictional space, exists in its entirety, waiting to be discovered, even if the player proceeds to run in circles in the starting room. This is the point which lies at the heart of Espen Aarseth's theorisation of the notion of the cybertext to account for texts (of which videogames represent perhaps the most prominent example) which do not, as in the traditional literary text, consist of a single, fixed, linear sequence, but are instead determined by a (generally concealed) textual engine that can produce any number of different linear sequences for any given 'reading', none of which – crucially – constitute the text itself. Aarseth's famous statement is that in the cybertext, what is read is not the same as what is read *from* - each reading represents only a particular glimpse of the unseen textual engine.¹¹ To apply this to the embedded narrative – and to return to Ryan's terms - the 'story to be discovered', and the explorable space within which it is encoded, exists independently of any particular play-through of the game, whereas the 'story of their discovery' is contingent and can vary from play-through to play-through. Exploring the same site within the same game, two players can take up different routes of traversal that reveal different insights, generating two divergent stories of discovery founded on the same embedded narrative.

It is here, then, that we grasp the idiosyncratic amenability of the videogame medium to the embedded narrative. The exploration of the embedded narrative site that is required finds an analogue in the process of exploration which constitutes the player's engagement with the gameworld – the result of this is that the contingent, moment-by-moment sequence of choices taken

¹¹ *Cybertext, Perspectives on Ergodic Literature* (Baltimore and London: The Johns Hopkins University Press, 1997), p.3

by the player in any given playthrough, what Gordon Calleja terms the *alterbiography*,¹² becomes the exploratory narrative that unfolds the embedded narrative encoded in the gameworld.

So thoroughly has the structure become established as a narrative mechanism in the medium that we can comfortably talk of a vocabulary of the embedded narrative. I would argue that Irrational's seminal 1999 title *System Shock 2* in particular has, to a great extent, shaped the techniques used by contemporary titles in constructing their embedded narratives: although itself drawing, of course, on a number of earlier titles and already-established tropes of the adventure and role-playing genres, *System Shock 2* arguably represents the point at which these influences crystallized into a fundamentally stable lexicon of what Michael Nitsche terms 'evocative narrative elements' – that is, units of semiotic meaning placed within the gameworld for the player to encounter. Comprehension of the embedded narrative, Nitsche argues, results not only from the player's exploration of the gameworld in order to locate these evocative narrative elements, but also from a process of interpretation by which the player reduces the accumulation of details encountered into a coherent narrative: 'players encounter and read these elements, comprehend the information in the context of a fictional world, and learn from them as they build contextual connections between elements'.¹³

In *System Shock 2*, the nameless player-avatar wakes up from cryogenic sleep on board a spacecraft, to find that the ship has been taken over – and most of the crew killed – by the rogue artificial intelligence SHODAN. Initially, the player is very much in the dark about the situation, being called upon to act quickly and unthinkingly in order to survive, and it is only gradually, as more and more of the spacecraft is explored, that a complete picture of earlier events begin to form. Even by contemporary standards, *System Shock 2* is uncommonly rich in evocative narrative elements,

¹² "Experiential Narrative in Game Environments", *DiGRA.org* <<http://www.digra.org/dl/db/09287.07241.pdf>> [accessed 28th March 2011]

¹³ *Video Game Spaces: Image, Play and Structure in 3D Worlds* (Cambridge, MA: MIT Press, 2008), p.37

and the embedded narrative that emerges from the player's exploration of the gameworld is particularly complex, involved and multi-layered: the player can piece together not only a general narrative of events, but also personal narratives for several different characters caught up in the disaster that befell the ship. The range of evocative narrative elements that *System Shock 2* deploys includes audio diaries conveniently left behind by the spacecraft's crew, notes and other forms of text, and even, crucially, elements of the scenery itself – a message daubed on a wall in blood, a particular arrangement of disordered furniture and bloodstains which suggest the contours of a fight, et cetera. Its influence can be clearly felt in more recent examples of the form, such as the impressively detailed city of Rapture in *Bioshock* (2K Games, 2007), or the expansive wastes of post-apocalyptic Washington DC in *Fallout 3* (Bethesda, 2008), both of which make use of techniques for embedding evocative narrative elements that have changed remarkably little in the intervening years.

In all of these cases, the embedded narratives that emerge are massive, sprawling and complex, involving a large cast of characters, numerous sub-plots and countless incidental details serving to flesh out the scene. *Small Worlds* (David Shute, 2009) demonstrates this process at work in miniature, compressing a minimal but effective embedded narrative - and one that makes use of almost obtusely basic graphics - into the space of a few minutes' gameplay. Mechanically, the game is a resolutely traditional two-dimensional platform game, predicated upon the exploration of its intricate levels and on overcoming the challenge of performing precise jumps in order to progress.

Play commences in what appears to be a ruined space station containing four portals, each of which transports the player to a separate level. Each of these levels constitutes a scene whose spherical shape and self-containment suggests the image of a snow-globe scene.

The first world constitutes a textbook example of an embedded narrative, starting the player off in what initially appears to be an idyllic winter scene that pushes the snow-globe allusions to the foreground. As the player explores further, however, they begin to uncover a series of underground

tunnels, and it is here that the first doubts are cast on the scene. First to emerge are what look like a series of empty, crumbling concrete bunkers or silos. Even further underground, the player discovers a room with a world map on the wall, covered in blinking LEDs. The suspicion that these hints engender in the player is cemented when, returning to the row of silos by another route, she discovers that the furthest two still possess their contents, imbuing the emptiness of the other silos with a horrible significance.

At the end of the level, the player returns to the wintry surface, to a scene whose connotations have shifted completely, from the initial greeting-card winter wonderland to a chillingly apocalyptic – and frighteningly lonely - glimpse of nuclear winter, thereby providing the first intimation - which will be reinforced as subsequent levels accumulate further tableaux of ruination - of the avatar as the protagonist of a ‘last man’ narrative in a universe decimated by some vast, unspecified conflict.

Here, then, we have all the characteristics of the embedded narrative in miniature: the gradual accumulation of evocative narrative elements is ingeniously mirrored by the zooming-out of the camera to provide an always fuller picture of the gameworld, while the player’s movement through the level is structured in such a way that a constant drip-feed of information results in suspense, mystery and even narrative twists, as new discoveries constantly force the player to overturn her assumptions about the fictional space she is inhabiting. And, just as in *System Shock 2*, *Bisobock*, *Fallout 3*, and, indeed, just about every game I have used as an example throughout this paper, the deployment of ruin-imagery - a set of imagery rich in cultural, aesthetic and even philosophical resonances – evokes themes of loss, of exile from an unattainable state of wholeness, and of loneliness; with the difference that, in contrast to the manifestations of these thematic concerns in earlier media, here they are anchored firmly in the player’s inhabiting of, and journey through, the space of the gameworld.

It has not been my intention, with this paper, to arrive at any general conclusions relating to the medium as a whole. Instead, my more modest aim has been to examine a highly specific, but nonetheless remarkably widespread, formal structure, and to reach an understanding of the mechanisms by which it takes on new configurations within videogames. The embedded narrative structure therefore demonstrates one possible way in which the unique formal affordances of videogames can be brought to bear to rework, rejuvenate and locate new possibilities within the existing cultural tropes the medium will inevitably draw upon.

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