



KUNGLTEKNISKA HÖGSKOLAN

Royal Institute of Technology
Numerical Analysis and Computing Science

CID-54, KTH, Stockholm, Sweden 1999

Space and Character Representation In Interactive Narratives

Björn Thuresson



CID
Centre for
User Oriented IT Design

Björn Thuresson

Space and Character Representation In Interactive Narratives

Report number: CID-54

ISSN number: ISSN 1403-073X

Publication date: June 1999

E-mail of author: thure@nada.kth.se

URL of author: <http://www.nada.kth.se/~thure/neue/>

Reports can be ordered from:

CID, Centre for User Oriented IT Design

Nada, Dept. Computing Science

KTH, Royal Institute of Technology

S-100 44 Stockholm, Sweden

telephone: + 46 8 790 91 00

fax: + 46 8 790 90 99

e-mail: cid@nada.kth.se

URL: <http://www.nada.kth.se/cid/>

**Paper presented at the Technologies of the Moving Image conference
at The Department of Cinema Studies, December 6-9, 1998, Stockholm.**

Content

Space for events, characters, and stories	5
Transfiguration of time	8
A glimpse around the virtual corner	8
Notes	10

Space and Character Representation In Interactive Narratives

In a broad sense, I want to bridge the gap between traditional narratives and the new expectations of a high level of interactivity, and the call for hypermedia structured material. I'm trying to bring some of the experiences from cinema, radio and television to the production of material which is to be viewed on a computer screen. The leading questions are embarrassingly simple:

- How does an interactive narrative (I'm deliberately using the term 'narrative' instead of 'fiction') work and function?¹ What does it look like? How do you construct it?
- How does it affect the use of the material and the user?
- What are the examples to date?
- How do these examples relate to traditional narratives?

I started off by trying to pin down the essentials of what constitutes a narrative. I wanted to present a toolkit to which any producer, script writer, or graphic artist working in a digital environment could relate, and find possible applications, in their own work. This is by no means revolutionary, but I hope that the combination of habits, conventions, and traditions, drawn from a wide range of disciplines, can contribute in some way.

As a point of departure: I do not find it fruitful to try to determine whether this or that is a narrative. I believe that narrative is a continuum the boundaries of which are utopian. The five elements that I suggest constitute a narrative are apparent in narratives to different degrees. They are not necessarily essential. In different contexts, the narration focuses on different elements in the narrative. What then is narrative? A narrative takes place somewhere, denotes a time frame, includes something like characters that act in some way, and these actions (or events) are organised in some motivated order and, finally, the combination connotes and promotes personification with the events and characters by a receptee². Expressed in a condensed way, the five elements that constitute narrative are: spatiality, temporality, causality, dramaturgy, and personification. In this context, I will consider some of the elements of interactive narratives, and focus on different uses of specific environments and the ways in which we, as users/players, are represented in interactive narratives.

Space for events, characters, and stories

A narrative takes place somewhere. There has to be an arena of some kind. This could be a thoroughly defined, real environment or an abstract one. The events and characters help to define their surroundings. In the visual arts, the environment is often crucial, and can be used to make the presentation more efficient. What would the car chase in *Bullitt* (1968) be without the San Francisco setting? Would any of the finales in the James Bond series be exciting if you didn't know exactly how far it is from point A to B? Would a chamber

drama be comprehensible if you didn't know that, for instance, a daughter can hear her father confess an act of incest to her step mother?

In a digital environment spatiality is equally important (and to some extent even more important). In an interview with one of the two brothers who created *Myst*, Rand Miller observed that 'the interactive story design followed two paths: the linear and the non-linear.'³

The linear was the back story and the history, all those elements that followed a very strict time line. The non-linear was the design of the worlds and was more like architectural work. Like building a world without the time element at all – a snapshot of an age. Now the struggle was to try to merge the two by revealing some parts of the linear story during the exploration of the non-linear world, while maintaining the explorer's feeling that he/she can go anywhere and do anything they please.⁴

In *Myst*, the producers believed that the space had the possibility to 'blur' the story,⁵ but also the built-in potential to scatter fragments of the story. Spatiality can be used for the *potentiality* of a story. In the case of *Myst* (and in a number of games inspired by *Myst* and its sequel *Riven*), the producers motivate the signs more than being cultural inhabitants or markers of a specific time period⁶ (or whatever semiotic connotations that may occur);⁷ the signs are motivated by the story, they are part of its narrative content.

These games also situate the user/player in a special way. The window (or frame) to the world simulates your point of view. You are being handed things which leave the frame at the bottom frameline, and reappear outside the frame. You are being addressed in face-to-face conversation. The environment also reacts and remembers your actions. If you move things around and then leave, the place looks the same when you return, as when you left. The navigation is based upon movements from still image to still image. The steps between them are rather small, but there is still no simulation of actual movement in space. The main reason for this is a technical one. To achieve this kind of image resolution, no real-time renderer can maintain the frame-rate. But there is some "within-the-frame-animation" to simulate actions or events. That is, parts of the frame are animated, to let a bell toll, doors open, or birds fly around.

In *Marathon*, *Quake* (or in a whole range of similar games), there is full-screen, real-time rendering. The resolution is poorer, but the advantage (or what is sought for in the context) is fast-paced action. The producers try to situate the stories in different confined spaces (so they don't have to render faraway objects, and therefore increase speed). One runs around in attics, tunnels, and strange fictional spaces in space. In the window-to-the-world you see "your" hands together with the weapon you currently use. Since the rendering techniques are getting better all the time, new "engines" for rendering are being introduced. One of the most successful games is *Tomb Raider I-III*. Here the heroine – Lara Croft – is seen from right behind all the time. You almost never see her face.⁸ You control her, but you ARE not her.

In purer simulations (like flight simulators, or car games), you are usually able to shift the view point: inside, from the sides, from behind, or from, the somewhat confusing, front view. In *Carmageddon* (as well as in *Wolfenstein* and several others), you also get a representation of how "you" react to different events. The world in *Carmageddon* also remembers your action. If your car leaves skid marks somewhere, those marks are still there when you return.

There is definitely a difference in the ways in which characters are represented. In these games you get to "loan" some features from a character, and then you act out the events. In games like *Riven* you invest your own knowledge and experience, and bring it to the protagonist, the "you" in the game. It is like a constrained "self", with a predefined action radius.

Aristotle stressed that actors (or characters) are one of the main causes of action, but also that action (to some extent) denotes characters:

[A]n action implies personal agents, who necessarily possess certain distinctive qualities both of character and thought; for it is by these that we qualify actions themselves, and these – thought and character – are the two natural causes from which actions spring, and on actions again all success or failure depends.⁹

David Bordwell puts a similar notion forward when he observes that "[c]haracters are embodied; they can be assumed to perceive, think, and feel; they seem to display traits and to execute actions."¹⁰ But, of course, these characters do not need to be human characters. We can attribute these traits, feelings, and so forth, to basically anything. In an experiment conducted in the early 1940s,¹¹ a research team of psychologists made an animated movie where a couple of circles, squares and triangles of different sizes moved around in a bigger square. People watching the film were required to reconstruct what had happened. To different degrees, they imposed a story structure on the presentation. 'The big triangle chases the small one; and then the small circle comes to the aid of the small triangle,' for example. The other aspect of characters is the possibility (or potential) for identification or interest since, as Edward Branigan has observed, "[t]he spectator [or user/reader/perceiver] has an intrinsic interest in characters as agents since comprehending a narrative event requires at least recognizing how agents interact with one another in a causal framework/...".¹² Characters (and our involvement in them) are important to narratives; but how do we facilitate or integrate this element in a digital environment? Since we seem to want to impose meaning and causal relationships between events and the settings and characters involved, the simplest anthropomorphic figure (in Barthes' terms) will be considered as a character if this figure is contextualized as a character. In John Lasseter's *Luxo Jr.* (1986) 'A larger lamp watches while a smaller, younger lamp plays exuberantly with a ball but doesn't pick up the knack of correct handling.'¹³ *Luxo Jr.* is a computer animation, and the characters are completely anthropomorphic; but even at this level of recounting the plot, the age difference (together with playfulness, inability to learn) is believed to be essential to make the reconstruction comprehensible. It is then fairly easy to construct a character-like figure, but the task at hand is to contextualise the character and maintain the user's interest in the presentation.

Transfiguration of time

We live in and with time, and it is within that temporal dimension that our ways of seeing are established.¹⁴

In narrative, temporality is constituted by the sequence of events, in two ways. If we are presented with a series of still photographs or sketches (as in a cartoon) a temporal relation is implied between the single photographs. In cinema, the temporal relationship between the single frames that constitute a shot is the actual technique that creates the effect of moving images. Temporal duality is, on the one hand, constituent of the apparatus and, on the other hand, a vehicle for narrative presentation.¹⁵ But, as Vivian Sobchack notes, the temporal relation between successive images is less intense, "not only because each individual image contains time only in a very indirect and coded way, but because the apparatus within which they appear is much less constraining."¹⁶ The sequence of events indicate that there is a temporal relationship between the events,¹⁷ but (obviously) not a chronological succession. 'A story is *made out of* events to the extent that plot *makes* events *into* a story'.¹⁸ The duality can also be expressed another way as 'story time' and 'actual time'.¹⁹ The 'actual time' (the time it takes to present the story for an audience) in *North By Northwest* (Alfred Hitchcock, 1959) is 136 mins. The 'story time' is something like two weeks, perhaps. When talking about the cinema it is fairly straightforward, but with many other forms of representation it is more difficult: how long does it take to read a book?²⁰ Editing (in the cinema) is 'first and foremost the ordering of units of time, units between which there are implicit temporal connections'.²¹ When an intended user in a digital environment is using the material, the time of the telling can be vital. While browsing the World Wide Web, who wants to wait? Who wants to add user-time (that is, time of the telling) because of an inefficient hypermedia structure and navigation? On the other hand, if the time of the telling is efficient, the time of the story can be prolonged, and include a lot more information, 'events', if you will.

A glimpse around the virtual corner

These are some examples of what characters and environments look like now, and how our actions are defined. What can we expect in the near future? I think that full-screen rendering is sought for, and that the worlds will get more complex. I believe it is going to be important that the worlds are being flexible and have a "memory" of action, and that predetermined temporal changes are implemented, like night or day, summer or winter.²² This will even extend to real-time manipulation of actions in complex environments.²³ When it comes to characters, I'm not sure. There are several options. On the one hand, rendering techniques have presented more complex movements and appearances of fictional characters. On the other hand, flesh-and-blood people are being mapped onto wire-frame models, even to the extent that interactive digital video of real people acting out user-controlled events in virtual environments. The commonly used subjective view of the world promotes identification with a character transforms the "it" to a "you". But, is it the best way to distribute human traits? Should we rule out constructed characters as vehicles of content? I don't think so. I choose to believe that Janet Murray is correct when she notes

that "[w]hen we enter a fictional world, we do not merely "suspend" a critical faculty; we also exercise a creative faculty.[—]Because of our desire to experience immersion, we focus our attention on the enveloping world and we use our intelligence to reinforce rather than to question the reality of the experience."²⁴ There is a specific difference between controlling a character and being "in" the character (or avatar). In the latter, you need to bring characteristics of "you" (relating to your self-image in the "real" world) to the avatar-representation in the digital environment. The subjective view then definitely promotes identification and gives a sense of presence. The case of Lara Croft in *Tomb Raider* is an example of identification with a character, enhanced with user-control. The effects are not very different from identification with characters in cinema, in literature, and so forth. In fact, these characters are treated much in the same way as stars of the silver screen with a huge amount of merchandising, fan clubs, and detailed personal information. I will end with an excerpt from an interview with Nell McAndrew who will play Lara Croft in the movie based on *Tomb Raider*.²⁵ Perhaps this will shed some light on how we conceptualise these "stars of the computer screen".

How do you feel about representing a digital character?

Very excited! Lara Croft is such a tough, sexy character - why wouldn't I want to be her? She's larger than life and I'm proud to think that I've been chosen to play her part.

Do you think you have much in common with Lara?

Yes. I'm very independent and I love sports – running, boxing etc. I have an athletic build like Lara and I've also got a rather large chest... though not quite as big as Lara's!!! I also love a challenge.

Do you think Lara is a positive role model to today's young women? If so, why?

Yes, I do think Lara is a positive model – it's great to see a woman so powerful, independent and tough, yet still sexy. I really think that Lara gives women inspiration to go out and get what they want. She's a real no-nonsense character!

What's the best thing about being Lara Croft?

Being Lara makes me feel powerful and confident, and the reaction I've had from people so far makes me feel really popular, even loved! It's a real pleasure to meet all the fans who support Lara –they're so dedicated to her!

Notes

¹ Interactive fiction refers to a wide range of writers (Michael Joyce, J. David Bolter et.al) whose work has artistic ambition rather than using narrative as a way of presenting and experiencing material, which is the topic of this argument.

² This system is a combination of the structuralist approach derived from Roland Barthes, Tzvetan Todorov, Seymour Chatman, Mieke Bal, Gérard Genette, Claude Brémont, André Gaudreault et.al, and the phenomenological approach inspired by Martin Heidegger, Maurice Merleau-Ponty and Michel de Certeau, apparent here by Arthur Asa Berger, Don Ihde, Vivian Sobchack et.al. The term 'personification' is loosely connected to the discussion provided by David Bordwell in *Making Meaning: Inference and Rhetoric in the Interpretation of Cinema*, (Cambridge: Harvard UP, 1989), 152, where he notes that: 'The critic uses the schema to build up more or less 'personified' agents in, around, underneath, or behind the text. Such agents, once endowed with thoughts, feelings, actions, traits, and bodies, become capable of carrying semantic fields.'

³ Steven Jones, 'The Book of Myst in the Late Age of Print' *Postmodern Culture* 7.2, <http://www.press.jhu.edu/journals/postmodern_culture/v007>.

⁴ Ibid.

⁵ In Roland Barthes 'Introduction to the Structural Analysis of Narratives' in *Image-Music-Text* (New York: Hill & Wang, 1977), 95, the 'catalyser' can have this function (along with acceleration, delay, anticipation). Also, in a footnote he refers to Valéry's 'dilatatory signs'.

⁶ This could be anything that the majority of users link to a specific time or. A cultural inhabitant may, for example, include a tropical helmet in a rendition of the Boer War. A time marker could mean playing Sex Pistols' *God Save the Queen* in a historical piece on Britain in the late 1970s.

⁷ Barthes called these objects '/.../accepted inducers of associations of ideas/.../' Ibid. 22.

⁸ In the first *Tomb Raider* the "camera" was placed fairly close to the back of Lara's head. *Tomb Raider II* and *III*, the "camera" has moved back a bit. This means that you see more of Lara. In some cases you actually see quite a bit of her. One reason for moving the "camera" back in space could be that the player then sees more of the environment. The producers had enhanced the rendering "engine" to reveal more of the environment by simulating a wide view.

⁹ Aristotle, *Poetics* translated by S. H. Butcher, Paragraph 6:IV.

¹⁰ David Bordwell, (1989) Ibid., 153.

¹¹ Heider, F. & Simmel, M., 'An Experimental Study of Apparent Behavior', *American Journal of Psychology*, 57 (2), (April 1944): 243-59.

¹² Edward Branigan, *Narrative Comprehension and Film*, (London: Routledge, 1992), 101.

¹³ This plot summary is picked from Internet Movie Data Base <<http://www.imdb.com>>.

¹⁴ Jacques Aumont, *The Image* (London: BFI, 1997), 118.

¹⁵ The instrumentality of the apparatus vs. the content is expressed by many researchers in the areas of the history of technology and of the arts in different media specifications. Vivian Sobchack observes: '/.../while they [the films enabling mechanisms] enable the commutation of perception and expression that is the film, neither the camera nor projector (nor lenses, editorial equipment, optical printers, sound recording and transfer equipment, screen, et al.) are themselves the film we experience and see, which itself visually signifies vision as visible and significant experience', *The Address of the Eye: A Phenomenology of Film Experience*, (Princeton: Princeton University Press, 1992), 169.

¹⁶ Vivian Sobchack, Ibid., 126.

¹⁷ André Gaudreault goes even further when suggesting that: [t]here are two types of narrative in the cinema: the micro-narrative (the shot), a first level on which is generated the second narrative level; this second level more properly constitutes a filmic narrative in the generally accepted sense.' In *Early Cinema: Space – Frame – Narrative*, ed. Thomas Elsaesser (London: BFI, 1990), 71. And in footnote #16 he stresses 'that every shot, taken out of its context and projected on the screen as a single object, should be regarded as a narrative in itself', 74.

¹⁸ Paul Ricoeur, 'Narrative Time' in *On Narrative*, ed. W.J.T. Mitchell (Chicago: The University of Chicago Press, 1980), 167.

¹⁹ Seymour Chatman talks about reading-time and plot-time (or, with his terminology, discourse-time and story-time) in *Story and Discourse: Narrative Structures in Fiction and Film* (Ithaca: Cornell University Press, 1978), 62. In footnote #23, he presents other terminologies describing, roughly, the same dichotomy as 'chronological' and 'pseudo-chronological' time (Mendilow) and Christian Metz's 'the time of the thing told and the time of the telling (the time of the significate and the time of the signifier)'.

²⁰ Jacques Aumont expresses in *The Image*: 'The point is to never confuse the time of the image with the time of the spectator. The spectator has the freedom to view a photograph for three seconds or three hours, but in cinema the spectator can view only as long as the projector is running', 120.

²¹ *Ibid.*, 125.

²² We have already seen examples of this in the distributed 3D-environment *Active Worlds*, in strategy games like *SimCity*, and (somewhat farfetched) the Swiss clock company Swatch's Internet time: Swatch Beat <<http://www.swatch.com>>.

²³ Like interaction in MUDs, MOOs in the 1980s; in chats, and in virtual communities like *WorldsAway* <<http://www.worldsaway.com>>.

²⁴ Janet Murray, *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*, (New York: The Free Press, 1997), 110.

²⁵ <<http://www.tombraider.com/>>.